St. Francis Xavier University

Academic Calendar

2018-2019
The St. Francis Xavier University motto is taken from the letter of Paul to the Philippians. The following is an excerpt from the epistle.

*I want you to be happy, always happy in the Lord; I repeat, what I want is your happiness. Let your tolerance be evident to everyone: the Lord is very near. There is no need to worry; but if there is anything you need, pray for it, asking God for it with prayer and thanksgiving, and that peace of God, which is so much greater than we can understand, will guard your hearts and your thoughts, in Christ Jesus. Finally, brothers and sisters, fill your minds with everything that is true, everything that is noble, everything that is good and pure, everything that we love and honour, and everything that can be thought virtuous or worthy of praise.*

*Phil. 4: 4-9*
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Students and other readers will appreciate that matters dealt with in this Academic Calendar are subject to continuing review. The university reserves the right to alter anything described herein without notice other than through the regular process of the university. The university cannot accept responsibility or liability to any person or persons who may suffer loss or who may be otherwise adversely affected by such changes. The Academic Calendar takes precedence over all other publications.

In the interpretation of academic regulations, the University Senate is the final authority. The registrar will assist students in interpreting academic regulations; however, it is the responsibility of students to see that their academic programs meet university regulations.

The Board of Governors has final authority on all financial matters. The financial policies will be enforced through the Financial Services, under the direction of the Financial Services. Notwithstanding any other provision of this calendar, St. Francis Xavier University accepts no responsibility to provide any course of instruction, program or class, residential or other services including the normal range of academic, residential and other services in circumstances of utility interruptions, fire, flood, strikes, work stoppages, labour disputes, war, insurrection, the operation of law or acts of God or any other cause (whether similar or dissimilar to those enumerated) that reasonably prevent their provision. Published March 2018.

St. Francis Xavier University is a member of
Association of Universities and Colleges of Canada
Association of Atlantic Universities
Association of Commonwealth Universities
International Association of Universities

StFX Academic Calendar: sites/stfx.ca/registrars_office/academic_calendar/
## CALENDAR OF EVENTS 2018 - 2019

### JUNE 2018
- **Thu. 14** 2018-2019 Course timetable posted
- **Mon. 18** Course registration for the 2018-2019 academic year begins for continuing students

### JULY
- **Mon. 2** Canada Day observance, offices closed
- **Tue. 3** Summer term classes begin
- **Fri. 6** Final date to apply for degree or diploma to be conferred at Fall Convocation
- **Tue. 10** Course registration for the 2018-2019 academic year begins for first-year students

### AUGUST
- **Mon. 6** Civic Holiday, offices closed
- **Wed. 29** International students - airport pick up (day 1)
- **Thu. 30** International students - airport pick up (day 2)
- **Fri. 31** International Student Orientation (attendance mandatory)

### SEPTEMBER
- **Sat. 1** Welcome Day. New students arrive. Orientation program begins. Students will receive first week schedule of events, times and locations. New students only may check into residence after 9:00 a.m.
- **Mon. 3** Academic Day
- **Tue. 4** Classes begin
- **Sun. 9** Opening Mass of the Holy Spirit 5 p.m.
- **Tue. 11** Last day to change first-term or full-year courses
- **Fri. 14** Student Account - First term payment due
- **Thu. 20** Last date for approval of senior honours and advanced major thesis topics and supervisors
- **Fri. 28** December exam schedule available

### OCTOBER
- **Tue. 2** University Senate Meeting, 3:45 p.m.
- **Fri. 5** Fall Study Day
- **Mon. 8** Thanksgiving Day, no classes
- **Fri. 12** HKIN Outdoor Camp session 1 begins
- **Fri. 19** HKIN Outdoor Camp session 2 begins
- **Tue. 23** Final day for partial tuition refunds for first-term courses, when applicable
- **Fri. 26** Professors to submit October mid-term grades by 9 a.m.
- **Wed. 31** Final date to apply for degree or diploma to be conferred at Spring Convocation

### NOVEMBER
- **Fri. 2** Last day to drop first-term three-credit courses
- **Mon. 5** University Senate Meeting, 7:00 p.m.
- **Mon. 12** Remembrance Day observance, no classes
- **Tue. 20** Final day for partial tuition refunds for full year courses, when applicable
- **Tue. 28** Continuing and Distance Education courses end
- **Fri. 30** Last day of classes for first term

### DECEMBER
- **Sat. 1** Fall Convocation
- **Mon. 3** Feast Day of St. Francis Xavier, Alumni Memorial Mass
- **Tue. 4** University Senate Meeting, 3:45 p.m.
- **Wed. 5** Term examinations begin
- **Sat. 15** Christmas recess begins after last examination
- **Thu. 20** Professors to submit term grades by 9 a.m.
- **Fri. 21** Offices closed for holidays

### JANUARY 2019
- **Jan. 2** Offices re-open
- **Jan. 6** Residences re-open
- **Mon. 7** Second year classes begin
- **Mon. 14** Last day to drop first-year courses or change first-year courses
- **Fri. 18** Good Friday, no exams, offices closed
- **Mon. 21** Winter Study Break begins
- **Mon. 25** Classes resume after break

### FEBRUARY
- **Fri. 1** April exam schedule available
- **Tue. 5** University Senate Meeting, 3:45 p.m.
- **Tue. 19** Last day for partial tuition refunds for second-term courses, when applicable
- **Mon. 25** For Spring Convocation, final date for:
  - seniors to submit senior theses
  - graduate students to submit theses
- **Wed. 27** Final date for:
  - BA and B.Ed. first-year students to declare majors
  - BBA second-year students to declare majors and apply for honours and advanced major programs
  - All other second-year students to apply for honours and advanced major programs
  - Student Research Day
- **Thu. 28** University Faculty Meeting, 1:15-3:15 p.m.

### MARCH
- **Fri. 1** Second-term, three-credit mid-term grades available to students
- **Mon. 4** Last day to drop second-term three-credit courses
- **Mon. 11** Formal academic advising period begins
- **Mon. 25** For Spring Convocation, final date for:
  - seniors to submit senior theses
  - graduate students to submit theses
- **Wed. 27** Final date for:
  - BA and B.Ed. first-year students to declare majors
  - BBA second-year students to declare majors and apply for honours and advanced major programs
  - All other second-year students to apply for honours and advanced major programs
  - Student Research Day

### APRIL
- **Tue. 2** Continuing and Distance Education courses end
- **University Senate Meeting, 3:45 p.m.
- **Fri. 5** Last day of classes
- **Tue. 9** Final examinations begin
- **Fri. 19** Good Friday, no exams, offices closed
- **Tue. 23** Last day of examinations
- **Wed. 24** Spring term classes begin
- **Mon. 29** Professors to submit final grades by 9:00 a.m. for graduation candidates

### MAY
- **Fri. 3** Spring Convocation list published
- **Sun. 5** Spring Convocation
- **Mon. 6** Professors to submit final grades for continuing students by 9:00 a.m.
- **Mon. 20** Victoria Day, offices closed

### JUNE 2019
- **Mon. 24** Spring Convocation
- **Wed. 26** Summer term classes begin
- **Mon. 30** Last day to receive full tuition refund for second-term courses, when applicable
A TRADITION OF EXCELLENCE

St. Francis Xavier University is widely recognized as one of the top post-secondary institutions in Canada. From its halls and classrooms have come prime ministers, provincial premiers, Rhodes scholars, scientists and religious and business leaders. Since its founding in 1853, StFX has helped shape the communities in which we live.

Today, StFX continues to offer what so many of Canada’s top students want: a high quality education focused primarily on the undergraduate, in a vibrant residential setting. StFX continues to meet the needs of its students through outstanding teaching, exceptional hands-on research experience, the very best in residential living, and unique opportunities to make a contribution to communities at home and abroad.

Home to over 4,500 full and part-time students from across Canada and around the world, StFX students have the opportunity to excel in an intimate learning environment that nurtures the development of the whole person. Our professors rank among Canada’s top teachers and researchers. These exceptional faculty members, almost all holding doctorates and many with teaching awards, inspire students to achieve their academic and personal potential. The unique StFX brand of education offers innovative teaching methods and exceptional opportunities for personal growth in a close-knit campus community. The result is individual attention, lively classroom discussions, and the opportunity for students to reach their personal best.

In addition to the teaching and learning process, our holistic approach to the educational experience requires a commitment to the quality of the cultural, spiritual, social, and recreational life of our students. The very nature of a StFX education inherently encourages students and faculty to be engaged with the world around them. Through internships, service learning experiences, international research and learning partnerships and community outreach initiatives, our students and professors make meaningful contributions as socially engaged citizens to communities at home and abroad.

It’s all part of an educational experience built on StFX’s long and honorable commitment to social justice and equality. As more evidence to its commitment to community and social development, StFX established the Coady International Institute in 1959, a world-renowned centre of excellent in community-based development, educating leaders from around the world to address global challenges and opportunities.

St. Francis Xavier University’s Strategic Plan, which represents the ideals for which the university strives and reflects its proud traditions, emphasizes commitment to the highest standards for its faculty and students. Unlike mega-universities, StFX measures its quality on excellence in its teaching and research programs rather than the size of the institution. Our niche is to be Canada’s premiere residential university, steeped in a liberal arts tradition, with high academic standards and a character attractive to those who hold and respect social values. The university takes pride in the Catholic heritage and character that have formed a vital part in its history and mission, and is dedicated to providing its students with a post-secondary education that is intellectually stimulating and personally enriching within an atmosphere of inclusiveness for students, faculty and staff of diverse backgrounds.

Today, StFX is in the midst of the most ambitious academic and facilities renewal program for StFX in its history. We continue to enhance teaching and research facilities and strengthen the residential campus experience. This investment is further evidence of our commitment to create a university experience as it’s meant to be.

Arts
The Arts Faculty includes programs in the social sciences and the humanities. Through their teaching and research, faculty members lead our students on a journey that is intellectually broadening, socially awakening and culturally rich. StFX Arts graduates have an understanding of the world, an appetite for learning and an ability to solve problems. They are prepared to assume leadership roles in our rapidly changing society.

Business
The Faculty of Business is the home of the Gerald Schwartz School of Business. StFX keeps pace with the changing way the world does business by connecting theory with practice as a vital component of the learning process. This is why the Schwartz School offers a variety of hands-on learning experiences, international exchanges and a co-op option. The business program is uniquely integrated in the liberal arts tradition. Graduates of the BBA program are consistently sought out by major firms and corporations.

Education
StFX’s Faculty of Education believes that learning is a lifelong endeavour. Faculty work hard in building collegial, professional relationships with their students, practicing teachers and those in a variety of educational organizations. A distinguishing feature of the school is that it educates teachers in priority needs areas through specialized cohort programs such as French language, math, and Aboriginal studies. It is consistently understood to be one of the very best education faculties in Canada.

Science
The Science Faculty includes both the theoretical and applied sciences and professional programs in Engineering, Human Kinetics, Human Nutrition, and in the School of Nursing. The Faculty includes accomplished scientists who conduct teaching and research of the highest standard. In doing so, they provide a solid academic foundation for bright minds that go on to award-winning research, further study and exciting scientific careers. They also make important contributions to scientific discovery in Canada.
History of StFX

StFX traces its origin to a small school of higher studies established by Most Rev. Dr. Colin F. MacKinnon at Arichat, Nova Scotia, in 1853. The previous year, on his consecration to the See of Arichat, Bishop MacKinnon was placed in charge of an extensive diocese with a relatively large but widely dispersed Catholic population. To solve the urgent need for pastoral clergy, he founded an institution of general education. The initial student body numbered only 15. Two years later, in 1855, the institution was relocated to Antigonish, Nova Scotia, with Dr. John Schulte as the first rector, succeeded by Most Rev. Dr. John Cameron.

By 1856, an ambitious curriculum had been developed in nine subjects, taught by six professors to 49 students, and the institution was then known as St. Francis Xavier’s College. The original building stood at the centre of the Antigonish community and served for 25 years as the home of the college. Dr. Cameron’s appointment to the Diocesan See in 1877 spurred further development, including a relocation to the southern boundary of Antigonish and the erection of the first wing of Xavier Hall in 1880. These 100 plus acres are the university’s home today.

Full university powers were conferred upon the college by an act of the provincial legislature in 1866. A board of governors was appointed and incorporated under another act in 1882. This granted to the board general control over the direction and internal affairs of the institution.

The early graduates of StFX received a Bachelor of Arts degree. This academic program was broadened through the energy of new faculty, well qualified in both the humanities and natural sciences, and encouraged always by Bishop Cameron. A Master of Arts degree was first awarded in 1890 and a Bachelor of Letters was available by 1899. Just prior to the turn of the century, the university had departments of law, commercial studies and a faculty of applied science, the first in Nova Scotia. Bachelor of Science degrees were awarded by 1904.

The foresight of Bishop Cameron led him to invite to Antigonish the Sisters of the Congregation of Notre Dame of Montreal, to staff a school for young women. This St. Bernard’s Academy became affiliated with the university in 1894 as Mount Saint Bernard College. In 1897 St. Francis Xavier became the first Catholic coeducational university in North America to grant degrees to women. Members of the Congregation joined the faculty in later years. Women represented a small fraction of the student body for more than 100 years, but by 1985, they equaled men in numbers.

On the occasion of the university’s golden jubilee, the chancellor, Bishop Cameron, declared, “No multi-millionaire laid its foundations in wealth and built the university’s walls from his own private fortune. But it boasts a more precious and, let me add, a more secure foundation: the loving hearts of a loyal people.” The well-being of StFX lay in the generous hands of the Scots, Irish and Acadians of eastern Nova Scotia. The priest faculty for over 100 years toiled essentially without remuneration. No university owes more to its loyal people, the alumni, than does StFX. The gracious campus, the many academic programs and the research endeavors were possible only through their support, as very little assistance was received from the public, through governments, prior to the 1960s. Today St FX alumni are the most dedicated and committed alumni in Canada.

Under the inspiration of Dr. Cameron in 1900, the Congregation of the Sisters of St. Martha was founded on the campus. Their specific task was to provide household management of the university. Within a very few years, the sisters’ apostolic mandate broadened to include nursing care, and formal nursing programs at St. Martha’s Hospital were affiliated with the university for 65 years. In the trying years after World War I, and in the depression decade especially, the university would not have survived without the labor of the priest faculty and the unselfish devotion of the Sisters of St. Martha. Today the presence of the Marthas is still felt on campus with the establishment of Wellspring Centre, a relaxing place of welcome and friendship. Staffed by the Sisters of St. Martha, it offers to the university community an environment for multi faith interaction and dialogue, quiet reading, reflection and prayer.

A decade after the First World War, influential priest faculty, led by Dr. J.J. Tompkins, became concerned that StFX should relate more closely to the circumstances of ordinary people. Their view was that those outside the formal academic setting could, by study and co-operative action, find the power to solve economic and other problems through social reform. The product of their effort became known as the Antigonish Movement. The formal structure within the movement crystallized as the university’s Extension Department in 1928. Its first director was Dr. M.M. Coady. As a result of this work, by the end of the Second World War, a formidable number of co-operative projects, leadership training programs, consumer, producer and credit co-operatives, and agricultural associations developed, bringing with them a new measure of social and economic vitality. Leaders from the developing world began to come to the university to study in the Extension program. To satisfy this quest for information the Coady International Institute was established in 1959. To date, over 7,500 graduates of the institute have held economic and social development positions around the globe.

The rapid growth in student numbers following World War II, especially in the Cape Breton industrial area, prompted the extension of academic programs beyond the home campus. Xavier College was established in Sydney in 1951 to offer the first two years of degree programs. This campus not only grew rapidly over the next two decades, but the demands for technology training prompted both the government of Nova Scotia and the university to amalgamate the Nova Scotia Institute of Technology with Xavier College. The College of Cape Breton was born of this union in 1974 and it granted degrees in affiliation with StFX. These degrees, based on both traditional academic and innovative technological programs, were awarded until 1982.

The Next Chapter

Many changes have impacted StFX, but perhaps there has never been so much optimism as there is today. In 2014 the Nova Scotia Legislature passed the new St. Francis Xavier Act (2014). The Act clearly defined the four objectives of the University. They are:

1. Provide students with a post-secondary education that is intellectually stimulating and personally enriching within an atmosphere of inclusiveness for all students, faculty and staff;
2. Promote academic excellence, service to society and innovation in teaching and research;
3. Provide opportunities to enrich the cultural, spiritual, social and recreational life of students; and
4. Respect the catholic heritage and character that have formed a vital part of the University’s history.

Over the coming decade StFX is transforming its footprint as a clean energy environmentally sustainable campus; in fact, aiming to become a leader in Canada in this regard. Further the university has reaffirmed its commitment to be Canada’s premiere undergraduate residential university. The demand comes from awareness around the world that StFX provides a unique, personal, high quality learning community that is unparalleled in Canada and since its founding, it remains committed to the development of the whole person in service to humanity.
UNIVERSITY PERSONNEL

University Officers
Kent MacDonald, Ph.D.  President
Kevin Wamsley, Ph.D.  Academic Vice-President & Provost
Andrew Beckett, CPA, CA  Vice-President, Finance & Administration, Director of Student Services
June Webber, Ph.D.  Director, Coady International Institute & Vice President International Development
Murray Kyte, BBA, M.Ed., LL.B.  Associate Vice-President Research & Graduate Studies
Richard Isnor, D.Phil.  Dean of Arts
Karen Brebner Ph.D.  Dean of Business
Timothy W. Hynes, Ph.D.  Dean of Education
Jeff Orr, Ph.D.  Dean of Science
Petra Hauf, Ph.D.  Registrar & Director Enrolment Planning
Tara Bukisaitis, BA, MLIS  University Librarian
Vacant

UNIVERSITY SENATE

Members Ex-Officio
Kent MacDonald, Ph.D.  President
Kevin Wamsley, Ph.D.  Academic Vice-President & Provost
Andrew Beckett, CPA, CA  Vice-President, Finance & Administration, Director of Student Services
June Webber, Ph.D.  Director, Coady International Institute & Vice President International Development
Murray Kyte, BBA, M.Ed., LL.B.  Associate Vice-President Research & Graduate Studies
Richard Isnor, D.Phil.  Dean of Arts
Karen Brebner Ph.D.  Dean of Business
Timothy W. Hynes, Ph.D.  Dean of Education
Jeff Orr, Ph.D.  Dean of Science
Petra Hauf, Ph.D.  Registrar & Director Enrolment Planning
Vacant

Officers of the Board
Robert Kennedy, Ph.D.  Chair
Anne Murray-Orr, Ph.D.  Secretary
Donna Trenblinski, Ph.D.  Past Chair

Elected Faculty Members
Term Expires April 2018
Youngwon Cho, Ph.D.
Michael D’Arcy, Ph.D.
V. (Karuna) Karunakaran, Ph.D.
Edward Langille, Ph.D.
Gerrard Marangoni, Ph.D.
Stephan Marmura, Ph.D.
Leslie Jane McMillan, Ph.D.
Zeynep Ozkork, Ph.D.

Term Expires May 2018
Marion Alex, MN, RN
Kara Thompson, Ph.D.

Term Expires October 2018
Santo Dodaro, Ph.D.

Term Expires January 2019
Frank Comeau, Ph.D.

Term Expires April 2019
Doug Al-Maini, Ph.D.
Patricia Cormack, Ph.D.
Neil Foshay, Ph.D.
Opal Leung, Ph.D.
Dan Robinson, Ph.D.
Barry Taylor, Ph.D.
Vijay Vishwakarma, Ph.D.

Term Expires May 2019
Adela Sandness, Ph.D.

Term Expires October 2019
Peter McInnis, Ph.D.

Term Expires May 2020
Hugo Beltrami, Ph.D.
Chris Gilham, Ph.D.
Mikael Haller, Ph.D.
Karine Lebris, Ph.D.
Bobbi Morrison, Ph.D.
William Sweet, D. Ph.
Charlene Weaver, Ph.D.

Term Expires October 2020
Réjeanne Leblanc, Ph.D.

Other Member: Kathleen MacKenzie

Elected Student Members
Term Expires September 2018
Emma Crilly
Amy Bobyn
Bry Crabbe
Melissa Grant
Lucas Middleton

BOARD OF GOVERNORS

Officers of the Board
Mike Boyd, MBA
Mary Lou O’Reilly
Andrew Beckett, CPA, CA

Members Ex-Officio
Kent MacDonald, Ph.D.
Susan E. Crocker, B.Sc.
Most Reverend Brian J. Dunn, D.D., MDiv., MA, J.C.L., J.C.D., Ph.D.
Kevin Wamsley, Ph.D.
June Webber, Ph.D.

Appointed Members
Larry Andrea, B.Sc., BBA
Joe Apalco, Ph.D.
John Caplice, BBA, CA
Alex Corrigan
Deborah Gillis
James R. Gogan, CPA, CA, LL.B.
Danny Graham, LL.B.
Boguslaw Hass, MBA, M.Sc.
Glenn Home, BBA, BA, MA
Tom Langley, B.Com., M.S., F.C.G.A., F.C.P.A
Steve MacNeil, BA, B.Ed., LLB
Father Thomas A. MacNeil, BA, B.Th., S.T.B, M.P.S
Tom Mahaffey, Ph.D.
Jennifer Mitton-Kukner, Ph.D.
Kevin Morris, BA, LLB, LL.M(Canatab)
Maureen Moynagh, Ph.D.
Kevin O’Brien, Ph.D.
Michael O’Brien, MD, FRCPC
Sydney Pagan
P.J. Prosper, Chief Paqtnkek Mi’kmaw Nation
Nikki Robar, CPA, CA, CBV
Anne Sirious
Judy Steele, FCPA
Carolyn Toomey, BA, MSW
Frank van Schaalayk, BE

Invited Member
Murray Kyte, BBA, M.Ed., LL.B.

Vacant

Vacant

Secretary
Past Chair
1. ADMISSION PROCEDURES AND REQUIREMENTS

1.1 Admission Procedures
1.2 Admission to University Programs
1.3 Admission from Nova Scotia Grade 12
1.4 Admission from the United States
1.5 Admission from Other Systems of Education
1.6 Admission to the Bachelor of Science in Nursing
1.7 Admission to the Bachelor of Education Program
1.8 Admission to Graduate Programs

1.1 ADMISSION PROCEDURES

Address all applications and inquiries concerning admission to:
Admissions
St. Francis Xavier University
PO Box 5000
Antigonish, NS B2G 2W5
Phone: 1-877-867-7839, 902-867-2219
Fax: 902-867-2329
Email: admit@stfx.ca

Applications for admission should be made on the appropriate form. A non-refundable application fee of $40 (subject to change) is required. All applicants must submit a school transcript. StFX may grant transfer credit equivalency for academic work previously completed at other accredited universities or colleges. Transfer students must submit official university or college transcripts.

The admission procedure is complete when the candidate has returned a confirmation form along with the appropriate fee. Admissions decisions are final. All information supplied by an applicant may be used by the university in its normal course of business. St. Francis Xavier University (StFX) is required to abide by Freedom of Information and Protection of Privacy legislation (FOIPOP) and the Personal Information Protection and Electronic Documents Act (PIPEDA) as they apply to universities.

Entrance Scholarships
All applicants from high school with superior grades will be considered for entrance scholarships. See section 2.6 for information on university scholarships.

Transfer Students
The university may admit and grant transfer credits to a student who has attended another accredited college or university. Official documents of all previous academic work must be submitted whether or not transfer credits are sought. Failure to supply such documents is considered grounds for subsequent academic dismissal.

Mature Students
Candidates who have not fulfilled the normal admission requirements and who have been out of school at least three years may be considered for admission. Candidates are required to submit transcripts of all previous academic work, letters of reference from employers, and an outline of future plans. Each applicant is considered on an individual basis.

Program for Students with Disabilities
StFX welcomes students with disabilities and offers a student-centred program of support. Students with disabilities are responsible for identifying and providing documentation of their disability to the co-ordinator of the program. Students are encouraged to make contact as soon as possible. For further information, call the Centre for Accessible Learning at 902-867-5349.

1.2 ADMISSION TO UNIVERSITY PROGRAMS

The university reserves the right to reject any application for admission on the basis of the applicant’s overall academic record even if the entrance requirements are satisfied.

In special circumstances, a student lacking the specified requirements may be admitted. The university takes into consideration the overall demographics of its constituency.

Senate regulations limit enrolment in some programs. Admission to these programs is competitive and possession of the minimum requirements does not ensure acceptance into the program.

1.3 ADMISSION REQUIREMENTS FROM GRADE 12

a) The requirements for admission from high schools are stated below. The courses required for university programs are specified in the chart on page 3.

Nova Scotia
i) A minimum average of 70 in grade XII, to include English each year; no grade less than 65 in a course required for admission
ii) Credit for five university preparatory courses in each of grade XI and grade XII.
iii) Some programs may require a higher average; contact the Admissions office for more information.

Alberta
Applicants must have grade XII with subject distribution and minimum averages as for Nova Scotia. All five courses must be at the 30 or 31 level.

New Brunswick, Prince Edward Island, Manitoba, Saskatchewan, British Columbia, Northwest Territories, Nunavut, Yukon
Applicants must have grade XII with subject distribution and minimum averages as for Nova Scotia.

Newfoundland and Labrador
Applicants must meet the same course requirements and minimum averages as for Nova Scotia students. Courses needed to satisfy entrance requirements must be at the 3000 level and students must achieve at least 11 credits.

Ontario
Ontario secondary school students must have a minimum of five grade XII courses of U and M levels (preferable four U level courses) to include the program-specific requirements outlined on page 3, and must have completed the Ontario Secondary School Diploma (OSSD) or equivalent to be considered for admission.

Quebec
Applicants who have completed senior matriculation or one year of CEGEP will be considered for entry into the first year of a four-year program. Students, who have completed more than one year of CEGEP, may be eligible to receive transfer credits for courses in which they have received a passing grade. Only courses that apply to the intended program of study will be transferred.

General Requirements
The following university preparatory subjects are acceptable: English, entrepreneurship, geography, global history, global geography, history, mathematics (algebra, trigonometry, geometry, functions/relations), modern languages, classical languages, economics, biology, chemistry, earth sciences, and physics. Some university preparatory courses may not be listed above. Please contact the Admissions office if you have any questions, or refer to the website www.stfx.ca/admissions/requirements.

b) In addition to English, all programs require additional grade XII credits as specified in the chart on page 3.

c) Admission to the music program is a two-part process. Students must apply to and be accepted by both the university and the music department.
Candidates must contact the music department to arrange for an audition or receive information regarding a taped audition. Call 902-867-2106 or write to the Department of Music, St. Francis Xavier University, PO Box 5000, Antigonish, NS, B2G 2W5. Only after acceptance to the university and completion of a successful audition are candidates fully enrolled in the music program. Successful candidates receive letters of acceptance from both the university and the music department.

d) Students are initially admitted to the Bachelor of Arts (BA) with major undeclared:
   i) Majors are offered in anthropology, aquatic resources, Catholic studies, development studies, Celtic studies, computer science, economics, English, French, history, mathematics, music, philosophy, political science, psychology, public policy and governance, religious studies, sociology, Spanish, and women’s and gender studies.
   ii) Students are expected to declare major and minor subjects prior to second year registration. Students may choose the four-year BA advanced major or honours program during their first year of study.

e) Students are initially admitted to the Bachelor of Business Administration (BBA) program in the Faculty of Business with major undeclared. Students declare a major prior to registering for their third year.

The BBA degree with major, advanced major or honours is offered in accounting, entrepreneurship, enterprise systems, finance, international business, management and leadership, and marketing.
Students in the Bachelor of Music program are given the opportunity to focus on creativity and additions in music, mathematics, physics, and psychology. A Bachelor of Music major degree is also offered in these subjects and tertiary programs, but not in economics or psychology. Students may choose the B.Sc. advanced major or honours before their second year of study.

Students accepted into any B.Sc. Nursing option are required to provide proof of: current certification in Health Care Provider (HCP) and Standard first aid; screening through the child abuse register in their home province (if this service is available in their home province); current (within three months of start of classes) criminal records check completed at their nearest detachment of the RCMP or local police department; current certification in WHMIS (within 12 months); a copy of their birth certificate, valid driver’s license (or provincial health card) and required immunization records (Hepatitis B immunization and tuberculosis-two-step Mantoux testing is also required). Annual recertification of HCP is mandatory for clinical practice. Students from outside of Nova Scotia will be screened through the Nova Scotia Child Abuse Register during first semester.

Students can choose to focus on various areas of concentration for the Bachelor of Arts and Science in Health or the Bachelor of Arts and Science in Climate and Environment Programs. These include biomedical or social determinants for the HLTH program and climate or environment for the CLEN program.

**Facility of Arts**

<table>
<thead>
<tr>
<th>Program (four-years)</th>
<th>Description</th>
<th>High School Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor of Arts with Major</td>
<td>Offered in anthropology, aquatic resources, Catholic studies, Celtic studies, computer science, development studies, economics, English, French, history, mathematics, music, philosophy, political science, psychology, religious studies, sociology, Spanish, women’s and gender studies. Students may choose the advanced major or honours degree during their second year of study.</td>
<td>English and four university preparatory courses in grade 12. See 1.3 d.</td>
</tr>
<tr>
<td>Bachelor of Arts in Human Kinetics</td>
<td>The study of human movement from an arts (humanities and social sciences) perspective prepares students for a variety of options: employment and careers in health and fitness, or further studies in education, occupational therapy, sport sociology, sport history, sport philosophy or sport psychology. Students must choose a major, advanced major or honours in kinesiology, or a major, advanced major or honours in pre-education during their second year of study.</td>
<td>English; one of math, biology, chemistry or physics; and three other university preparatory courses in grade 12 (grade 11 physics highly recommended). Limited enrolment</td>
</tr>
<tr>
<td>Bachelor of Music</td>
<td>Students in the Bachelor of Music program are given the opportunity to focus on creativity and performance. They will develop more fundamental skills in improvisation and theory as the number of Music credits taken in this program is higher than those taken in the BA with Major in Music.</td>
<td>English and four university preparatory courses in grade 12. See 1.3 d. Admission depends on the student’s performance during an audition, which may be submitted on a CD or tape. See 1.3 c.</td>
</tr>
<tr>
<td>Bachelor of Arts in Public Policy &amp; Governance</td>
<td>Students will study the world of public affairs and leadership. This new program involves introducing students to a broad field that integrates many different disciplines to answer the key questions: how do we solve the common problems we have as a society, and how do we organize ourselves to provide those solutions? This involves analysis of government and other public institutions, their processes for tackling policy problems, and how to analytically approach the design, implementation and assessment of public policy.</td>
<td>English and four university preparatory courses in grade 12. See 1.3d.</td>
</tr>
</tbody>
</table>

**Facility of Arts and Science**

<table>
<thead>
<tr>
<th>Program (four-years)</th>
<th>Description</th>
<th>High School Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor of Arts and Science in Climate &amp; Environment</td>
<td>This program serves students who seek an interdisciplinary education with a unique strength in both environment and climate. The field of environment focuses on the physical and chemical composition, nature, and the societal relationship we maintain with our physical setting, while the field of climate focuses on how the Earth’s energy balance affects our environment. Students in the BASc in Climate and Environment program will have the option of completing a Co-op internship placement.</td>
<td>English; two of math, chemistry, biology or physics; and two other university preparatory courses in grade 12. See 1.3g.</td>
</tr>
<tr>
<td>Bachelor of Arts and Science in Health</td>
<td>A program for students interested in the ever-broadening field of health, including scientific, social and humanistic dimensions. Students in the BASc in Health will take courses in a wide range of disciplines and have the opportunity to focus on either the biomedical or social determinants and health equity field as they customize their degree. Students in the BASc in Health program will have the option of completing a Co-op internship placement.</td>
<td>English; two of math, chemistry, biology or physics; and two other university preparatory courses in grade 12. See 1.3g.</td>
</tr>
</tbody>
</table>

**Facility of Business**

<table>
<thead>
<tr>
<th>Program (four-years)</th>
<th>Description</th>
<th>High School Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor of Business Administration</td>
<td>Majors, advanced majors and honours programs are offered in accounting, entrepreneurship, enterprise systems, finance, international business, management and leadership, and marketing. A joint honours in business administration and economics option is available. Co-op programs are available in all streams.</td>
<td>English, math and three other university preparatory courses in grade 12.</td>
</tr>
</tbody>
</table>
## FACULTY OF EDUCATION

<table>
<thead>
<tr>
<th>Program (two-years)</th>
<th>Description</th>
<th>Entrance Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor of Education</td>
<td>A professional degree program that prepares graduates to enter the school system as teachers, at either the elementary or the secondary level.</td>
<td>Completion of an undergraduate degree (BA, B.Sc. or equivalent). Normally a minimum average of 70 in senior year of the undergraduate program. Limited enrolment.</td>
</tr>
</tbody>
</table>

## FACULTY OF SCIENCE

<table>
<thead>
<tr>
<th>Program (four-years)</th>
<th>Description</th>
<th>High School Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor of Science with Major</td>
<td>Major degree program offered in: aquatic resources, biology, chemistry, computer science, earth sciences, environmental sciences, mathematics, physics, psychology. During their second year of study, students may choose the advanced major, joint advanced major, honours or joint honours program. See section 7 for additional information.</td>
<td>English; pre-calculus math; two of biology, chemistry or physics; and one other university preparatory course in grade 12. See 1.3 f.</td>
</tr>
<tr>
<td>Bachelor of Science in Human Kinetics</td>
<td>The scientific study of human movement prepares students for a variety of options: employment and careers in the health and fitness sector; studies at the graduate level in biomechanics, motor control, or exercise physiology; and admission to programs such as education, physiotherapy, athletic therapy, or medicine. Students must choose a major, advanced major or honours in kinesiology, with a minor in human nutrition or health sciences, or a major, advanced major or honours in pre-education during their second year of study.</td>
<td>English; two of math, chemistry, biology or physics; and two other university preparatory courses in grade 12 (grade 11 physics highly recommended). Limited enrolment.</td>
</tr>
<tr>
<td>Bachelor of Science in Human Nutrition</td>
<td>The program prepares students for a range of career possibilities in the field of nutrition and foods as well as advanced studies. Students may choose the advanced major or honours program during their second year of study. Students may meet the requirements for the Integrated Dietetic Internship program and for the Graduate Dietetic Internship programs.</td>
<td>English; math; two of biology, chemistry or physics (normally biology and chemistry); and one other university preparatory course in grade 12. Limited enrolment</td>
</tr>
<tr>
<td>Bachelor of Science in Nursing</td>
<td>The program combines academic and professional theory with nursing practice to prepare nurses to think critically and creatively by providing a sound education in nursing science, related sciences, and the humanities. Graduates practice nursing across the health illness continuum, the life course, and health care settings. See 1.6 for other program options.</td>
<td>English, academic math, chemistry, biology, and one other university preparatory course in grade 12. A minimum average of 70 in the five preparatory courses is required for admission. Admission is competitive. Limited enrolment. Successful completion of CASPER prior to March 1. See 1.3 g.</td>
</tr>
<tr>
<td>Bachelor of Science with Diploma in Engineering</td>
<td>This option allows students to obtain both a Bachelor of Science and a Diploma in Engineering in four years. The combined option will provide students with the opportunity to add an Applied Sciences focus to their studies while completing their BSc. This combination will be beneficial to students who want to supplement their BSc in any of the above disciplines with skills offered through the Engineering Diploma. Graduates will be in the unique position to choose whether they would like to continue on to graduate school in the Sciences or Engineering, look for employment across a widened field of opportunities, or enroll in the engineering program at Dalhousie (or other potential partner institutions) to obtain their Bachelor of Engineering. Should graduates of this combined program choose to go on to complete the Engineering degree, they will then be unusually well-prepared as professional engineers.</td>
<td>English; pre-calculus math; chemistry; one of physics or biology; and one other university preparatory course in grade 12. Limited enrolment</td>
</tr>
<tr>
<td>Engineering Diploma (two years)</td>
<td>Upon completion of the diploma, students continue their studies at Dalhousie University, or transfer the credits earned to any other university of their choice, to complete the remaining requirements for the Bachelor of Engineering degree.</td>
<td>English; pre-calculus math; chemistry; one of physics or biology; and one other university preparatory course in grade 12. Limited enrolment</td>
</tr>
</tbody>
</table>

### 1.4 ADMISSION FROM THE UNITED STATES

High school graduates who have completed 16 academic subjects will be considered for admission to a four-year degree. The 16 courses must include four English courses and the program-specific subjects listed in the following chart.

<table>
<thead>
<tr>
<th>Program (four years unless otherwise indicated)</th>
<th>Additional Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor of Arts</td>
<td>see 1.3 d</td>
</tr>
<tr>
<td>Bachelor of Arts in Human Kinetics</td>
<td>3 sciences and/or mathematics</td>
</tr>
<tr>
<td>Bachelor of Music</td>
<td>see 1.3 c</td>
</tr>
<tr>
<td>Bachelor of Arts in Public Policy &amp; Governance</td>
<td>see 1.3 c</td>
</tr>
<tr>
<td>Bachelor of Business Administration</td>
<td>4 mathematics</td>
</tr>
<tr>
<td>Bachelor of Science</td>
<td>4 mathematics and 4 sciences</td>
</tr>
<tr>
<td>Bachelor of Science in Human Nutrition</td>
<td>4 mathematics and 4 sciences</td>
</tr>
<tr>
<td>Bachelor of Science in Nursing (four years and two sessions)</td>
<td>4 mathematics and 4 sciences</td>
</tr>
<tr>
<td>Diploma in Engineering (two years)</td>
<td>4 mathematics and 4 sciences</td>
</tr>
<tr>
<td>Bachelor of Science with Diploma in Engineering</td>
<td>4 mathematics and 4 sciences</td>
</tr>
<tr>
<td>Bachelor of Science in Human Kinetics</td>
<td>4 sciences and/or mathematics</td>
</tr>
<tr>
<td>Bachelor of Arts &amp; Science in Climate &amp; Environment</td>
<td>4 sciences and/or mathematics</td>
</tr>
<tr>
<td>Bachelor of Arts &amp; Science in Health</td>
<td>4 sciences and/or mathematics</td>
</tr>
</tbody>
</table>

### 1.5 ADMISSION FROM OTHER SYSTEMS OF EDUCATION

International applications will be considered on an individual basis.

For applicants from a British system of education, students must complete English and four other academic courses at the Ordinary level as well as four GCE AS level examinations or two GCE A level examinations with a minimum grade of A, B, or C for admission to any program. A student who has received exceptional results at the ordinary level may be considered for admission. Students who achieve a final grade of A, B, or C in approved Advanced ‘A’ level courses may be eligible to receive transfer credit. English, mathematics, two sciences, and one other academic subject are required for admission to programs in the Faculty of Science.

For applicants whose first language is not English, or whose normal language of instruction has been other than English, a test of English language proficiency may be required. The IELTS test is preferred and strongly recommended. Students with an IELTS score of 6.5 and no band below 6.0 will be deemed to have satisfied the English language requirements for admissions to undergraduate or graduate programs. Students with IELTS scores below 6.5 may be considered for admission conditional on the completion of a program designed to improve English language competency to an IELTS 6.5 equivalent. Other acceptable tests include: MELAB (minimum score required is 90), TOEFL (minimum score required is 92), CAEL (minimum score required is 70).
1.6 ADMISSION TO THE BACHELOR OF SCIENCE IN NURSING

Besides the traditional four-year degree program for students applying from high school, other students may apply for the accelerated two-year option or the part-time post-RN option. Admission is competitive and enrolment is limited. Students seeking re-admission must contact the Assistant Director, School of Nursing, prior to June 30. Transfer student should contact the Admissions office for options.

CASPer is a mandatory admissions requirement for the BSc in Nursing program. The test can only be taken once each year and is only valid for one academic cycle. Test scores are not released to students to protect the integrity of the test. The scores are used in combination with high school requirements and averages for admissibility into the BScn program. All students must successfully complete the test prior to the March 1 deadline in order to be considered for admission to Nursing.

<table>
<thead>
<tr>
<th>Program</th>
<th>Description</th>
<th>Admission Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accelerated two-year</td>
<td>University students who hold the required prerequisite courses may complete the B.Sc.Nursing program in a full-time two-year option. This program begins in January.</td>
<td>This program is available to transfer applicants who must have the following 30 credits completed prior to admission with a minimum grade of 65 in each of the mandatory courses and an overall average of 65 in the combined 30 university credits below: anatomy &amp; physiology (8 credits), microbiology (3 credits), English (3 credits), statistics (3 credits), and 15 credits of open electives. Successful completion of CASPER.</td>
</tr>
<tr>
<td>Post-RN 63 credits by distance, with limited opportunity for courses on campus</td>
<td>Designed around core nursing competencies with extensive flexibility that enables students to select courses meeting their professional interests and practice needs.</td>
<td>Completion of an approved registered nursing program and current RN license.</td>
</tr>
<tr>
<td>LPN to B.Sc. in Nursing Pathway</td>
<td>A bridging program designed for LPNs to earn credit for their education and experience. Students who are successful in this program will join the accelerated option students in the semester beginning in May.</td>
<td>Two-year Diploma from Nova Scotia Community College (NSCC). Graduated 2008 or later. Grades-minimum 75% overall average in both years of the diploma program. Total of 1800 hours work experience within the last two years (require a letter of verification from employer(s)). Current LPN License.</td>
</tr>
</tbody>
</table>

1.7 ADMISSION TO THE BACHELOR OF EDUCATION PROGRAM

Admission to the B.Ed. program is limited. Consideration is given to those who have successfully completed an undergraduate degree, provided references, and had experience related to a career in teaching. Admission is competitive and the possession of minimum requirements does not ensure acceptance into the program. See chapter 6 for admission and program requirements.

1.8 ADMISSION TO GRADUATE PROGRAMS

The requirements for admission to graduate programs are given in chapter 8.

2. GENERAL INFORMATION

2.1 Registration Fees

2.1.1 Tuition Fees
2.1.2 Other Registration Fees
2.1.3 Refunds
2.1.4 Students’ Union Fees
2.1.5 Payment Regulations
2.1.6 Non-Payment of Tuition, Registration, Residence or Meal Plan Fees
2.1.7 Other Undergraduate Fees
2.1.8 Tuition and Fees for Graduate, Distance, Diploma in Adult Education and Diploma in Ministry Programs

2.2 Residence and Meal Plans

2.3 Student Services

2.4 Human Rights and Equity

2.5 Safety & Security

2.6 University Scholarships and Bursaries

2.7 University Prizes

2.1 UNDERGRADUATE REGISTRATION FEES

2.1.1 Tuition Fees

The tuition fees shown here are for 2017-2018 in Canadian dollars and are subject to change. An addendum to this Academic Calendar will show the fees for 2017-2018. For the most current and up to date information on tuition fees and refunds please refer to the accounting services online resources at http://sites.stfx.ca/financial_services/StudentAccounts

Tuition fees including tuition, laboratories, library, and university health service are:

- Fewer than 24 credits $ 284.50 per credit
- 24 to 30 Credits $8084.00
- Above 30 Credits $8084.00 plus $258.47 per credit

For nursing students, the tuition fees including tuition, laboratories, library, and university health service are:

- Fewer than 24 credits $ 295.60 per credit
- 24 to 30 Credits $8395.00

Students with disabilities enrolled in fewer than 30 credits qualify for the per credit rate upon recommendation of the Program for Students with Disabilities.

2.1.2 Other Registration Fees

Up to 18 credits, a pro-rated students’ union fee is assessed at $5.34 per credit hour. For 18 or more credits, the fee is a flat rate of $180.00.

Students registered in 18 or more credits are automatically enrolled in the St. Francis Xavier Students’ Union Health and Dental Plans. This plan supplements provincial health care plans, it does not replace them. The fees for 12 months are:

- Canadian students $220.00 (single)*
- Dental Plan $130.00*
- International students $1085.00 (single)*

*Fees are subject to change from year-to-year dependent on changes to insurance premiums.

If a Canadian student is already covered under an extended health plan (this does not mean a provincial health plan), they may opt out of the students’ union health and dental plan(s). To opt out of the students’ union health and dental plan(s), students can go online to www.mystudentplan.ca. Select the StFX Students’ Union in the drop down and follow the steps to complete the opt out process. Opt out’s must be completed online before August 1 - September 9. Late opt out requests are not permitted.

International students attending SIFX are automatically enrolled in the SIFX Students’ union health and dental plans. International students are provided through this plan, the coverage that Canadian students receive provincially, as
well as additional health and dental coverage. International students cannot opt out of the health and dental plans unless proof of provincial medical coverage can be shown. Students with permanent residence outside of Canada are considered International students for the purpose of the health and dental plans, regardless of Canadian Citizenship. For additional information on the health and dental plan visit www.mystudentplan.ca.

Up to 24 credits, a pro-rated technology fee is assessed at $12.74 per credit. For 24 or more credits, the fee is a flat rate of $382.00.

Students who are not Canadian citizens or permanent residents are required to pay an international student fee in addition to tuition. Up to 24 credits, a pro-rated fee is assessed at $284.50 per credit. For 24 or more credits, the fee is a flat rate of $382.00.

Students who audit courses (not for credit) are charged one-half of tuition and registration fees. Senior citizens (age 65 and over) are not charged tuition or registration fees for undergraduate on campus courses only.

All fees are subject to change. A summary of tuition and registration fees from 2017-2018 in Canadian currency is as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>Residency</th>
<th>From Credit Hrs</th>
<th>To Credit Hrs</th>
<th>Per Credit Charge</th>
<th>Flat Charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part-time Tuition</td>
<td>In-province</td>
<td>0.01</td>
<td>23.99</td>
<td>$284.50</td>
<td>$8084.00</td>
</tr>
<tr>
<td>Full-time Tuition</td>
<td>Canadian Citizen</td>
<td>24.00</td>
<td>30.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overload Tuition</td>
<td></td>
<td>30.01</td>
<td>99.00</td>
<td>$258.47</td>
<td></td>
</tr>
<tr>
<td>Part-time NURS</td>
<td></td>
<td>0.01</td>
<td>23.99</td>
<td>$296.60</td>
<td></td>
</tr>
<tr>
<td>Full-time NURS</td>
<td></td>
<td>24.00</td>
<td>30.00</td>
<td>$8395.00</td>
<td></td>
</tr>
<tr>
<td>Coop Education</td>
<td></td>
<td>3.00</td>
<td>3.00</td>
<td></td>
<td>$3300.00</td>
</tr>
<tr>
<td>M.Ed. Tuition</td>
<td></td>
<td>36.00</td>
<td>36.00</td>
<td></td>
<td>$8154.00</td>
</tr>
<tr>
<td>M.A.Ed. Tuition</td>
<td></td>
<td>36.00</td>
<td>36.00</td>
<td></td>
<td>$10600.00</td>
</tr>
<tr>
<td>M.Sc., MA Tuition</td>
<td></td>
<td>42.00</td>
<td></td>
<td></td>
<td>$10150.00</td>
</tr>
<tr>
<td>Ph.D. Tuition</td>
<td></td>
<td>36.00</td>
<td>36.00</td>
<td></td>
<td>$10150.00</td>
</tr>
<tr>
<td>Travel - B.Ed.</td>
<td></td>
<td>3.00</td>
<td>3.00</td>
<td></td>
<td>$275.00</td>
</tr>
<tr>
<td>Photocopy - NURS</td>
<td></td>
<td>3.00</td>
<td>3.00</td>
<td></td>
<td>$30.00</td>
</tr>
<tr>
<td>International Student Fee</td>
<td>International on VISA</td>
<td>0.01</td>
<td>23.99</td>
<td>$284.50</td>
<td></td>
</tr>
<tr>
<td>Recreational Facilities Fee</td>
<td></td>
<td>18.00</td>
<td>30.00</td>
<td></td>
<td>$109.00</td>
</tr>
<tr>
<td>Information &amp; Technology Fee</td>
<td></td>
<td>24.00</td>
<td>30.00</td>
<td>$12.74</td>
<td></td>
</tr>
<tr>
<td>M.A.Ed. Tuition</td>
<td></td>
<td>36.00</td>
<td></td>
<td></td>
<td>$446.00</td>
</tr>
<tr>
<td>Health Care Plan</td>
<td>Canadian Citizenship</td>
<td>18.00</td>
<td>99.00</td>
<td></td>
<td>$220.00</td>
</tr>
<tr>
<td>Dental Plan</td>
<td></td>
<td>18.00</td>
<td>99.00</td>
<td></td>
<td>$175.00</td>
</tr>
</tbody>
</table>

2.1.4 Students' Union Fees
The Students' Union is the autonomous, democratic student organization at StFX. The union represents students' interests and provides a wide variety of academic, social, issue-oriented, and cultural services for students. Fees are collected at the request of the union and are administered by students.

Students' Union fees fund the following:

<table>
<thead>
<tr>
<th>Description</th>
<th>Full-time per credit</th>
<th>Part-time per credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students' union general budget</td>
<td>149.00</td>
<td>5.05</td>
</tr>
<tr>
<td>Athletic fee</td>
<td>7.00</td>
<td>0.29</td>
</tr>
<tr>
<td>Refugee student support</td>
<td>4.00</td>
<td>--</td>
</tr>
</tbody>
</table>

The general budget covers: student societies; Drive U, Food Resource Centre; orientation; activities and events; student newspaper; radio station; lobbying and publicity; issue awareness campaigns; elections; and general operations.

2.1.5 Payment Regulations
St. Francis Xavier University discontinued the mailing of paper statements effective December 1, 2012. Notification of the balance owing on the student account will be sent to the students St. Francis Xavier University e-mail account on a monthly basis. Students can check their student account online at http://mesamis.stfx.ca. Students can use their student number and PIN to access this information.

Refunds on student accounts will reflect the method of payment. Cheques should be made payable to St. Francis Xavier University. All fees are subject to change at any time. Payment can also be made by debit card in person. Students can also pay by telebanking or online banking by setting up St. Francis Xavier University as a payee and the account number is the student ID number. A portion of the fees is due and payable at registration in September and the balance at registration in January. New students are required to pay first-term fees during the orientation session at the Keating Centre in September.

Students who drop one or more course(s) or withdraw from the university, refunds are applied according to the date, within the applicable term, on which the drop(s) occur(s) or the student withdraws. The percentage of the refund reduces on a weekly basis until the end of the applicable refund period. The final dates on which students will receive refunds are indicated in the calendar of events at the front of the Academic Calendar, for first term, second term and full year courses.

The refunding process applies the appropriate refund percentages to the credit-hour value of courses that are dropped and then sums all of the student’s credit hours to determine the correct tuition and fee assessment. For examples of refunding, select the links at student accounts, then refunds on the accounts receivable web page at www.stfx.ca/campus/admin/accounting-services/
2.1.7 Other Undergraduate Fees
All fees are subject to revision.

Application fee for admission to undergraduate and B.Ed. programs $40.00
Late payment fee (each term) (see 2.1.6) 50.00
Confirmation payment (non-refundable)
B.Ed. students 300.00
New students 100.00
Transcript of record (each copy) 10.00
Letter of permission (per 3 credit course) 20.00
NSF cheque fee 20.00
Unwarranted breakage of or damage to StFX University property will be charged to the student responsible.

2.1.8 Tuition and Fees for Graduate, Distance, Diploma in Adult Education and Diploma in Ministry Programs
For information about tuition, fees and refunding policy for graduate studies, distance education, the Diploma in Adult Education and Diploma in Ministry programs, refer to the information available from the applicable program office.

2.2 RESIDENCE AND MEAL PLANS
Students in residence agree to be governed by the StFX University Community Code of Conduct and the residence contract and to assume responsibility for their own actions or those of their guests, for their room and, along with other residents, for the common areas and assets of their house.

No refunds of fees for residence or food service will be made if students are temporarily absent from residence. This includes absences for academic reasons. All inquiries about residence or meal plan contracts should be made to Residence Services, Morrison Hall, email: residence@stfx.ca, phone: 902-867-5106.

2.2.1 Application for Residence
New, Re-Entry, Mature, Exchange and Transfer Students
When a student applies to attend StFX, they are given the opportunity to apply for residence. New students direct from high school are guaranteed a space in residence if they confirm their acceptance to the university by paying a $100 confirmation fee and submit a residence application by May 15. Once offered a space in residence, students have until June 1 to pay their $400 residence fee to confirm their space. This $400 non-refundable fee is applied towards the student's cost for residence and meal plan. Students may continue to apply for residence after May 15.

Returning Students
Returning students may apply for residence using the online application. Information about the room assignment process can be found on the residence services website. Once a room assignment is offered to a student and a student accepts their room and selects their meal plan, a $400.00 non-refundable residence fee (room forfeiture fee) will be applied to the student's account if a student cancels their residence contract before August 15. Refer to the residence contract for details about cancelling after August 15. Students wishing to return to residence must be in good standing with the Community Code of Conduct. Students can continue to apply to live on campus during the academic year.

2.2.2 Residence and Meal Fees and Regulations
All students living in residence are required to participate in a combined room and meal plan. There are minimum meal plans and declining cash balance (DCB) associated with each residence. Students can always increase their meal plan option at any time; however, no meal plans can be downgraded after October 7. Off-campus students may purchase a meal plan and/or DCB or purchase meals. Visit the residence website.

2.2.3 Duration of Residence Occupancy
New, Re-Entry, Mature, Exchange and Transfer Students
The university shall permit new students to occupy their assigned room from Saturday, September 1, 2018 until 24 hours after their final exam in December or by noon the day after the final exam period, whichever date and time is earlier. Students may return to residence second term on January 6, 2019 until 24 hours after their final exam in April or by noon on the day after the final exam, whichever date and time is earlier.

Returning Students
The university shall permit returning students to occupy their room from Monday, September 3, 2018 until 24 hours after their final exam in December or by noon the day after the final exam, whichever date and time is earlier. Students may return to residence second term on January 6, 2019 until 24 hours after their final exam in April or by noon on the day after the final exam, whichever date and time is earlier.

Note: Students, in extenuating circumstances, may apply to occupy their room on dates outside of those identified above; however, they will be required to sign additional contract(s) and will be subject to additional charges. Pre-approval by residence services is required.

2.2.4 Cancellation of Residence Application and Contract
New Entry Students
Where the resident notifies the University prior to June 1, that he/she does not intend to take a room in residence, the residence deposit will be returned. If the resident notifies the university that he/she does not intend to take a room in residence after June 1, he/she will forfeit their $400 residence deposit. If the resident notifies the University after August 15 that he/she does not intend to take their assigned room in residence, then the resident is responsible for 15% of the room fee for the full academic year.

Returning Students
Once the returning resident accepts his/her room assignment, he/she is bound to the residence contract. Breaking a contract after accepting a room assignment will result in a $400.00 room forfeiture fee. If the resident does not notify the University prior to August 15 that they do not intend to return to residence, then the resident is responsible for 15% of the room fee for the full academic year.

Where the resident notifies the university in writing that they wish to decline their room assignment either after the resident takes up his/her room (this includes an off-campus move) or after the day when the resident was expected to take occupancy (this includes an off-campus move), then the resident assumes full responsibility for room and meal plan fees for the 2018-2019 academic year except in the following cases:

a) if the resident formally withdraws from the University (academic withdrawal) up to and including November 1, they will receive an 85% credit for the remaining room and meal plan fees from the date they vacate the premises; if the resident formally withdraws in the first term after November 1 they will be charged room and meal plan fees for the first term; if the resident formally withdraws in the second term up to and including February 1, the resident will receive an 85% credit for the remaining room and meal plan fees from the date the resident vacates the premises; if the resident formally withdraws in the second term after February 1, the resident will be charged with room and meal plan fees to the end of the academic year according to the current calendar of events.

Residents are required to vacate their residence within 24 hours of academic withdrawal; or

b) if the resident is released from this contract due to compassionate circumstances, it is at the sole discretion of the University.

The university reserves the right to cancel any residence contract on the basis of violation of policies outlined in the University Community Code and/or residence contract for residence and dining hall.

2.3 STUDENT SERVICES
The StFX student services department strives to maintain an inclusive and welcoming environment. Along with residence and food service, programs are provided to help students develop their capabilities and interests as fully as possible within the university community. In addition to the services identified below, the student services department works with the students’ union to co-ordinate the first-year orientation program.

2.3.1 Athletic and Recreational Programs
The university has a wide variety of athletic and recreational programs. The campus recreation program provides all students with opportunities to participate in different forms of physical activity through intramural sports, which offer competitive leagues and tournaments; non-credit instruction in a variety of physical activities; self-directed activities; and sport clubs.

StFX has a long and distinguished history in intercollegiate varsity athletics, offering students with superior athletic ability an opportunity to develop and utilize their talents in competition with students from other universities within the Atlantic University Sport conference and USPORTS national organization. There are women’s teams in basketball, cross-country, hockey, rugby, soccer and track & field; and men’s teams in basketball, cross country, hockey, football, soccer and track & field. StFX Club sports include men’s baseball, cheerleading, curling, dance, equestrian, women’s field hockey, men’s lacrosse, rowing, men’s rugby, swimming and ultimate frisbee.

2.3.2 Student Career Services
The Student Career Services (SCS) offers three primary services: career coaching,
career information and employment services. Career coaching services are provided on an individual and group basis. The SCS can incorporate the strong interest inventory in students' career decision-making process and further educational opportunities.

Throughout the academic year, the SCS offers a variety of events and programs that help students make informed career decisions and develop effective job search strategies. Some examples include workshops on career planning, resume writing, job search, interview skills and job fairs. Employment related services include advertising new graduate, summer and on-campus jobs as well as employer and school information sessions which help students gain an understanding of the skills required in today's workplace.

### 2.3.3 Chaplaincy Services
In keeping with the university's Catholic Christian character, a university chaplain and an associate chaplain co-ordinate a team ministry which gives interested students an opportunity for religious and spiritual expression. Part-time ministers of the Anglican and United Church co-ordinate activities for students of their denomination.

### 2.3.4 Counselling Services
The StFX counselling centre provides a variety of services to help students handle the personal challenges of university life. Professional counsellors can work with students on all personal issues which may include homesickness, anxiety, depression, stress, eating disorders, relationship problems, academic struggles and career preparation - any issue big or small.

The counselling centre offers individual and group counselling. Counsellors can make referrals to other services as required. All contact with the counselling centre is strictly confidential, students may self refer or referrals may be made by others.

The counselling centre is located on 3rd floor Bloomfield Centre (Room 305). To contact us, please visit our website at [http://www.sites.stfx.ca/counselling](http://www.sites.stfx.ca/counselling) or phone (902) 867-2281.

### 2.3.5 Student Life Office
The Student Life Office works closely with other areas on and off campus to enhance student success. The office strives to provide a positive space for all students to feel welcome and included in the wider StFX and Antigonish community. Academic success is always the number one priority while attending university however, a close second is engaging with and being involved in all the things the campus community has to offer.

The office is responsible for non-academic student advising for Gender and Sexual Diversity, Aboriginal, and Student of African Descent, as well as the Student Career Centre. The office acts as the primary liaison with the Students' Union and works collaboratively to offer programming on student leadership, off campus resources and university transition. The Student Life Office is responsible for the administration of the Community Code of Conduct which deals with all matters of non-academic student conduct.

The office is located on 3rd floor Bloomfield Centre (Room 306). To contact us, please visit our website at [http://www.sites.stfx.ca/student_life](http://www.sites.stfx.ca/student_life) or phone (902) 867-3934.

### 2.3.6 Financial Aid Office
The university maintains a financial aid office to advise students regarding Canadian and American government student loans, help students with financial planning, administer the university bursary program, and provide information on scholarships and awards from sources outside the university. For further information, visit the website here.

### 2.3.7 Health Services
The StFX Health Centre encourages students to take care of their body while expanding their mind. The Health Centre offers holistic health care services that include general physicians, nurses and referrals to alternative health care providers. The nurses provide ongoing residence and off campus consultations as well as health promotion sessions. Students can take advantage of special services like immunization clinics, liquid nitrogen treatment, sexual health information, flu and travel vaccines. StFX student wellness is at the core of a positive student experience.

The Health Centre is located on 3rd Floor Bloomfield Centre (Room 305). To contact us, please visit our website at [http://sites.stfx.ca/health_and_counselling/index.html](http://sites.stfx.ca/health_and_counselling/index.html) or phone (902) 867-2263.

### 2.3.8 Student Life Advisors
StFX offers advising which aids students transitioning into and through university and recognizes that students have a variety of needs in the many distinct communities within the broader StFX community. The university aims to foster an environment of cultural competency and diversity through a variety of programs and one-on-one assistance which encourages student academic and personal success. These include Gender and Sexual Diversity, Aboriginal and Students of African Descent and mature student advisors. More information is available at [http://sites.stfx.ca/student_life](http://sites.stfx.ca/student_life).

#### 2.3.9 Tamable Rooms Centre for Accessible Learning
StFX welcomes students with diagnosed, permanent disabilities and offers a student-centered program of support. These supports can include: advocacy, tutoring, exam accommodation, registration assistance, assistive technology training, peer support, physical accessibility arrangements, transition workshops, speakers bureau and note taking assistance.

The program is located in the Tamable Rooms, 108 Angus L. MacDonald Library. Contact us at (902) 867-5349 or visit the website at [http://sites.stfx.ca/accessible_learning](http://sites.stfx.ca/accessible_learning)

#### 2.3.10 Wellspring Centre
The Sisters of St. Martha staff Wellspring Centre, a comfortable, relaxing environment for reflection, interaction, prayer, support, personal and spiritual growth.

#### 2.3.11 Student Success Centre
Student Success Centre services complement course work by assisting students in developing their academic communication skills and assisting them in accessing the other academic supports they require, including locating subject tutors. StFX students can arrange free one-to-one appointments by registering through the centre’s web page ([http://sites.stfx.ca/ssc](http://sites.stfx.ca/ssc)), by calling the centre at (902)867-5221, or by walking in to the centre in the Angus L. Macdonald library. Student Success Centre instructors discuss with students ways to improve writing and general academic skills and habits. Writing consultations are valuable at any stage of the writing process. Appointments may also focus on improving academic writing and communication skills such as note-taking, oral presentations, and exam preparation. In addition, the instructors at the centre assist students through the following programs:

**Academic Skills Workshops**

No matter how well students perform in high school, university presents a new set of challenges, and these are sometimes not apparent until students have been at university for several months. This program of workshops introduces students to strategies that will help them receive the highest quality university education possible. These workshops are not a tutorial service or a remedial program. Instead, they enable students to develop or enhance their skills and become self-directed, responsible learners. Workshops deal with skills such as time management, note taking, and academic writing. Students at any stage of a degree are welcome, though those entering from high school will find the full program especially valuable.

Registration in individual workshops is available (see the Student Success Centre website for fees and details), and those who register for and attend all six workshops in a term will earn the Certificate in University Learning.

**APEX: Academic Program of Excellence**

This is a free, mandatory university program for students accepted and placed on probation by StFX or another institution and for students re-admitted after suspension or dismissal as a result of a previous year’s academic performance. See section 3.12. Students are required to register for and participate in six workshops in the fall term. In addition to attending workshops, students must meet with a Learning Skills instructor at least twice per term in fall and winter, including once in September. The one-to-one appointments provide opportunities for students to focus on their specific academic needs. Details are available on the Student Success Centre’s website. Upon application by a student, the Committee on Studies of the appropriate faculty may excuse the student from taking APEX.

**EAP: English for Academic Purposes**

A bridging program for English language, for students planning to take a bachelor’s degree at StFX, who have been conditionally accepted into an academic program but do not meet the English language requirements. The courses consist of 25 hours per week of classroom instruction and some outings to local sites and cultural events. Students must achieve the standard for admission (IELTS 6.5) in a benchmarked test before moving into a diploma or degree program at StFX.

EAP is not an English-as-a-second-language (ESL) course; rather, the EAP curriculum concentrates on reading critically, writing analytically, and applying these skills to academic material. Classes provide students with the opportunity to listen, learn, and put their academic skills into practice. Course fees and other details are available on the Student Success Centre’s website.

### 2.4 HUMAN RIGHTS & EQUITY

All members of the university including students, staff and faculty have the right to study, work and learn in an environment that promotes equity and that is free from harassment and discrimination on human rights grounds (as described in the Nova Scotia Human Rights Act, 1991). In support of ensuring a campus free of discrimination and harassment, and of creating a collegial study, work and
living environment where all individuals are treated with respect and dignity, the StFX Human Rights & Equity Advisor assists with the resolution of discrimination and harassment issues, including arranging for informal or formal procedures for resolving concerns and complaints. The Human Rights & Equity Advisor also offers education and training on a wide variety of human rights and diversity issues, and advocates for educational and employment equity. The Discrimination and Harassment Policy can be found on the human rights’ office website at https://sites.stfx.ca/equity/index.html or on the Human Resources website at http://sites.stfx.ca/hr/policies

2.5 SAFETY AND SECURITY

Safety & Security Services fosters and safeguards a healthy, safe and welcoming campus community that supports the well-being of students, faculty, staff and guests. Partnerships within the university and active collaboration with local law enforcement and community emergency response teams ensures essential services are in place and ready to respond.

Safety & Security Services provides 24-hour coverage 365 days per year via the Safety & Security Operations Centre (SOC). In addition, our team of dedicated Safety & Security Officers conduct regular vehicle and foot patrols of campus instilling confidence that everyone is able to LIVE, LEARN, WORK and PLAY in a supportive and safe environment.

The Student Safety & Security Services Leadership Team, known as “X-PATROL”, work side by side with Safety & Security Services Officers to provide campus event supervision, evening foot patrols and a walk home service.

2.6 UNIVERSITY SCHOLARSHIPS AND BURSARIES

The purpose of the university scholarship program is to recognize superior scholastic achievement on the part of high school graduates and in-course students. Awards are offered to students selected by the university scholarship awards committee and are tenable only at StFX University. If a student is eligible for more than one university-nominated scholarship, s/he will receive the largest to which s/he is entitled.

The university gratefully acknowledges the generosity of the persons and organizations whose contributions made possible the following scholarships, awards, and bursaries:

Dr. Louis J. Allain Scholarship
Daniel W. & Marjorie E. Almon Scholarship
Alumni Scholarship Endowment
Ambroise Allen Bursary
The Lord Ambroise Celtic Travel Bursary
Christopher Amirault Award
Anderson Environmental Award
George Anderson Business Award
George Anderson Leadership X-Ring Award
Antigonish Diocese CWL Bursary
Art History Prize
Justin Avery Memorial Award
Bank of Montreal Scholarship Fund
Rev. R.V. Bannon Scholarship Fund
Barrick Gold Scholarship
Holly Bartlett Memorial Bursary
Bauer Bursary Fund
A.P. Beaton Scholaristic Award
John Beaton Fellowship Bursary
Rev. Donald Belland Bursary
Bergengren Credit Union Scholarship
Lou Bilek Soccer Award
Rod & Betty Bilodeau Bursary
Birks Foundation Bursary
Michelle Birks Memorial Bursary
Black Student Bursary in Education
Harry and Martha Bradley Scholarship
Bishop Bray Foundation Scholarship
Cecilia Brennan Bursary
Jacqueline Brougham Award
Jo M. Brown Scholarship in Nursing
Claude Brunelle Memorial Scholarship
Florence Kate Burroughs Nursing Scholarship
CJFX Scholarship
Dominic Joseph Campbell O’Halloran Bursary
Rev. J.V. Campbell Bursary
Michael A. “Diker” Campbell Scholarship
Cape Breton Scholarship and Bursary Fund
Dr. J.J. Carroll Scholarship
Catholic Women’s League Scholarship
Celtic Travel Bursary
Central Home Improvement Warehouse Scholarship
Clarence & Helen Chadwick Bursary
Chadwick-Hayes Scholastic Award
Chevrolet High Note Student Bursary
Dr. Leo P. Chiasson Fund
A.W. (Bill) Chisholm Bursary
Donald A. Chisholm Memorial Scholarship
Rev. J.C. Chisholm Scholarship in Biology
Rev. John Archie Chisholm Memorial Scholarship in Celtic Studies
J. Fraser Chisholm Scholarship
Rev. John W. Chisholm Fund
Joseph D. Chisholm Scholarship
Mary Ann Chisholm Nursing Bursary Award
Rod Chisholm Scholarship
CIBC Scholastic Award
Rosemary Landry Clark Memorial Award
Rev. Dr. E.M. Clarke Scholarship in Pure and Applied Sciences
Class of 1954 Bursary
Class of 1955 Bursary
Class of 1956 Bursary
Class of 1962 Bursary
Class of 1963 Scholarship
Class of 1965 Fund
Class of 1970 Bursary
Class of 1971 Scholarship
Class of 1973 Service to Others Award
Paul Cogger Memorial Scholarship
Gerald P. Coleman Q.C. Award
Louis Connolly Fund
Jean E. Cooke Bursary
Daniel Cordeau Scholarship
Arleen Power Corey Memorial Fund
Rev. Cornelius B. Collins Scholarship
Rev. Cornelius J. Connolly Bursary
Rev. Cornelius J. Connolly Scholarship
Dahdelah Scholarship for Indigenous Canadians
General Romeo Dallaire African Leadership in Education Award
John & Selena Daly Scholarship
James E. & Mary D. Deagle Endowment
Edward P. Delaney Bursary
Edward P. Delaney Scholarship
Democracy 250 Leadership Bursary
Development Studies Internship Bursary
Alphonse Desjardins Commemorative Scholarship
Jeannine Deveau Educational Equity Bursary
Jeannine Deveau Educational Equity Scholarship
L.A. DeWolfe Memorial Scholarship
Diploma in Ministry Bursary
Dr. John Dobson Memorial Award in Adult Education
Paul Dole Memorial Bursary
Rev. John Dougher Bursary
Alexander Doyle Memorial Scholarship
Rev. D.A. Doyle Scholarship
Dorothy Doyle Bursary
DSM Bright Futures Bursary
The Sir James Dunn Foundation Internship Scholarship
Trudy Eagan Women in Business Award
Faculty Staff Scholaristic Award
J. Wallace Farrell Memorial Scholarship
Margaret Martell Farrell Scholarship
Margaret Martell Farrell B.Ed. Award
The Audrey Penwick Memorial Award for Studies in Adult Education
Rev. Peter Fiset Fund
Florida Alumni Bursary in Memory of Jim Kenney
Irene & Joseph Francis Memorial Award
Roger Franklin Memorial Scholarship
Hugh Allen Fraser Scholarship
Fund for French Scholarships
Douglas P. Furlott Award

The university gratefully acknowledges the generosity of the persons and organizations whose contributions made possible the following scholarships, awards, and bursaries:
Gaelic Scholarship Fund
L.T. Gallant Bursary
Danny Gallivan Memorial Scholarship
Wilfred J. Garvin Scholarship
General Motors of Canada Ltd. Women in Science Bursary
General Motors of Canada Ltd. Women in Science Scholarship
Dr. A. Marie Gillan Award in Adult Education
Anne Gillis (of Glen Alpine) Award
Donald and Margaret Gillis (of Glen Alpine) Award
Sister Henrietta Gillis Award for Education
Hugh and Celia Gillis Bursary
Joseph and Tessie Gillis Fund
Margaret Gillis (of Glen Alpine) Award
Mary Gillis (of Glen Alpine) Award
John and Sarah Gillis-Campbell Award
Mary Margaret Gillis-Campbell Award
Colin and Christine Gillis-Chisholm Award
Joan Gillis-Lang Award
Margaret C. Gillis-MacDonald Award
Mary Ann Gillis-MacIsaac (of Glen Alpine) Award
Glen Scholarship
Fred Gormley Scholarship
Jeff Graham Memorial Scholarship
Mary Jane Graham Bursary
Catherine (MacLeod) Grant Scholarship
Daniel and Emeline Grant Scholarship
Rev. J. Edward Grant Bursary
Ray Greening Memorial Scholarship
Shirley (Martinello) Grinnel Scholarship
The Gulf Canada Scholarship
Dr. H.B. Hachey Scholarship
A.G. Hamilton Scholarship
Thomas J. Hayes Scholarship
Dr. H. Stanley and Dorreen Alley Heaps Scholarship
Heaslip/Macdonald Award Fund
Bernard M. Henry Scholarship
Dr. Mary G. Hickman Award for Education
Rosemary & Stephen A. Holton Scholarship
Mitch Hudson Memorial Scholarship
Phil Hughes Leadership Award
Philip H. Hynes Memorial Scholarship
IBEW Local 625 Nursing Award
Arthur and Sandra Irving Scholarship
Dr. A.A. Johnson History Award
Joyce Family Foundation Bursaries
Julie Anne Award
B.J. Keating Memorial Award
Gisela Keck Outstanding Achievement Award
Rev. George Kehoe Memorial Bursary
Alexander and Mary Kell Memorial Scholarship
Angus Kell Memorial Bursary
Thelma May Kempffer Award
M. Colleen Kennedy Memorial Bursary
Margaret Kennedy Scholarship
Killam American Bursary
Elmer & Pauline King Atlantic Canada Bursary
Rev. Martin Luther King, Jr. Award
Rev. John B. Kyte Scholarship
Dr. & Mrs. Francis E. Lane Scholarship
Joan Gillis Lang Fund
Livingstone-Topshee Award
MacBain-Riley International Fund
Don Loney Scholarship
Rev. Dr. Dan MacCormack
Dr. Frederick Murdock Scholarship
MacDonald-MacIntyre Scholarship
Angus MacDonald Memorial Bursary
Rev. B.A. MacDonald Scholarship Fund
Rev. Hugh John MacDonald Memorial Fund
James M. MacDonald Bursary
Kathryn M. MacDonald Scholarship
Linda MacDonald Humanitarian Bursary
M. & N. MacDonald Bursary
Dr. Vernon and Mrs. Ann MacDonald Bursary
The Honourable Hugh J MacDonnell Memorial Bursary
John H. MacDougall Engineering Bursary
Allan J. MacEachen Fellowship in Celtic Studies
Angus MacGillivray Bursary
Colter MacGillivray Bursary
Katherine MacGillivray Maloney Nursing Award and Bursaries
Rev. Rod MacInnis Bursary
Roddie MacInnis Memorial Bursary
Rev. R.K. MacIntyre Scholarship
Hon. Angus MacIsaac Democracy 250 Veteran’s Memorial Leadership Bursary
Rev. Charles MacIsaac Memorial Bursary
Donald F. MacIsaac Memorial Scholarship
John C. MacIsaac Foundation Scholarship
Mary McNaill MacIsaac Bursary
Minnie MacIsaac Award
J. Elizabeth Mackasey Memorial Award for Education
Michael and Jean MacKenzie Award
Gerard MacKinnon Memorial Bursary
Hugh MacKinnon Scholarship
Dr. Ron MacKinnon Enterprise Systems Scholarship
Dr. Cecil MacLean Award
Donald and Ethel Lyle MacLean Scholarship
Monsignor Donald A. MacLean Scholarship
Rev. Leonard (Butch) MacLean Bursary
Neil MacLean Memorial Gaelic Teacher Award
Roderick D. MacLean Award
The Duncan Hugh and Millie MacLellan Bursary
Joseph & Mary (MacNeil) MacLellan Bursary
Rev. J.D. MacLeod Bursary Fund
Joan M. and Douglas MacMaster StFX University Award
Daniel and Mary MacNeil Fund
John V. MacNeil Fund
Archie and Catherine MacPhee Memorial Bursary in Catholic Studies
Joseph B. MacSween Award
Rev. Rod J. MacSween Scholarship
The Noreen Manthorne Memorial Bursary
Rev. Rod J. MacSween Scholarship
Memorial Scholarship for a Woman in Engineering
Rev. Rod J. MacSween Scholarship
Memorial Scholarship for a Woman in Engineering
John V. MacNeil Fund
Monsignor Donald A. MacLean Scholarship
Mary McNair MacIsaac Bursary
John C. MacIsaac Foundation Scholarship
Donald F. MacIsaac Memorial Scholarship
Dr. Mary G. Hickman Scholarship
Bernard M. Henry Scholarship
Rev. J.D. MacLeod Bursary Fund
Hon. Angus MacIsaac Democracy 250 Veteran’s Memorial Leadership Bursary
Rev. Charles MacIsaac Memorial Bursary
Mary McNaill MacIsaac Bursary
Dr. Frederick Murdock Scholarship
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Rev. Hugh John MacDonald Memorial Fund
James M. MacDonald Bursary
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M. & N. MacDonald Bursary
Dr. Vernon and Mrs. Ann MacDonald Bursary
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Roddie MacInnis Memorial Bursary
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Rev. Charles MacIsaac Memorial Bursary
Donald F. MacIsaac Memorial Scholarship
John C. MacIsaac Foundation Scholarship
Mary McNaill MacIsaac Bursary
Minnie MacIsaac Award
J. Elizabeth Mackasey Memorial Award for Education
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Joseph & Mary (MacNeil) MacLellan Bursary
Rev. J.D. MacLeod Bursary Fund
Joan M. and Douglas MacMaster StFX University Award
Daniel and Mary MacNeil Fund
John V. MacNeil Fund
Archie and Catherine MacPhee Memorial Bursary in Catholic Studies
Joseph B. MacSween Award
Rev. Rod J. MacSween Scholarship
The Noreen Manthorne Memorial Bursary
Memorial Scholarship for a Woman in Engineering
Dr. Edward J. Meyer Memorial Scholarship
M. Colleen Kennedy Memorial Bursary
Margaret Kennedy Scholarship
Killam American Bursary
Elmer & Pauline King Atlantic Canada Bursary
Rev. Martin Luther King, Jr. Award
Rev. John B. Kyte Scholarship
Dr. & Mrs. Francis E. Lane Scholarship
Joan Gillis Lang Fund
Livingstone-Topshee Award
MacBain-Riley International Fund
Don Loney Scholarship
Rev. Dr. Dan MacCormack
Senator John MacCormick Scholarship
MacDonald-MacIntyre Scholarship
Anastasia MacDonald Bursary
Angus R. MacDonald Memorial Bursary
Rev. B.A. MacDonald Scholarship Fund
Rev. Hugh John MacDonald Memorial Fund
James M. MacDonald Bursary
Kathryn M. MacDonald Scholarship
Linda MacDonald Humanitarian Bursary
Rev. J.B. Nearing Scholarship
Rev. Dr. P.J. Nicholson Scholarship
Paul and Miki Norris Bursary
Nova Scotia Power Scholarships
Daniel and Margaret O'Brien Bursary
Dr. Ed O'Connor Scholarship
Commodore Bruce S. Oland Scholarship
Philip W. Oland Scholarship
Barry O'Leary Leadership Award
Rudy Pace Memorial Jazz Bursary
The James and Marguerite (Murphy) Pistury Bursary
Pluta Family Bursary
Prodigy Consulting Scholarship
Allan Quigley Adult Education Access Award
Rev. Donald M. Rankin Scholarship
RBC Leadership Award
Ken Reashor Bursary
Dr. Abraham Risk Award
Joy (MacIsaac) and Diego Romero Scholarship
Helen & Cyril Ross Bursary
Bruce and Dorothy Rossetti Scholarship
Father Gerald Russell Bursaries
Dr. Ria Rovers Memorial Scholarship
Royal Bank Scholarship
Noah Rossell "Return-to-University" Bursary
B.A. Ryan Scholarship
Claire Sampson Nursing Scholarship
Loretta Saunders Memorial Bursary
James P. Sawler Scholarship
Tom & Lieselot Scales Bursary
Schwartz School Scholarship/Bursary
T.J. Sears Family Scholarship
Service Learning Bursary
Dr. William Shaw Bursary in Earth Sciences
Dr. Ann Sherman Scholarship
Sisters of St. Martha Scholarship in Nursing
Sisters of St. Martha Single Mothers Bursary
C. Gordon Smith Scholarship
St. Francis Xavier University Alumni Scholarships
St. Francis Xavier Association of University Teachers Bursary
St. Martha's Hospital School of Nursing Alumnae Bursary
The Sobey Scholarship
J. Jarvis Stewart Bursary
Hon. John B. Stewart Scholarship for Political Science
SIFX Halifax Alumni Kehoe Bursary
John L. Stoik Scholarship
Students for Life Bursary
Students' Union Bursary
Sullivan Family Scholarship
Marjorie McLeod Sullivan Bursary
Tannenbaum Canada Israel Exchange Student Scholarship.
Fred L. Taylor Memorial Scholarship
TD Bank Scholarship in Jazz Studies
Allard Tobin Fund
Dr. J.J. Tompkins Memorial Scholarship
Rev. John F. Toomey Bursary Fund
Rev. John F. Toomey Scholarship Fund
Toronto Alumni Bursary
Judge D. Tramble Bursary
Arthur P.H. Tully Fund
Katherine Tully Scholarship
Ted and Ann (MacDonald) Turcotte Bursary
Paul Wagco Scholarship
Walker Wood Foundation Bursary
Walker Wood Foundation Bursary for Bachelor of Arts
Walker Wood Foundation Bursary for Bachelor of Science in Nursing
Ada MacNeil Wallace Bursary
Martin J. Walsh Bursary
Katherine Wdowiak Memorial Award
Kathie Wdowiak Bursary
Westbury Family Scholarship
James and Mary Whelan Scholaristic Award
Rev. Robert Wicks Fund
August Wilkins Atlantic Engineering Competition Fund
August Wilkins Scholarship in Engineering
XEDC Entrepreneurship Bursary
Angus F. and Jean A. Young Award
John H. Young Award
Young Family Award

2.6.1 Major and Entrance Scholarships
SIFX is founded on the values of academic excellence, leadership, and service to others. The SIFX National Entrance Scholarship program reflects these qualities. Students' efforts in achieving a high school average of 85 or greater in their grade 12 year are recognized with a guaranteed minimum award.

All scholarships are awarded on the grade 12 average of either December exams or first-semester final grades in grade 12. Scholarship averages are based on available marks of the five required courses for the program to which the student is applying. The deadline for all entrance and major scholarship applications listed below is March 1. To be eligible for any guaranteed entrance renewable scholarships you are required to submit the following:

a) An application for admission to the University;
b) A final first term/semester grade 12 high school transcript with an average of 85% or higher prior to March 1;

c) Complete all required tasks for major scholarships and upload application materials through the online scholarship application site, awards.stfx.ca. Application materials include a detailed résumé containing a description of extra-curricular activities and awards and two letters of recommendation, one of which must be from a high school teacher from your current year of high school.

If a student is eligible for more than one university nominated scholarship, s/he will receive the largest to which s/he is entitled. Students must be enrolled at least 24 credits in the Fall/Winter terms combined, with a minimum overall average of 80%, at SIFX to maintain scholarship offer. All scholarships are tenable at SIFX over four consecutive years of study. Beginning in September 2017, any new, incoming undergraduate students who do not meet the renewal terms stated above will not be eligible to renew their entrance or major scholarships in subsequent years.

$32,000 SIFX President's Scholarships
These awards recognize outstanding academic achievement. They are for entering students who demonstrate the qualities and values honoured at SIFX: high academic success, leadership, and dedication in service to others. These scholarships are based on grade 12 December exams or first-semester grade 12 results. They are renewable for four years at $8,000 per year. The deadline for application is March 1.

$28,000 International Baccalaureate (IB) Scholarships
These scholarships are awarded to students who successfully complete the IB Diploma program, renewable for four years at $7000 per year. The application deadline is March 1.

$24,000 Philip W. Oland Scholarships and J.P. McCarthy Scholarships
Students with the highest scholastic standing and demonstrated leadership ability are eligible for these scholarships. A nomination letter from their principal or guidance counsellor is required for this scholarship. These scholarships are based on grade 12 December exams or first-semester grade 12 results. Philip W. Oland Scholarships are available to students from the Atlantic provinces only while the J. P. McCarthy Scholarships are open to entering students from across Canada. These scholarships are renewable for four years at $6,000 per year. The deadline for application is March 1.

$24,000 SIFX Canadian Scholarships
These scholarships are awarded based on academic achievement and the province of origin of the student. Based on grade 12 December exams or first-semester grade 12 results, these scholarships are renewable for four years at $6,000 per year. The application deadline is March 1.

$24,000 SIFX International Scholarships
These scholarships are awarded based on academic achievement in the country of origin of the student. Based on grade 12 December exams or first-semester grade 12 results, these scholarships are renewable for four years at $6,000 per year. The application deadline is March 1.
$12,000 StFX Merit Scholarships
These scholarships are awarded to outstanding students in arts, science, or the Gerald Schwartz School of Business. Based on grade 12 December exams or first-semester grade 12 results, these scholarships are renewable for four years at $3,000 per year. The application deadline is March 1.

$7,000 StFX Guaranteed Scholarships
These entrance scholarships are awarded to all applicants with an average of 90% or higher, based on grade 12 December exams or first-semester grade 12 results. These scholarships are renewable for four years at $1,750 per year. The application deadline is March 1.

$5,000 StFX Guaranteed Scholarships
These entrance scholarships are awarded to all applicants with an average of 85 to 89.9 per cent, based on grade 12 December exams or first-semester grade 12 results. These scholarships are renewable for four years at $1,250 per year. The application deadline is March 1.

2.6.2 University In-Course Scholarships
In-course scholarships are awarded to students who have completed at least one academic year of 24 credits in the Fall and Winter terms combined towards a first degree. They are awarded on the basis of academic performance at StFX University. A minimum average of 60 in each scholarship group is required. No application is necessary. The scholarships, ranging in value from $1,000 to $5,000, are awarded for one year.

For the purpose of scholarships, students are grouped by year of study and by degree programs as follows:

- Group A: BA and Music
- Group B: BBA
- Group C: B.Sc. and Engineering
- Group D: Nursing, Human Nutrition, and Human Kinetics

The following guidelines are used in making these awards:

a) A student ranked first in each scholarship group will qualify for the amount of $5000.

b) A student ranked in top 5% in each scholarship group will qualify for the amount of $2000.

c) A student with average of 80% or higher will qualify for the amount of $1000.

d) If a student is eligible for more than one university nominated scholarship, s/he will receive the largest to which s/he is entitled.

2.6.3 Bursaries
University bursaries are available under three programs: Entrance, Limited and General. Awards range in value from $250 to $4000 and are based on demonstrated need of the student and availability of bursary funds. The holder of a bursary is expected to maintain a satisfactory academic record. Bursaries are not automatically renewed; a new application must be made each year. The online application form for university bursaries is available through the financial aid website. The Entrance bursary program runs from mid-February to April and the limited and general bursary programs run from September to March of each year, each bursary has a separate due date. Bursary applications open by month, late submissions cannot be accepted. Bursaries are based primarily on financial need, satisfactory academic standing, and may include other criteria as specified by the donor(s).

2.7 UNIVERSITY PRIZES
The university gratefully acknowledges the generosity of the persons and organizations whose contributions make possible the many prizes awarded at the end of each academic year. Recipients of prizes are normally full-time students in regular attendance in a degree program at StFX and must have given satisfactory evidence of merit. The university reserves the right not to make an award should there be no suitable candidate. Awards, unless otherwise specified, are tenable only at StFX.

At convocation the following prizes, listed by associated department, are awarded to graduating students:

- Onex Corporation Gold Medal
- Dr. Leo P. Chiasson Award for Biology to the Outstanding Advanced Major or Honours Student
- Centre for Marine Biology Prize
- Dr. Marguerite Michaud Prize for Canadian Studies
- Angus L. Macdonald Memorial Scholarship for Celtic Studies
- Flora Macdonald Prize
- Rev. Malcolm MacDonell Award in Celtic Studies
- Chemistry Industry Merit Award
- Employer’s Choice Award for X-cellence in Co-operative Education
- Dr. D.J. MacDonald and Dr. A.B. MacDonald Memorial Prize for Economics
- Engineering Department Medal
- Association of Professional Engineers of Nova Scotia Scholarship
- Association of Professional Engineers of Nova Scotia Award
- J. Wallace Farrell Memorial Award for Engineering
- Nova Scotia Power Centennial Scholarship for Engineering
- English Department Cape Breton Creative Writing Prize
- Margaret MacGillivray-MacDougall Prize for English
- Rev. R.J. MacSween Prize for English
- Ambassador of France Book Prize for French
- Ambassador of Switzerland Book Prize for French
- Jean Babin Prize for Excellence in French
- Consulate of Argentina Prize for Spanish
- Angus Dan Gillis Prize in Gaelic
- Professor Donald J. MacNeil Memorial Award for Earth Sciences
- Mining Society of Nova Scotia Centennial Scholarship Medal
- Dr. Randall W. Cerny Award for Best Thesis in Earth Sciences
- Mary Tramble Memorial Award for Field Earth Sciences
- Ambassador of Germany Book Prize for German
- Ambassador of Austria Book Prize for German
- Ambassador of Switzerland Book Prize for German
- German Consulate General Montreal Prize
- Hogan/Phillips Prize in History
- Rev. A.A. Johnston History Award for Diocesan History
- Italia MacDonell Prize for Canadian History
- Dairy Farmers of Canada Award for Further Study in Dietetics/Nutrition
- Nova Scotia Home Economics Book Award
- Nova Scotia Health Research Foundation Award
- Dr. H. Stanley and Doreen Alley Heaps Prize for Computing Science
- Dr. A.A. MacDonald Prize for Mathematics
- Canadian Academy of Recording Arts and Sciences Award for Music
- Chevrolet High Note Student Bursary
- Paul Groarke Philosophy Prize
- Rev. Charles R. MacDonald Memorial Medal for Philosophy
- Dr. M.S. Gautam Memorial Prize for Physics
- Wallbank/Weingartshofer Prize for Experimental Physics
- Yogi Joshi Prize for Excellence in Physics
- G.P. Brooks History of Psychology Prize
- Craig McDonald Mooney Prize for Psychology
- Walter Kontak Prize in Political Science
- Hon. John B. Stewart Scholarship for Political Science
- John and Mary Fraser Memorial Prize for Senior Religious Studies
- Rev. F. J. Milfen Sociology Prize
- Allard Tobin Travel Endowment Fund Award
- Dr. G.H. Murphy Prize for Proficiency in Pre-medical Studies
- St. Francis Xavier Association of University Teachers Book Prizes
- Nominations to the Kappa Gamma Pi Honour Society
- Katherine Widowik Memorial Award in Nursing
- Women’s and Gender Studies Prize

At the end of each academic year the following prizes are awarded to undergraduate students:
- Gaelic Scholarship for Summer Study in Scotland
- Honourable Allan J. MacEachen Fellowship for Celtic Studies
- Rev. Donald M. Rankin Scholarship for Celtic Studies
- Rev. John Archie Chisholm Memorial Award for Celtic Studies
- Ceci MacLean Prize for Achievement in First-Year French
- B.J. Keating Memorial Medal for Philosophy
- Frank S. Shea Scholarship for Political Science
- Student-Industry Geology Field Trip Award
- Canadian Society of Petroleum Geologists Stanley E. Slipper Award
- Dr. F.J. Grinivin Prize for Mathematics
- Elizabeth Tobin McGivern Prize for Music
- Dr. Winston Jackson Honours Nursing Prize
- David Davis Prize for First-Year Physics
- David Davis Prize for Third-Year Physics
- Charles Jordan Memorial Prize for Second-Year Physics
- Bishop Campbell Prize for Second-Year Religious Studies
- Camille LeBlanc Prize for First-Year Religious Studies
- Flying Officer Wallace MacDonald Memorial Prize for Third-Year Religious Studies
3. **ACADEMIC REGULATIONS**

3.1 **Registration**

3.2 **Courses Taken at another Institution**

3.3 **StFX Degree or Diploma Requirements**

3.4 **Re-Admission to University**

3.5 **Directed Study & Selected Topics Courses**

3.6 **Student Classification**

3.7 **Class Attendance and Withdrawal**

3.8 **Academic Integrity Policy**

3.9 **Mid-term and Exams**

3.10 **Grading System for Undergraduate Programs**

3.11 **Academic Penalties**

3.12 **Appeal of an Academic Penalty**

3.13 **Grade Appeal Procedure**

3.14 **Convocation**

3.15 **Academic Records**

3.16 **Regulations for a Second StFX Degree**

3.17 **Continuing and Distance Education**

3.18 **Exchange and Study Abroad**

3.19 **Dean’s List**

3.20 **Distinction and First Class Honours**

3.21 **Correspondence from the Registrar’s Office to the Student**

3.22 **Obligations of Students**

3.23 **Research Ethics**

### 3.1 REGISTRATION

**Registering and Adding Courses**

- **a)** Registration start times or time tickets are determined based on a student’s year of study, program, and then on total credits earned. Registration start times for first-year students are assigned based on program and student ID number in ascending order. Please refer to section 3.5 for additional information on how a students’ year level is determined.

- **b)** Students are responsible for the accuracy of their course registrations and for ensuring that the courses they select are appropriate to their degree programs.

- **c)** Students are responsible for dropping any second term courses if they have failed or dropped any required prerequisite course(s) in the first term.

- **d)** Students who are uncertain about their course selection are encouraged to seek assistance from academic advising or the department chair or program co-ordinators.

- **e)** The regular academic year runs from September to April and is divided into two terms. The Fall term runs from early September to mid-December and the Winter term from early January to late April.

- **f)** A course taught three hours a week over the regular academic year has a value of six credits and is called a full course. A course taught for three hours a week over the regular academic year (September to April).

- **g)** Students who cannot complete a course due to medical or other extenuating circumstances must contact the Dean’s Office and provide appropriate documentation.

- **h)** Students who stop attending class, but do not drop the course, will receive a final grade based on the work completed to date with a zero grade for any components not completed. This final grade will appear on students’ transcripts and is used in the calculation of the average.

- **i)** Students who who cannot complete a course due to medical or other extenuating circumstances must contact the Dean’s Office and provide appropriate documentation.

- **j)** Students should be aware that dropping a course may change their registration status from full to part time, and may have an impact on tuition, refunds, student loans, Dean’s List eligibility, in-course scholarship eligibility, athletic eligibility, or other StFX bursaries or awards.

**Normal Course Load**

- **a)** In most programs, the normal full course load is 30 credits during the regular academic year. Students are encouraged to maintain a balanced course load of 15 credits per term, whenever possible.

- **b)** Students enrolled in 60% of a normal full course load, or 18 credits, for the full academic year are considered to be full-time students.

**Overloads**

- **a)** Students, who wish to enrol in more than a full course load per term must apply to the Registrar for approval. Letter of Permission (LOP) courses are included and are counted as part of the overall course load.

- **b)** A minimum average of 65 is required, either for the previous academic year or for the first term if the application is submitted at the start of the second term.

- **c)** Students will not be permitted to enrol in more than 36 credits in the regular academic year (September to April).

- **d)** For spring and summer terms, students may enrol in up to 6 credits in either term. Students who wish to enrol in additional credits, must apply to the Registrar and meet the 65 minimum grade average.

- **e)** The maximum number of credits permitted in either the spring or summer term is 9, however students are reminded that spring and summer courses are offered in a compressed time frame and are advised to carefully consider enrolling in more than the recommended 6 credits each term.

- **f)** First-year students will not be permitted to carry an overload.

- **g)** Students are responsible for any fees associated with taking additional courses above the normal course load. Refer to Section 2.1, Undergraduate Registration Fees, for additional information.

**Repeating Courses**

- **a)** Students are permitted to repeat a course or register in a course deemed equivalent, or cross-listed, with one that they have already completed. However, credit will only be granted once; e.g., Credit will be granted for only one of HIST 232 or HIST 230. Refer to course descriptions for additional information.

- **b)** The final grade for the first instance the course was taken will remain on the transcript and be denoted with an (R) to indicate a repeat grade. The credit hours will be removed but no adjustment will be made to the end of year average.

- **c)** The final grade for the second instance the course was taken will be reflected on the transcript under the year it was retaken and will be used in the calculation of the average for that year. If the grade in the second instance is lower, an adjustment will not be made to the grade in the first instance.

**Course Restrictions**

- **a)** Courses in business administration, education, engineering, human kinetics, human nutrition or nursing normally may be applied only to those programs respectively, unless the courses are taken to fulfill specific program requirements. Refer to the appropriate Faculty regulations for exceptions.

- **b)** A “pair” is 12 credits in one subject with at least six credits at the 200-level or higher. As exceptions, language pairs in French, Celtic Studies and Classics may consist of 12 credits at the 100-level.

- **c)** A student may complete only one pair from a department, and may not complete a pair in the major or minor subject.

- **d)** A pair may not be completed in any of the professional or applied program disciplines: AQUA, BSAD, ENGR, HKIN, HNU or NURS.

**Auditing Courses**

- **a)** A student may audit any course with approval from the course instructor.
b) A student given permission to audit a course may attend and participate in the course and may, in agreement with the instructor, choose to received feedback from submitted course work and/or exams, but will not receive a grade and will not be given credit for the course.

c) Students wanting to take the course and receive credit will be given priority over audit students.

d) The fee for auditing a course is normally one-half of the normal course fee.

e) A decision to audit must be made within the first week of the term in which the course begins. Students who elect to audit a course may not, at a later date request to receive credit for the course.

3.2 COURSES TAKEN AT ANOTHER INSTITUTION

Transfer Credit

a) Transfer credit may be granted for courses for which credit has been earned at an accredited university, if based on the subject and learning outcomes, the courses can be used to meet the student's program requirements at StFX.

b) Students who receive a direct StFX course equivalency for courses taken at other institutions and choose to repeat the course at StFX will forfeit their transfer credit as students will not be permitted to receive credit for the same course twice.

c) Minimum grade and average requirements, as specified in the faculty regulations, apply to all transfer courses.

d) Official transcripts from all post-secondary institutions are required at time of admission. Failure to disclose attendance at another institution could result in academic dismissal.

e) Restrictions may apply to the transfer of credit for business administration courses at the 300 and 400 level.

f) Normally, transfer credit will not be granted for courses taken 10 years or more before the date of application.

g) Transfer credits may be granted for distance courses in recognized academic disciplines taken at Canadian universities.

h) Transfer credit will not be granted for distance courses if the StFX equivalent has a laboratory component.

i) Unless expressly permitted by the Deans, distance courses may only be used as electives or to meet requirements for pairs.

j) Upon completion of the Coady Diploma in Development Leadership, students will be eligible to transfer up to 12 credits as open electives towards a StFX undergraduate degree.

Courses Taken on Letter of Permission

a) To enrol in any course at another university, students must first obtain a letter of permission from the appropriate Dean prior to registering and completing the courses. The LOP form is available on mesAMIS.

b) Students who complete courses at another institution without having an approved letter of permission in place will not be eligible to receive credit for those courses.

c) Courses taken on letter of permission are counted towards a students' course load and overload regulations are applicable; refer to section 3.1e for additional information.

d) Grades obtained for courses taken on a letter of permission are not used in the calculation of averages or to determine First Class Honours or Distinction.

e) Students in good academic standing or on academic probation are eligible to enrol in spring or summer courses at another university.

f) Students who have been suspended or dismissed are not eligible to receive credit for course work completed elsewhere while the suspension or dismissal was in effect.

3.3 STFX DEGREE OR DIPLOMA REQUIREMENTS

In order to obtain a first degree or diploma from StFX, students must normally complete:

a) At least half of the credit hours required for the degree or diploma at StFX

b) At least 2/3 of the subject credit hours required at the 300/400 level for major, advanced major, honors or joint honors programs at StFX

3.4 RE-ADMISSION TO UNIVERSITY

a) A student who has not been registered at StFX for a 12-month period or longer, or withdraws from university, must re-apply for admission.

b) A student who is re-admitted is bound by any changes made in the curriculum and regulations after their first registration.

c) Students are required to complete their degree within 10 years of their first registration.

d) Courses taken for credit 10 years before acceptance into a degree program will be assessed by the appropriate Dean.

e) If a student is suspended or dismissed from the university and successfully appeals this decision and is permitted to return, the student will be placed on probation for one year, and be required to enrol and complete the APEX program. Refer to section 2.3.11.

f) Upon re-admission to the university, students will be eligible to register in courses at StFX and elsewhere during the spring and summer terms preceding their term of re-admission.

3.5 DIRECTED STUDY & SELECTED TOPICS COURSES

Directed Study Courses

a) Directed study courses permit students of exceptional ability and motivation to pursue, on a tutorial basis, individual programs of study in areas not normally offered by a department.

b) Directed study courses are normally restricted to no more than two students.

c) Normally, a faculty member may offer no more than two directed study courses per year.

d) A directed study course may earn no more than six credits.

e) To be eligible for a directed study, students must have:

i) completed 12 credits in the department;

ii) attained a minimum average of 70 in the 12 credits;

iii) obtained written consent from the department.

f) Students interested in a directed study course should consult with the department chair and the appropriate faculty member. Formal application must be submitted by the Department Chair to the appropriate Dean four weeks before the start of the term in which the course is to be offered.

Selected Topics Courses

a) Subject to approval of the appropriate Dean, departments may offer selected topics courses in their discipline.

b) A selected topics course may be offered twice before the department must seek regular approval through the appropriate Committee on Studies and the University Senate.

c) Selected topics courses may be offered in any department or interdisciplinary program at the 100-, 200-, 300- or 400-level and may be offered for three or six credits.

d) Course numbers for special topic courses will be assigned by the Registrar's Office.

3.6 STUDENT CLASSIFICATION

a) Students are classified as first year, sophomore, junior, or senior depending on the number of credits that have been earned.

b) Advancement in classification is granted when a student earns 30 credits in the preceding classification.

c) Students who are six credits short of the next level in a degree program will be placed in the next classification on a conditional basis.

<table>
<thead>
<tr>
<th>Year of Study</th>
<th>Credits Earned</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Year</td>
<td>less than 24</td>
</tr>
<tr>
<td>Second Year</td>
<td>24</td>
</tr>
<tr>
<td>Third Year</td>
<td>54</td>
</tr>
<tr>
<td>Fourth Year</td>
<td>84, 93 in nursing in previous curriculum</td>
</tr>
</tbody>
</table>
3.7 CLASS ATTENDANCE AND WITHDRAWAL

a) Students are expected to attend all classes and laboratory periods.

b) If a student is going to be absent for more than one class, the student is responsible for contacting each professor or instructor.

c) In the case of a sudden emergency requiring a student to be absent for more than five days, the student is required to contact the Dean’s office.

d) Faculty are required to report to the Dean all unexplained absences in excess of three hours over at least two classes in any term.

e) When a mandatory class, quiz, exam, or class project is scheduled outside normal class hours, provision will be made to enable students to attend scheduled classes and laboratories in their other courses.

f) Students wishing to withdraw from the university must give formal notice to the appropriate Dean in person or through mesAMIS.

g) Students who withdraw before the end of the term will not receive credit for courses with a later end date.

h) Formal notice of withdrawal is required for refunds of tuition and residence charges. Refer to section 2.1.3 for additional information.

i) The notice of withdrawal will be sent to: Campus Post Office, Financial Aid, Library, Registrar’s Office, Residence Office, Safety & Security Office, Student Accounts, Student Life Office, and Students’ Union (for health insurance).

3.8 ACADEMIC INTEGRITY

All members of St. Francis Xavier University are expected to conduct themselves in an ethical manner in their academic work. It is the policy of the university that academic dishonesty in any form is not acceptable. Academic dishonesty is defined as any act, practice, or behaviour that gives a student an unearned academic advantage over another or that counteracts or undermines the integrity of academic or scholarly endeavor at St. Francis Xavier University.

Any member of the University Community make act as a complainant or reports another’s academic dishonesty. The academic integrity policies and procedures document, available at http://www.stfx.ca/services/registrar/academic-integrity-document.pdf, provides guidelines to follow in reporting an offence.

3.8.1 The Code of Academic Conduct

An academic community flourishes when its members are committed to five fundamental values. An academic community of integrity:

a) advances the quest for truth and knowledge by acknowledging intellectual and personal honesty in learning, teaching, research, and service;

b) fosters a climate of mutual trust, encourages the free exchange of ideas, and enables all to reach their highest potential;

c) establishes clear standards, practices, and procedures and expects fairness in interactions among students, faculty, staff, and administrators;

d) recognizes the participatory nature of the learning process and honours and respects a wide range of opinions and ideas; and

e) upholds personal responsibility and accountability and depends upon action in the face of wrong-doing.

3.8.2 Offenses against Academic Integrity

The following is a list of offenses constituting academic dishonesty that are subject to discipline; this list is not intended to be exhaustive.

a) Plagiarism

Although academic work often involves research on, or reference to, the ideas, data, and critical commentary of other scholars, academic integrity requires that any use of another person’s work be explicitly acknowledged. Plagiarism is the misrepresentation of another’s work—whether ideas or words, intellectual or creative works, images or data, published or unpublished—as one’s own. Examples of plagiarism include but are not limited to:

i) quoting, paraphrasing, or summarizing text, even small portions of text, without proper acknowledgement;

ii) paraphrasing too closely (e.g., changing only a few words or simply re-arranging the text); and,

iii) downloading from the Web, a library, or any other database all or part of a paper, a journal article, or a book, or downloading any other website material, excluding bibliography makers, and presenting it as one’s own work.

b) Cheating

Examples of cheating include but are not limited to:

i) submission, in whole or in part, of any purchased written work as one’s own;

ii) sharing papers, including the buying or selling, borrowing or leasing of essays, tests, or other assignments;

iii) submission, without the prior expressed written consent of the appropriate instructor(s), of any work for which credit has been, or is being, sought in another course, including any work that has been submitted at another institution;

iv) collaboration (i.e., working together) on an assignment which an instructor did not specify was to be completed collaboratively;

v) possession of unauthorized aids, including cell phones, iWatches and Smart Watches, or assistance including copying during tests and examinations;

vi) impersonating another student in a test, examination, assignment, or attendance record, or knowingly permitting another to impersonate oneself;

vii) knowingly helping another to engage in academically dishonest behaviour (including, but not limited to, providing answers to a test or examination or providing an essay or laboratory report that is subsequently plagiarized or submitted by another student as his or her work);

viii) obtaining or looking at a copy of a test or examination before it is administered; and

ix) altering a test or examination after it has been graded and returned by the instructor.

c) Falsification

Examples of falsification include but are not limited to:

i) falsification of any research results, whether in laboratory experiments, field trip exercises, or other assignments;

ii) alteration or falsification of transcripts or other academic records for any purpose;

iii) submission of false credentials;

iv) making false representation on an application for admission;

v) making false representation on an application for ethical approval for a research project involving human or animal subjects; and

vi) requesting the extension of a deadline citing reasons known to be false, including submitting false documentation supporting that request.

d) Tampering

Examples of tampering include but are not limited to:

i) unauthorized access to, use of, or alteration of computer data sets, including course, student, faculty, alumni, public, and corporate records;

ii) gaining unfair advantage by using software and computer tools that inhibit the use of the resources by others;

iii) damage to or destruction of library materials or laboratory resources; and

iv) willful or negligent damage to the academic work of another member of the university.

e) Miscellaneous

i) any other form of misrepresentation, cheating, fraudulent academic behaviour, or other improper academic conduct of comparable severity to the above.

The full academic integrity policies and procedures document is available at http://www.stfx.ca/services/registrar/academic-integrity-document.pdf

3.9 MID-TERMS AND EXAMINATIONS

a) All examinations are to be written during the examination periods indicated in the calendar of events.

b) Once the examination schedule is posted as per the calendar of events, it is considered final.

c) October mid-term grades must be entered in Banner for all courses; February mid-term grades are to be entered in Moodle. See calendar of events for deadlines.

d) December and April examinations are written during the formal examination periods as indicated in the calendar of events. Designated times are 9:00am, 2:00pm and 7:00pm.

e) Normally, final examinations for a three-credit course are 2 ½ hours in length. December examinations in a six-credit course are 2 hours in length and April examinations are 3 hours in length.
3.10 GRADING SYSTEM FOR UNDERGRADUATE PROGRAMS

a) The passing grade is 50. Some programs have specific passing grade requirements; see specific advancement and graduation requirements by degree charts in sections 4, 5, or 6. The highest grade awarded and calculated in an average is 99.

b) The student’s average is a weighted calculation for full-time students. The average is included on the transcript at the end of each academic year. A six-credit course has a weight of one; a three-credit course has a weight of one-half. The average is based on final grades in all courses attempted. Grades for courses completed in the spring or summer terms are not included in the average.

c) Courses graded as Pass or Fail are not included in a student’s average calculation.

d) The grade and average requirements for major, advanced major and honours degrees are stated in chapter 4 for arts degrees, chapter 5 for business degrees and chapter 7 for science degrees. Failure to achieve grade and average requirements may result in academic penalties and may affect students’ eligibility to proceed in some degree programs.

Students must obtain an average of at least 55% and receive credit for 60% of attempted courses, in their final year, to be granted a degree or diploma.

e) With the exception of nursing courses with clinical components, at least 75% of the final grade in all courses will be based on written (not oral) work; further, at least 40% of the final grade in a six-credit 100- or 200-level course will be based on invigilated written December and April examinations, and at least 40% of the final grade in a three-credit 100- or 200-level course will be based on invigilated mid-term quizzes and December or April examinations.

f) Performance in nursing clinical courses will be evaluated based on a combination of assignments, the development of major plans of care and an evaluation of clinical practice performance. A grade of pass/fail will be awarded for the clinical practice portion of the course. Students must successfully complete the clinical practice in order to receive credit for the course.

g) When a student repeats a course, the original grade remains on the transcript and in the student’s average. However, the credits originally earned are removed from the student’s transcript. The final grade from the second instance the course was taken will be used in the average calculation for the year in which the course was completed.

3.11 ACADEMIC PENALTIES

a) Academic standing is assessed once, at the end of the academic year with the exception of nursing which are assessed at the end of teach term, is based on a minimum of two final grades over the academic year.

b) All students, including those who withdraw from the University, will be academically assessed.

c) Academic assessment is based on a minimum of two final grades over the academic year.

d) To be considered in good academic standing at the end of the academic year, students are required to:

i) earn a year end average of 55 or better, and

ii) earned credit for at least 60% of the courses completed. Refer to chart.

e) Students who fail to meet one or both of these requirements will incur an academic penalty as listed in the following chart.

<table>
<thead>
<tr>
<th>Previous Penalty</th>
<th>Requirement(s) Not Met</th>
<th>Penalty at End of Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>One</td>
<td>Probation</td>
</tr>
<tr>
<td>None</td>
<td>Two</td>
<td>Suspension</td>
</tr>
<tr>
<td>One probation</td>
<td>One</td>
<td>Suspension</td>
</tr>
<tr>
<td>One probation</td>
<td>Two</td>
<td>Dismissal</td>
</tr>
<tr>
<td>One suspension</td>
<td>One</td>
<td>Dismissal</td>
</tr>
<tr>
<td>More than one</td>
<td>One</td>
<td>Dismissal</td>
</tr>
</tbody>
</table>

f) Students who require fewer than 30 credits to complete their degree will not be subject to academic penalties but will be required to meet the grading and average requirements in order to be granted a degree or diploma.

g) Students on probation must enrol in APEX unless, upon application by the student, the Committee on Studies of the appropriate faculty excuses the student on the grounds that the student would not benefit in a meaningful way from the program.

h) Academic penalties incurred for a full academic year are applied at the end of the following spring term. Notification of academic assessment will be sent to students via email to their StFX email account. A copy of the assessment will also be mailed to the home address on file.

i) Students who are suspended or dismissed and who are enrolled in courses when the penalty is applied may complete their in-progress courses. However, students will be withdrawn from any courses that they are registered in for future terms.

j) Students who are suspended from the university will be invited to return to their studies in the spring term following the term of their suspension.

k) Students who have been dismissed will not be eligible for further study at the university unless they successfully appeal the dismissal. Refer to Section 3.12, Appeal of an Academic Penalty, for additional information.

l) No credit will be granted for work completed elsewhere while a suspension or dismissal was in effect.

3.12 APPEAL OF AN ACADEMIC PENALTY

a) Academic penalties of suspension or dismissal may be appealed to the Committee on Studies of the appropriate faculty.

b) Appeals of suspension must be received by June 15 of the calendar year in which the suspension was imposed.

c) Appeals of dismissal must be received by June 15 of the previous calendar year in which the student wishes to return to studies.

d) The decisions of the Committee on Studies are final.

e) Students who successfully appeal a suspension or dismissal will be eligible to return to their studies, on probation, for the next full academic year following the appeal. Students will be required to enroll in APEX.

f) If there will be 12 months or more between course registration, the student will be required to apply for re-admission. Refer to Section 3.4.

g) For information on the progression requirements and academic penalties for the Bachelor of Education, please refer to Section 6.4.

3.13 GRADE APPEAL PROCEDURE

a) Only final grades, including grades of course work used to calculate a final grade, may be appealed.

b) All appeals must be made in writing to the appropriate Dean. The letter must clearly state the reason for the appeal.

c) There is a fee of $10 for each grade appealed. This fee will be refunded if the appeal results in a change of grade.

d) Appeals must be made before January 15 for first-term courses; before May 30 for full-year and second-term courses; before July 15 for spring courses;
Academic Regulations

3.14 CONVOCATION

a) StFX confers degrees and/or diplomas at two convocations per year; Spring (May) and Fall (December). Refer to the calendar of events for specific dates.

b) All students who expect to receive their degree or diploma must submit an application to graduate through Banner Self-service. Refer to the calendar of events for application deadlines.

c) Students who are completing their degree requirements in the fall term are not eligible to graduate at fall convocation with the exception of students in those programs whose requirements are all completed well in advance of the end of the term.

d) The name printed on the parchment must be the student’s legal name as recorded on his/her academic record and the name provided on the admission application. Any change to this name must be supported by official documentation and submitted to the Registrar’s Office.

e) StFX degrees are printed in Latin and show the academic designation (i.e., Bachelor of Arts with Major) but not the specific major, concentration, or minor. However, this information is included in the students’ official academic record and appears on any transcript issued.

f) StFX diplomas are printed in English.

g) Graduates who are unable to attend convocation will have their degrees sent to their home address on file by courier or Expresspost.

h) Students graduating with an undergraduate degree may be awarded the designation Distinction or First Class Honours. Refer to Section 3.20, Distinction and First Class Honours, for additional information.

i) Candidates who receive degrees, diplomas and certificates from St. Francis Xavier University become members of the StFX Alumni Association. As members, alumni are eligible to receive the Alumni News, benefits and promotions exclusive to alumni, and information regarding development programs.

j) Additional graduation information is available at http://www.sites.stfx.ca/registrar/graduation.

3.15 ACADEMIC RECORDS

3.15.1 Release of Student Academic Records

Disclosure to Students of their own records

a) Students have the right to inspect their academic records and to challenge contents they believe to be inaccurate. This right does not extend to letters of reference given in confidence by the author. A member of the Registrar’s Office staff will be present during the inspection.

b) Students have the right to receive copies of their official StFX transcript.

c) No partial transcripts will be issued.

d) The Registrar will not normally provide students or third parties with copies of other documents on file, e.g., transcripts from other institutions.

Disclosure to University Officials

a) Information on students may be disclosed without their consent to faculty, university officers, or committees at the discretion of the Registrar.

b) Students’ personal and academic information is stored securely and is to be used solely for the university’s normal course of business.

d) Students have the right to receive copies of their official StFX transcript.

e) No partial transcripts will be issued.

d) The Registrar will not normally provide students or third parties with copies of other documents on file, e.g., transcripts from other institutions.

Disclosure to Third Parties

a) The following information is considered public and may be released at the discretion of the Registrar without restriction:

i) Name; hometown if in convocation program;

ii) Certificates, diplomas, and degrees awarded;

iii) Date of conferral.

b) Information will be released without student consent in compliance with a judicial order, search warrant or subpoena, or as required by federal or provincial legislation.

c) Necessary information may be released without student consent in an emergency, if knowledge of that information is required to protect the health or safety of a student or other persons. Such requests should be directed to the Registrar.

d) Notification of Disclosure of Personal Information to the Maritime Provinces Higher Education Commission (MPHEC)

The MPHEC collects student identification information (student’s name, student ID number), student contact information (address and telephone number), student demographic characteristics, and enrolment information from StFX. Enrolment and demographic information is used by MPHEC in the preparation of basic statistics, as well as to understand student pathways through to graduation, and the factors that affect these pathways. The information assists governments and institutions in decision-making and in enhancing the post-secondary learning environment.

Personally-identifying information is used only for limited purposes:

i) To create record linkages between data from different institutions in order to track student pathways among institutions. Once records are linked, personal information is deleted from the research data files.

ii) To communicate with INSTITUTION and Statistics Canada during the data validation process.

iii) Compile a student/graduate contact list for an MPHEC survey.

The legal authority for these activities is provided by a data sharing agreement between StFX and the MPHEC, as well as the Maritime Provinces Higher Education Commission Act. The Act requires that all data received by the Commission is kept confidential, and ensures the protection of personal information. More information about the MPHEC can be found at www.mphec.ca. A copy of its Standard for Maintaining Confidentiality is available here: http://www.mphec.ca/general/confidentiality.aspx

Questions may be addressed to:

Director, Research and Data Analysis
Maritime Provinces Higher Education Commission
82 Westmorland St. Suite 401
P.O. Box 6000
Fredericton NB E3B 5H1
Phone: (506) 453-2844
Fax: (506) 453-2106
Email: mphec@mphec.ca

Notification of Disclosure of Personal Information to Statistics Canada

The federal Statistics Act provides the legal authority for Statistics Canada to obtain access to personal information held by educational institutions. The information may be used for statistical purposes only, and the confidentiality provisions of the Statistics Act prevent the information from being released in any way that would identify a student.

Students who do not wish to have their personally-identifying information submitted to MPHEC or Statistics Canada will notify StFX by contacting the Registrar’s Office.

e) Other than in the above situations, personal information about a student will only be released to third parties with the written consent of the student, or in accordance with the purposes for which it was collected or as required by law. A student’s academic record will only be released to third parties at the written request of the student, or when the student has signed an agreement with a third party, a condition of which is access to his or her record (e.g., financial aid), or as required by law. This restriction applies to requests from parents, spouses, credit bureaus and police.

3.15.2 Retention of Student Files

a) Academic records, that is, paper files in the Registrar’s Office, will be held for five years from the date of last attendance, and then destroyed.

b) Former students who wish to re-apply after their files have been destroyed may have to re-submit academic transcripts from other institutions.
3.15.3 Transcript Requests
a) Requests for transcripts must be made in writing by students and accompanied by the required fee. An original student signature is required on the request.

b) Requests for transcripts by phone will not be accepted.

c) Requests are to be made on the appropriate form obtainable from the Office of the Registrar or online at http://sites.stfx.ca/registrars_office/index.html

d) Transcript requests will be processed in the order in which they are received.

e) Normal processing time is 3-5 business days, but additional processing time may be required during peak times in January and May.

f) Same-day service is available for an additional fee.

g) Transcripts include the following information, where appropriate
   i) The student’s program
   ii) Courses and numeric grades (failed as well as passed) for all academic work attempted or completed at StFX. Approximate conversion to letter grades is: A = 99-80, B = 79-70, C = 69-60, D = 59-50, F = less than 50.
   iii) The rank and year-end average if the student is enrolled in a full-time undergraduate program. The average is calculated by weighing each grade by the credit value; see section 3.10. The decile is a student’s ranking (10 high, 1 low) in a course with a least 15 registrants.
   iv) Transfer credits granted; grades for transfer credits are not shown
   v) Degrees, diplomas and certificates awarded and dates conferred
   vi) Academic penalties, including notations of academic dishonesty
   vii) Distinctions, including placement on the Dean’s List
   viii) Theses titles

h) Transcripts will be issued only if all financial obligations to the university have been met.

i) Transcripts are considered official only when printed on secured paper bearing the signature imprint of the Registrar and either faxed, mailed/couriered directly from the Office of the Registrar to an institution or agency, or provided to the student in a sealed envelope. Transcripts cannot be sent electronically.

j) Additional information is available on the website at http://sites.stfx.ca/registrars_office/

3.16 REGULATIONS FOR A SECOND STFX DEGREE

To receive a second degree from StFX, a graduate of the university must complete at least 30 credits towards the second degree at StFX and must comply with all course requirements of the second degree. Candidates for a second degree may not choose a major, joint major, advanced major, joint advanced major or honours in the same subject as the first degree.

A StFX graduate who previously earned a BA, B.Sc. or BBA below the honours level may subsequently qualify for and receive an honours degree in the same major as that of the first degree. The student must qualify by meeting all faculty and department course, residence, grade, and average requirements for the honours degree, and must complete a minimum of 18 additional credits at StFX towards the second degree.

3.17 CONTINUING AND DISTANCE EDUCATION

The continuing and distance education department offers degree and non-degree learning opportunities onsite and online during fall, winter, spring and summer sessions.

For degree-credit courses, see specific departments in chapter 9; section 9.28 for information on the part-time B.Sc.Nursing program; chapter 8 for programs leading to master’s degrees in education. Non-degree and non-credit courses offered through continuing and distance education are normally concentrated in two areas: general interest and professional development. University preparation courses are available in the areas of mathematics and academic writing. Non-credit workshops may also be offered on campus and online.

Current listings may be obtained from the continuing and distance education department’s website at http://sites.stfx.ca/continuingeducation or by phone at 902-867-3906 or toll-free at 1-877-867-3906.

Diploma in Intellectual Disability Studies

The Diploma in Intellectual Disability Studies is a professional/personal development non-credit online program. This is an opportunity for individuals who have some training and/or experience working or living with people who have an intellectual disability. Students must complete five 12-week courses to receive the diploma, however courses are offered individually for interest (contact the Program Office for details; inds@stfx.ca). Each course requires 10 to 12 hours per week of study. For additional information, refer to section 4.5.

Course* offered

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>INDS110</td>
<td>Foundations of Disability &amp; Caregiving</td>
<td>Fall</td>
</tr>
<tr>
<td>INDS120</td>
<td>Relationships, Advocacy &amp; Vision</td>
<td>Winter</td>
</tr>
<tr>
<td>INDS130</td>
<td>Human Development</td>
<td>Fall</td>
</tr>
<tr>
<td>INDS140</td>
<td>Building Community</td>
<td>Winter</td>
</tr>
<tr>
<td>INDS150</td>
<td>Practicum</td>
<td>Open access</td>
</tr>
</tbody>
</table>

*Not all courses may be offered each year.

3.18 EXCHANGE AND STUDY ABROAD

StFX has exchange agreements with a number of universities, normally for a third-year international study experience. Most of these universities are listed below. For universities where English is not the general language of instruction, there are usually some courses are taught in English that might suit StFX students. Students interested in participating in an exchange or study abroad opportunity are encouraged to consult with the International Exchange Office.

Aalborg University, Denmark
American University of Ras Al Khaimah, UAE
Bangor University, Wales
Bond University, Australia
CEU Universidad San Pablo, Madrid, Spain
Charles University, Czech Republic
ESB Reutlingen, Germany
ESC Amiens Business School
ESDES, Université Catholique de Lyon, France
ESSCA School of Management, France, Hungary, China
HAN-University of Applied Sciences
HANKEN School of Economics, Finland
Heriot-Watt University, Scotland
ICLA Yamanashi Gakuin University, Japan
IESEG, School of Management - Lille, France
Institut d’Etudes Politiques de Lille, France
Interdisciplinary Centre Herzliya, Israel
International School of Management, Germany
King Mongut's University of Technology-SIT, Thailand
Korea University, Soeul, Korea
Leeds Trinity University, England
NS-New England Partnership, USA
Pontificia Universidad Catolica del Peru, Peru
University of Guanajuato, Mexico
Universidad del Salvador, Argentina
Universidad Iberoamericana, Mexico
Universidad Iberoamericana UNIBE, Dominican Republic
Universtitat Koblenz-Landau, Germany
Universität Stuttgart, Germany
Université Catholique de l’Ouest, Angers, France
L’Universite de Toulouse II – Jean Jaures, France
University of Exeter, England
University of Limerick, Ireland
University of Newcastle, Australia
University of the West Indies, Barbados
Warsaw School of Economics, Poland
Yeditepe University, Turkey

Students on exchange pay full-time tuition to StFX and any other applicable fees to the host institution. A student may also apply to study abroad as a visiting student at any accredited university and pay tuition directly to that university. Exchange and study abroad students must apply to the International Exchange Office and be approved by StFX in order to have these courses credited towards their StFX degree. Students in some programs may need additional semesters to complete their degree.

To be eligible to participate, students must:

a) be enrolled in a four-year program;

b) be in good academic standing prior to the exchange semester/year;

c) earn an average of at least 70, based on a minimum of 15 credits, in the semester prior to submitting the exchange application;

d) submit an application to the International Exchange Co-ordinator.

The deadline to apply for exchange and study abroad opportunities is January 15th. Second year students applying by this deadline will be considered for host university spaces available in the following academic year. After January 15, students may only apply to do an exchange during the winter term of third year.
for remaining exchange spaces at host universities. For more information, contact Brenda Riley, International Exchange Co-ordinator at briley@stfx.ca or 902 867-4532.

3.19 DEAN’S LIST

At the end of each academic year students who have earned at least 24 credits, and who have earned an average of at least 75%, will be named to the Dean’s List if they rank in the top 25% of their class in their Faculty.

Students who participate in international education (i.e., exchange and study abroad opportunities) and co-op programs will be eligible for the Dean’s list provided that the student has completed a minimum of 12 credits at StFX in the year of eligibility.

3.20 DISTINCTION AND FIRST CLASS HONOURS

Faculty of Arts and the Faculty of Business

a) The designation of Distinction is awarded to students whose general average over the final three years of the program is at least 80.

b) Candidates in the Faculty of Arts and Business who satisfy requirements for the degree with honours will be awarded the designation of First Class Honours when their general average is 80 or higher over the final three years, and an average of 80 or higher in all courses taken in the honours subject over the final three years.

c) Students who return to complete a minimum of 18 credits toward an honours degree are not eligible for the First Class Honours designation.

d) For students who complete part or all of a degree through part-time study, the designation of Distinction is awarded to those who earn an average of at least 80 over the last 90 credits. Students must complete 80% of the courses at StFX.

Faculty of Science

a) The designation of Distinction is awarded to students whose combined average over the final three years of the program is at least 80 with a minimum average of 75 in each of the three years.

b) In the Faculty of Science, the designation of First Class Honours is awarded to students whose general average over the final three years is 80 or higher, with a minimum average of 75 in each year, and who have satisfied all other requirements for the degree with honours.

c) For students who complete part or all of a degree through part-time study, the designation of Distinction is awarded to those who earn an average of at least 80 on the best 60 credits completed at StFX, with no grade below 75 in any course completed at StFX or elsewhere.

Accelerated and Post Degree Nursing Programs

a) For students in the B.Sc.Nursing for Registered Nurses by Distance program, the average of at least 80 will be calculated on the best 33 credits completed at StFX if the student’s program is 63 credits. Of the grades considered in calculating the above average, none shall be below 75.

b) For students in the B.Sc.Nursing, accelerated post-degree option, the average of at least 80 will be based on the credits completed at StFX by calculating three averages, with no average less than 75, as follows:

i) combined first-year, spring and summer courses,

ii) full academic year September to April, and

iii) combined second-year, spring, summer, and fall courses.

3.21 CORRESPONDENCE FROM THE REGISTRAR’S OFFICE TO THE STUDENT

Upon registration at StFX, all official correspondence from the Registrar’s Office, with the exception of academic penalty letters, is sent to students via their StFX email account. Students are responsible for checking their StFX email regularly and to keep their inbox open for delivery.

3.22 OBLIGATIONS OF STUDENTS

Upon registration at StFX, students agree to abide by all applicable rules and regulations and acknowledge that their right to remain at StFX is subject to their observance of these regulations. Students must familiarize themselves with such documents as:

i) the StFX Academic Calendar available at http://sites.stfx.ca/registrar's_office/academic_calendar or from the Registrar’s Office

ii) the StFX Community Code of Conduct, available at http://sites.stfx.ca/student_life/student_conduct or from the Student Life office

iii) the Academic Integrity Policy available at http://www.stfx.ca/services/registrar/academic-integrity-document.pdf

Students are also expected to obey all federal, provincial, and municipal laws.

3.23 RESEARCH ETHICS

All faculty and student researchers at StFX who wish to carry out research involving human participants, whether on campus or elsewhere, must have their projects approved by the University Research Ethics Board (REB) or one of its department sub-committees. Researchers must submit electronically a completed application form and any supporting documentation. Researchers must have REB approval prior to beginning the study. The REB operates within the Tri-Council Policy Statement Guidelines; researchers may consult these or the REB website http://sites.stfx.ca/research_ethics_board/ for additional information.

Coady International Institute is an example of StFX’s commitment to social justice in action. Named for one of Canada’s great heroes, Rev. Dr. Moses M. Coady, the Institute has been educating community leaders from around the world since 1959. Coady’s extensive global network includes graduates and partners working in 130 countries.

The Institute offers its flagship 20-week Diploma in Development Leadership along with specialized certificate courses based on three themes: strengthening local economies; building resilient communities; and promoting accountable democracies. There are also specialty courses designed for women, including: Global Change Leaders; Indigenous Women in Community Leadership; Community Development Leadership by Women; and Canadian Women’s Foundation Leadership Institute.

Our focus on youth includes the Global Youth Leaders certificate for practitioners from the global south and the OceanPath Fellowship for select Canadian university graduates (Queen’s, McGill, UOttawa and StFX.)

At times, community leaders benefit from courses and workshops offered in-country. For example, Coady collaborates with the Government of Canada to run a five-year leadership program to strengthen women’s leadership for economic empowerment and food security in Ethiopia, Ghana and Zambia.

Here in Antigonish, Coady and StFX’s Department of Adult Education jointly offer a community development stream in the Master of Adult Education program. Coady program staff also collaborate with the Faculty of Arts to offer the undergraduate program in Development Studies. Graduates of Coady’s diploma program can apply 12 of their credits toward elective courses in a StFX undergraduate degree program.

Development professionals who study at Coady Institute add much to the multicultural atmosphere and learning exchange on campus. StFX students are welcome to use the Institute’s Marie Michael Library, which houses one of the world’s finest collections on international development and adult education.

In 2012 Coady and StFX established the annual Coady Chair in Social Justice to honour the spirit of Dr. Reverend Moses Coady and the leaders of the Antigonish movement. It has been designed as an interdisciplinary approach to bridging highly relevant local and global concerns involving StFX students, staff, Coady participants and Antigonish community members. Visit our website: coady.stfx.ca
4. FACULTY OF ARTS REGULATIONS

4.1 General Regulations

4.1.1 Degrees Offered

The Faculty of Arts offers degrees in Arts, Music and Human Kinetics.

Under the arts heading there are seven degrees:

- Bachelor of Arts with Major: in one of 18 majors listed below
- Bachelor of Arts with Joint Major: combines the study of two subjects
- Bachelor of Arts with Advanced Major: designed for the student who wishes both depth and breadth in subjects; requires high academic achievement
- Bachelor of Arts with Joint Advanced Major: an advanced major program that involves the combined study of two subjects
- Bachelor of Arts with Honours: in one of 14 subjects below; requires depth and breadth of subject study, and also superior academic achievement

Bachelor of Arts Honours with Subsidiary: involves the combined study of two subjects and superior academic achievement

Bachelor of Arts with a Major in Aquatic Resources: a major in economics or public policy and social research and a major in aquatic resources

The human kinetics degrees, each with a choice of kinesiology or pre-education major, are

Bachelor of Arts in Human Kinetics
Bachelor of Arts in Human Kinetics with Honours

The music degrees are

Bachelor of Music
Bachelor of Music with Honours

The Faculty of Arts, jointly with the Faculty of Science, offers

Bachelor of Arts and Science in Climate & Environment with Major, see section 4.2.
Bachelor of Arts and Science in Climate & Environment with Honours, see section 4.2.
Bachelor of Arts and Science in Health with Major, see section 4.2.
Bachelor of Arts and Science in Health with Honours, see section 4.2.

4.1.2 Subjects Available (see chart)

The subjects available chart lists the subjects available for study in the arts degrees within the Faculty of Arts and where these subjects can be a major, minor, pair or elective course, or where two subjects may be combined in a joint major, joint advanced major, or honours with subsidiary degree. Reference is also made to information in chapter 9.

4.2 Bachelor of Arts and Science

4.2.1 Climate and Environment

4.2.2 Health

4.2.3 Development Studies

4.3 Social Justice Colloquium

4.4 Humanities Colloquium

4.5 General Regulations

4.5.1 Subjects Available

M1 = Major 1; M2 = Major 2; Mi = Minor; P = Pair; E = Elective; S = Subsidiary

| ANTH | Anthropology, see 9.2 |
| CSCI | Computer Science, see 9.12 |
| ECON | Economics, see 9.16 |
| ENGL | English, see 9.19 |
| FREN | French, see 9.26 |
| HIST | History, see 9.21 |
| MATH | Mathematics, see 9.25 |
| PHIL | Philosophy, see 9.29 |
| PSCI | Political Science, see 9.31 |
| DEVS | Development Studies, see 9.14 |
| CELT | Celtic Studies, see 9.8 |
| PSYC | Psychology, see 9.32 |
| RELS | Religious Studies, see 9.34 |
| SOCI | Sociology, see 9.35 |
| PGOV | Public Policy and Governance, see 9.33 |
| MUSI | Music, see 9.27 |
| WMGS | Women's and Gender Studies, see 9.36 |
| CATH | Catholic Studies, see 9.7 |
| SPAN | Spanish, see 9.26 |
| ART | Art History, see 9.4 |
| BIOL | Biology, see 9.5 and note 5 |
| CHEM | Chemistry, see 9.9 and note 5 |
| CLEN | Climate and Environment, see 9.11 |
| ESCI | Earth Sciences, see 9.15 and note 5 |
| PHYS | Physics, see 9.30 and note 5 |
| CLAS | Classical Studies, see 9.10 |
| GERM | German, see 9.26 |
| AQUA | Aquatic Resources, see 9.3 |
| BSAD | Business Administration, see 9.6 and note 1 |
| ENGR | Engineering, see 9.18 and note 2 |
| HLTH | Health, see 9.20, see note 6 |
| Hkin | Human Kinetics, see 9.22 and note 3 |
| HNU | Human Nutrition, see 9.23 and note 3 |
| IDS | Interdisciplinary Studies, see 9.24 |
| MIKM | Mi’kmag, see 9.26 |
| NURS | Nursing, see 9.28 and note 2 |

Note 1: Students who transfer out of the engineering or nursing program may count a maximum of 6 credits in ENGR or NURS.
Note 2: A maximum of six credits in Hkin and/or HNU may be used as open electives; they may not be taken in the first year, permission of the professor and the department chair are required.
Note 3: The degree is BA Major in Economics or Public Policy and Social Research, and Major in Aquatic Resources.
Note 4: Students who transfer out of BASc in Health may use HLTH courses as a pair or electives
Note 5: Students who transfer out of BASc in Health may use HLTH courses as a pair or electives
Note 6: A subsidiary may normally be done only in a subject in which a major is offered in the BA program with exceptions as noted.
4.1.3 Degree Patterns (see chart)
Listed below are the degrees and diplomas in the Faculty of Arts with their course patterns and credit requirements. Each degree requires 120 credits.

In general at StFX, courses are three credits for a one-semester course and six credits for a full-year (two-semester) course.

First-Year Pattern
Students in the first year of the BA normally follow the pattern of courses listed below. Group I and Group II refer to departments that offer the full range of BA degree options, namely, majors, advanced majors, and honours programs. All courses are introductory with numbers in the range 100-199 (e.g., ENGL 100). The normal academic load is 30 credits per year. In first year, students in the BA carry courses as follows:

Group I
6 credits from Catholic studies, Celtic studies, computer science, English, history, mathematics, philosophy, religious studies
Group II
6 credits from anthropology, development studies, economics, modern languages (French, Spanish), political science, psychology, public policy and governance, sociology, women’s and gender studies
Group I or II
6 credits
Arts/Science electives
6 credits (may not be a course from a professional program such as aquatic resources, business administration, engineering, human kinetics, human nutrition or nursing)

4.1.4 Declaration of Major, Advanced Major, or Honours
Students meet with faculty advisors in their major, advanced major, or honours departments to discuss future course selection. In the first year of study, a student applies for admission to the desired program by completing and submitting the appropriate application form, signed by the chair, to the Dean’s office by March 29. Students are advised of acceptance to their programs in the summer following submission of their forms. Students in the advanced major or honours programs must be registered full time in their final year of study. The forms are available at http://sites.stfx.ca/dean_of_arts/

4.1.5 Advancement & Graduation Requirements by Degree (see chart)
All students must fulfill the pattern and credit requirements as specified above and the course, seminar, research report, senior paper, or honours thesis requirements of the major, advanced major or honours department(s). For any honours with subsidiary or joint degrees, students submit only one research report, senior paper, or honours thesis to the first named department on the student’s application, after consultation with both departments.

Candidates who fail to meet the requirements for the degree for which they have applied may be eligible for another degree, provided those requirements are met.

Note 1 For students intending the secondary teaching stream, a minimum of 24 credits must be in one of the subject fields taught in Nova Scotia schools. For students pursuing the elementary teaching stream option, Arts A becomes 18 credits and the approved electives become 12 credits.

Note 2 Courses in Major 1 or Major 2 may not be used as electives.

Note 3 Major 1 plus Major 2 up to a maximum of 84 credits. A minimum of 24 credits of electives must be from departments other than honours or subsidiary.

Note 4 Senior research paper must be written on a topic in Subject A.

Note 5 A pair is 12 credits in one subject, with requirements and restrictions as outlined in the glossary section of this academic calendar.

### Degree Patterns

<table>
<thead>
<tr>
<th>Bachelor of Arts</th>
<th>Major 1</th>
<th>Major 2</th>
<th>Minor</th>
<th>Pair</th>
<th>Electives</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA Major</td>
<td>36 credits</td>
<td>—</td>
<td>24 credits</td>
<td>3 x 12 credits</td>
<td>24 credits</td>
</tr>
<tr>
<td>BA Joint Major</td>
<td>36 credits</td>
<td>36 credits</td>
<td>—</td>
<td>24 credits</td>
<td>24 credits</td>
</tr>
<tr>
<td>BA Advanced Major</td>
<td>36 credits</td>
<td>—</td>
<td>24 credits</td>
<td>3 x 12 credits</td>
<td>24 credits</td>
</tr>
<tr>
<td>BA Joint Advanced Major</td>
<td>36 credits</td>
<td>36 credits</td>
<td>2 x 12</td>
<td>24 credits</td>
<td>24 credits</td>
</tr>
<tr>
<td>BA Honours</td>
<td>60 credits</td>
<td>—</td>
<td>2 x 12</td>
<td>36 credits</td>
<td></td>
</tr>
<tr>
<td>BA Honours with Subsidiary (see note 3)</td>
<td>min 48</td>
<td>min 24</td>
<td>—</td>
<td>1 x 12</td>
<td>24-36, See note 3</td>
</tr>
</tbody>
</table>

### Major 1 & Major 2

<table>
<thead>
<tr>
<th>BAHKIN Major Kinesiology</th>
<th>HKIN Req</th>
<th>HKIN Elec</th>
<th>Statistics</th>
<th>Arts A</th>
<th>Arts B</th>
<th>Arts/Sci Elec</th>
<th>Approved</th>
<th>Elective</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAHKIN Major Pre-Education</td>
<td>39</td>
<td>18</td>
<td>3</td>
<td>24</td>
<td>12</td>
<td>12</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>BAHKIN Advanced Major or Honours Kinesiology</td>
<td>51</td>
<td>9</td>
<td>—</td>
<td>24, See note 1</td>
<td>12</td>
<td>12</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>BAHKIN Advanced Major or Honours Pre-Education</td>
<td>42</td>
<td>15</td>
<td>3</td>
<td>24, See note 1</td>
<td>12</td>
<td>12</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>BAHKIN Major Kinesiology</td>
<td>57</td>
<td>—</td>
<td>3</td>
<td>24, See note 1</td>
<td>12</td>
<td>12</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

### Music

<table>
<thead>
<tr>
<th>Bachelor of Music</th>
<th>MUSI Req</th>
<th>Pair</th>
<th>Arts/Sci Elec</th>
<th>Electives</th>
</tr>
</thead>
<tbody>
<tr>
<td>78</td>
<td>2 x 12</td>
<td>—</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>90</td>
<td>2 x 12</td>
<td>—</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

## Advancement & End of Year Requirements

### Bachelor of Arts

- **BA Major, BA Joint Major**
  - average 65 in each of first two years; grade of 65 in each major and minor course
  - average 70; average 70 in the major courses; average 70 in the minor courses

- **BA Advanced Major**
  - average 65 in each of first two years; grade of 65 in each course in each major
  - average 70; average 70 in each major

- **BA Joint Advanced Major**
  - average 65 in each of first two years; grade of 65 in each course in each major
  - average 70; average 70 in each major

- **BA Honours**
  - average 75 on 60 credits completed in the first two years; grade of 70 in each course in the honours subject
  - average 75; average 75 in the honours courses; grade of 70 in each course in the honours subject

- **BA Honours with Subsidiary**
  - same as above for BA Honours, and applied to both subjects
  - same as above for BA Honours, and applied to both subjects

- **Bachelor of Music**
  - average 75 on 60 credits completed in the first two years; grade of 70 in each MUSI course
  - average 75; average 75 in MUSI courses; grade of 70 in each MUSI course

- **BA Human Kinetics**
  - average 65 in each of first two years; grade of 65 in each course in each HKIN course
  - average 70; average 70 in HKIN courses

- **BA Human Kinetics with Advanced Major**
  - average 65 in each of first two years; grade of 65 in each HKIN course
  - average 70; average 70 in HKIN courses

- **BA Human Kinetics with Honours**
  - average 75 on 60 credits completed in the first two years; grade of 75 in MUSI courses completed during the first two years; grade of 70 in each MUSI course
  - average 75; average 75 in MUSI courses; grade of 70 in each MUSI course

- **BASc**
  - average 75 on 60 credits completed in the first two years; grade of 70 in each course in each subject during the first two years; grade of 70 in each course in each subject
  - average 75; average 75 in each HKIN course

- **BASc Honours**
  - average 75; grade of 70 in all core and primary concentration courses
  - average 75; grade of 70 in all core and primary concentration courses
Exceptions to these requirements need the approval of the Dean and the department chair. Additional requirements are listed below.

The averages and grades specified below are the minima required.

4.1.6 Co-operative Education Program in Arts
A form of work-integrated learning, Co-op Education is a model of education that integrates academic study with related and supervised co-op work experience (12-16 months) with an employer partner in industry, government and not-for-profit across Canada. This optional academic program is for BA in computer science or mathematics students, BASc in Health, BASc in Climate & Environment. The CSCI Co-op Program is accredited by the Co-operative Education & Work-Integrated Learning Canada (CEWIL Canada). COOP 405 can be used as a major subject elective or as an open elective. See section 9.13 for further information.

4.2 BACHELOR OF ARTS AND SCIENCE
The Bachelor of Arts and Science (BASc) is designed to expose students to both Arts and Science knowledge that inform a particular topic. Since many contemporary topics and issues are better understood through thorough engagement with both scientific and humanistic contributions, the degree is structured so that students engage with as many relevant disciplinary contributions as possible. Students completing Bachelor of Arts and Science programs will complete interdisciplinary core courses pertaining to their subject of study as well as science, arts, and humanities requirements.

Currently, StFX offers a Bachelor of Arts and Science in Health or one in Climate and Environment. Both programs are direct-entry.

This degree program is not intended as a compromise for students who cannot decide between an arts and science degree. This degree is rather for students with specific topical interests that are better served by interdisciplinary study.

4.2.1 Climate and Environment
The program was carefully designed to provide students with maximum exposure to knowledge that will contribute directly to their understanding of climate and environmental topics while maintaining a liberal arts approach that encourages commitment to broad critical and scientific inquiry, logical rigour, and creative problem-solving. Students will complete courses across the faculties of arts and science to gain a broad yet inclusive education in both climate and environment. This approach reflects the complexity of addressing climate and environment issues currently facing our planet. Global initiatives in tackling human and environmental issues highlight the need for an interdisciplinary approach, recognizing that solutions will only be found through integrated scientific, socio-political, and economic inquiry.

4.2.2 Health
The program aims to provide students with a contemporary education in health by drawing on knowledge from the natural sciences, social sciences, and humanities to engage students in nuanced and considered discussions about how we think about health, how we approach health, how we create health, what biases contribute to our understanding of health, and how health is interwoven into all aspects of our individual and collective lives. Students will gain a better understanding of the ways in which human health is determined and defined, by emphasizing what biology, chemistry, the social sciences, history, and other disciplinary fields of study contribute to an integrative understanding of health. Students will complete concentrations in biomedical as well as social determinants and health equity as well as a humanities requirement.

4.3 HUMANITIES COLLOQUIUM
The Humanities Colloquium (HC) is an optional and interdisciplinary way of studying three first-year courses, usually ENGL 100, HIST 100, and PHIL 100. Three sections of these courses are taught in a historically co-ordinated way with a focus on the great works of Western Civilization. Students who enroll in the Humanities Colloquium are co-enrolled in all three of the HC sections, and these sections are restricted to HC students. The three courses present an intensive introduction to four historical periods: The Ancient World; The Middle Ages; The Renaissance to the Enlightenment; and The Modern Age. In each period, students learn the history while simultaneously reading the philosophy and literature of the same era. Assignments, essays, and examinations are co-ordinated to reflect common themes across the three courses.

Please see the website at http://sites.stfx.ca/humanities_colloquium/ for additional information and update for the specific courses offered each academic year.

4.4 SOCIAL JUSTICE COLLOQUIUM
The Social Justice Colloquium (SJC) is a first-year option for Bachelor of Arts students. Participants are enrolled in dedicated sections of anthropology, global history and women’s and gender studies. The instructors work together to coordinate their teaching so that students learn about social justice from various perspectives. In addition, students will complete a service learning experience that will be interwoven with academic learning. Through theory and practice participants will become better students and more engaged community members.

Further information is available on the website at http://sites.stfx.ca/sjc/

5. FACULTY OF BUSINESS REGULATIONS

5.1 GENERAL REGULATIONS

5.1.1 Degrees Offered
The following degrees are offered in Business Administration:
Bachelor of Business Administration with Major, Advanced Major, and Honours in accounting, entrepreneurship, enterprise systems, finance, international business, management and leadership, or marketing.
Bachelor of Business Administration with Joint Honours in business administration and economics.

5.1.2 Degree Requirements
Beginning in 2016-17, all students in the BBA program will choose their area of concentration at the end of their second year of studies. Students will declare their major in one of the six streams identified above. Students who qualify academically for the advanced major or honours programs will be able to apply for these degree streams at that time. For more specific requirements for the advanced major and honours degrees see Section 9.6. Chart 5.1.2 shows the structure of the BBA major, advanced major and honours degree programs.

4.2 Co-operative Education Program in Arts

5. FACULTY OF BUSINESS REGULATIONS

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5.1.3 Electives
a) Arts and Science Electives
   i) BBA students must earn 36 credits of arts/science electives (with the exception of students in the finance stream who need to earn 30 credits). Normally these credits are completed prior to the fourth year of study. The arts/science electives must include a pair (12 credits) in each of two different subjects offered by the Faculty of Arts or the Faculty of Science with exceptions noted below. The remaining credits of arts/science electives may be additional courses in paired subjects or courses in other subjects.
   ii) Economics, mathematics and statistics courses required to earn the BBA may not count as arts/science electives.

5.1.4 Application for Advanced Major or Honours

5.1.5 Advancement and Graduation Requirements by Degree

5.1.6 Co-operative Education Programs in the Schwartz School of Business

The Faculty of Business is located in the Schwartz School of Business. The Gerald Schwartz School provides students with skills and knowledge to meet the challenges of managing effectively in the 21st century. The major benefactor of the school is Mr. Gerald Schwartz, founder and CEO of Onex Corporation, and distinguished Canadian business leader. The Schwartz School offers Bachelor of Business Administration (BBA) majors, advanced majors and honours degrees.

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5.1.6 Co-operative Education Programs in the Schwartz School of Business

The Schwartz School offers Bachelor of Business Administration (BBA) majors, advanced majors and honours degrees.
iii) At least one of the two pairs must be in an arts subject. For maximum flexibility, students are advised to complete one arts/science pair by the end of their second year.

iv) The following professional and applied subjects are not permitted as arts/science electives: Adult education, aquatic resources, education, engineering, human kinetics, human nutrition and nursing.

v) Economics courses beyond ECON 101 and 102 may count as an arts pair except for BBA students enrolled in the joint honours in business administration and economics program.

b) Earning a Minor in an Arts or Science Subject (BBA programs)

Any BBA student earning 24 credits in one arts or science subject may qualify for a minor in that subject. Any specific departmental requirements for the minor must be met. Students must also complete a pair (12 credits) in another subject.

To have a minor officially recognized, a student must advise the Dean’s office of the desire to have the minor noted on the academic record.

i) Students wishing to complete a minor in economics must complete 24 credits in addition to ECON 101 and 102.

ii) Students wishing to complete a minor in mathematics/statistics/computer science must complete 24 credits in addition to MATH 105 and STAT 101.

c) Open Electives

Most BBA programs include nine credits of open electives. Students may satisfy this requirement by completing BSAD courses, arts/science courses (as above) or, with permission of the appropriate chair, courses in selected subjects not normally permitted as arts/science electives including engineering, human kinetics, human nutrition and nursing.

5.1.4 Application for Advanced Major or Honours

In the second year of study, students apply for admission to an advanced major or honours program when they complete the appropriate application form and submit the form to the Dean’s office by March 31. Students are advised of their acceptance to the program in the summer following submission of the form. Students in the advanced major or honours programs must be registered full-time in their final year of study. The forms are available at [http://sites.stfx.ca/dean_of_business/](http://sites.stfx.ca/dean_of_business/)

5.1.5 Advancement and Graduation Requirements by Degree (see chart)

All students must fulfill the pattern and credit requirements as specified for the major, advanced major or honours programs. For BBA joint honours degrees, students submit only one honours thesis to the business administration or economics department.

Candidates who fail to meet the requirements for the degree for which they have applied may be eligible for another degree, provided those requirements are met. Exceptions to these requirements need the approval of the Dean of Business.

5.1.6 Co-operative Education Programs in the Schwartz School of Business Administration

A form of work-integrated learning, Co-op Education is a model of education that integrates academic study with related and supervised co-op work experience. A form of work-integrated learning, Co-op Education is a model of education that integrates academic study with related and supervised co-op work experience. Co-op can integrate academic study with work experience. Co-operative Education is a model of education that integrates academic study with related and supervised co-op work experience.

5.1.7 Co-op Education Programs

Electronic options are available in all streams and options.

6.  FACULTY OF EDUCATION REGULATIONS

6.1 BACHELOR OF EDUCATION ADMISSION REQUIREMENTS

The Bachelor of Education (B.Ed.) is a two-year program following a first degree. Applicants must have completed a first degree in arts, science, human kinetics, kinesiology, physical education or equivalent. The B.Ed. program has two streams: elementary and secondary with an additional middle years option available in either stream. Specialist programs in teaching physical education and French as a second language are available in all streams and options.

6.1.1 Admission Process

At the present time, admission to the B.Ed. program is limited to approximately 115 students. The admissions process consists of the three steps described below.

a) File Review

During the file review process, applicants are initially evaluated on four equally weighted criteria.

i) Academic record: Normally applicants must have a senior-year average of at least 70 or a GPA of 2.5. Consideration is also given to the applicant’s performance throughout the entire undergraduate program.

ii) Life experiences and community involvement: Both breadth and depth of involvement are evaluated, as is the applicant’s experience with diversity and with inclusive practices.

iii) Letters of reference: Evaluation of the applicant’s personal and professional qualities as presented by three referees who know the individual well as a student, worker and community member-leader.

iv) Essay on why the applicant wants to teach: Evaluation of the essay is based on the applicant’s articulation of his/her view of students, subject area, and vision for schooling.

b) Interview

Based on the above criteria, applicants will be short-listed for the next stage of the process in which interviews are normally required. Interviews are about 30-40 minutes in length and include core questions asked of all applicants applying to the B.Ed. program as well as specific questions relating to the

<table>
<thead>
<tr>
<th>Degree</th>
<th>Admission End of Second Year</th>
<th>Advancement End of Third to Fourth Year</th>
<th>Graduation and Fourth-Year Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBA Major</td>
<td>-</td>
<td>average 70; average 70 in the BSAD and required ECON courses taken in year three in the majors subject</td>
<td>average 55</td>
</tr>
<tr>
<td>BBA with Advanced Major</td>
<td>average 65 in courses taken in the first two years; average 65 in the required first- and second-year BSAD, ECON, MATH and STAT courses</td>
<td>average 75; average 75 in all BSAD and required ECON courses; grade of 70 in each course in the honours subject</td>
<td>average 75; average 75 in all BSAD and required ECON courses; grade of 70 in each course in the honours subject</td>
</tr>
<tr>
<td>BBA with Honours</td>
<td>average 75 in courses taken in the first two years; average 75 in the required first- and second-year BSAD, ECON, MATH and STAT courses; grade of 70 in each of these required courses</td>
<td>average 75; average 75 in all BSAD and ECON courses; grade of 70 in each BSAD and ECON course</td>
<td>average 75; average 75 in BSAD and ECON courses; grade of 70 in each BSAD and ECON course; grade of 70 on the honours thesis</td>
</tr>
<tr>
<td>BBA with Joint Honours in Business Administration and Economics</td>
<td>average 75 in courses taken in the first two years; average 75 in the required first- and second-year BSAD, ECON, MATH and STAT courses; grade of 70 in each of these required courses</td>
<td>average 75; average 75 in BSAD and ECON courses; grade of 70 in each BSAD and ECON course; grade of 70 on the honours thesis</td>
<td>average 75; average 75 in BSAD and ECON courses; grade of 70 in each BSAD and ECON course; grade of 70 on the honours thesis</td>
</tr>
</tbody>
</table>

http://sites.stfx.ca/dean_of_business/
elementary or secondary stream, as applicable. Secondary stream applicants are asked about the major and minor subject fields for which they are applying. Interview questions focus on a general understanding of teaching, teaching content and processes, personal and professional qualities, an understanding of diversity and inclusive practices, and communication skills.

c) Decision
The applicant’s file review and interview are equally weighted. Composite scores from the two parts of the application process form the basis for offers in each stream of the program, and within subject fields in the secondary stream.

d) Criminal Records and Child Abuse Checks & Updates
Applicants for the Bachelor of Education Program must submit Criminal Records Checks and Child Abuse Registry Checks to the StFX B.Ed. Admissions Coordinator following confirmation of enrollment into the program; these checks will be shared with the participating School Board(s) for EDUC 471; EDUC 472; EDUC 481; EDUC 482; Field Practicum. While enrolled in the B.Ed. program students are responsible to inform the Chair of the Department of Teacher Education of any changes that occur to the Criminal Records Check or the Child Abuse Registry Check that are submitted as part of the Admissions requirements; changes in this status could result in denial of practicum and/or denial of teaching license.

6.1.2 Admission Timeline
Jan 24 Completed applications are submitted for the year in which admission is sought.
Feb 1-10 Applications are reviewed by Faculty of Education.
Feb 10-Mar 15 Selected applicants are invited for interviews by stream and by subject field throughout this period.
Feb 25-Mar 30 Letters are mailed to applicants either making an offer, placing individuals on a wait list, or expressing regret.

6.1.3 Elementary Education (P-6) Requirements
There are five requirements for entrance into the B.Ed. elementary stream.

Social Studies: Nine credits are required in social studies from any one or combination of the following disciplines: history (with a preference for local and Canadian history), geography, economics, political science, anthropology, sociology, law, classics, Acadian studies, African-Canadian studies, Mi’kmaq studies, and/or philosophy.

Mathematics: Six credits are required in the subject field of mathematics. Three of the six credits must include the investigation of fundamental concepts and ideas.

English or French: Six credits are required in the subject field of English, if the undergraduate degree was delivered in English. Six credits are required in the subject field of French, if the undergraduate degree was delivered in French. Applicants for the specialist program for teaching French are encouraged to have courses in oral and written communication; communication strategies (speaking, listening, reading, writing strategies); Acadian, Québécois, and francophone culture courses; and an introduction to French literature which could include literature throughout the francophone world. In addition to this, elementary applicants are encouraged to have a course in children’s French literature taught in French.

Science: Six credits are required in science from any one or combination of: biology, chemistry, physics, geology/earth sciences, oceanography and environmental studies. Please note that a full laboratory component is recommended and is required for teacher certification in some Canadian provinces outside of Nova Scotia.

Developmental Psychology: Three or six credits are required.

A maximum of six credits of cognate courses may be recognized in fulfillment of the individual subject field requirements identified above.

Cognate coursework refers to coursework in which the content is consistent with the content in the discipline for which credit is being allocated, for example, classics as history, communications as English. Final decisions on cognates are determined by the Faculty of Education in consultation with the NS Department of Teacher Certification.

6.1.4 Secondary Education (7-12) Requirements
There are two requirements for entrance into the B.Ed. secondary stream.

a) Major Subject Field
A minimum of at least 30 credit hours of university coursework in one discipline of a subject field taught in Nova Scotia secondary schools. A maximum of 6 credit hours of cognate university coursework may be included in fulfillment of this requirement.

b) Minor Subject Field
A minimum of at least 18 credit hours of university coursework in one discipline of a second subject field taught in Nova Scotia secondary schools. A maximum of 6 credit hours of cognate university coursework may be included in fulfillment of this requirement.

Cognate coursework refers to coursework in which the content is consistent with the content in the discipline for which credit is being allocated, for example, classics as history, communications as English. Final decisions on cognates are determined by the Faculty of Education in consultation with the NS Department of Teacher Certification.

Note: A number of positions in the secondary stream have been set aside for applicants who have at least 18 credit hours in a second minor subject field. This may give potential teachers an advantage in applying for middle school or junior high school positions. With appropriate methods courses, endorsement could be achieved in three subject areas rather than the customary two.

Secondary education students must prepare to teach two subject fields normally taught in the public secondary schools of Nova Scotia (English, French, social studies, mathematics, science, physical education/health education, fine arts, Gaelic, family studies, Spanish, business). Information on subject fields and related disciplines:

- English: Applicants are encouraged to have courses in Canadian, American, British (including Shakespeare), and post-colonial literature.
- French: Applicants are encouraged to have courses in oral and written communication; communication strategies (speaking, listening, reading, writing strategies); Acadian, Québécois, and francophone culture courses; and an introduction to French literature which could include literature throughout the francophone world.
- Social Studies: Applicants must have a concentration in one of the following related disciplines: African-Canadian studies, classics, Acadian studies, economics, geography, history, law, Mi’kmaq studies, political science, or sociology. Anthropology may be used for a minor subject field and as a major subject field only if the courses are cross-listed with sociology.
- Mathematics: Applicants are encouraged to take courses in calculus, algebra, geometry, and statistics.
- Science: Applicants must have a concentration in one of the following related disciplines: biology, chemistry, geology/earth sciences, environmental studies, oceanography, or physics.
- Physical Education/Health Education: See section 6.2.
- Gaelic: Applicants must have a concentration in one of the following related disciplines: Celtic studies, Scottish Gaelic, or Irish Gaelic.
- Fine Arts: Applicants must have a concentration in one of the following related disciplines: art, drama, music or theatre studies.
- Family Studies: Applicants must have a dual concentration which covers two of the three threads of the family studies program: food and nutrition; textile arts disciplines; art, drama, music or theatre studies.
- Spanish: Applicants must have a concentration in Spanish with an emphasis on oral and written communication.
- Business: Applicants must have a concentration in Spanish with an emphasis on oral and written communication.

6.2 Bachelor of Education Physical Education Specialization
As a specialist discipline, physical education requires that prospective students normally meet recognized CCPEPE standards. In addition to the general requirements for either the elementary or secondary stream, applicants must have a minimum of 30 credits in the major subject for their first degree in the related disciplines of physical education, human kinetics, or kinesiology, with at least half consisting of courses beyond the introductory level. In addition, students should present among their required courses the following:
a) Courses illustrating knowledge of disciplinary content, including but not limited to, human anatomy/physiology, motor learning and control, biomechanics, and psychology of physical activity.
b) Courses related to the curriculum of the provincial school system including basic movement, gymnastics, dance, and team/individual sports, recreation and leisure pursuits, outdoor pursuits, and exercise and health-related fitness.
c) Courses in health education and growth and development.
d) A course in special populations in physical education.

Consideration may be given to applicants with unique skill sets or experiences.

6.3 BACHELOR OF EDUCATION MI’KMAQ FOCUS

Applicants pursuing a Mi’kmaq focus in their B.Ed. may develop a concentration in language and/or culture. The language focus requires oral fluency in Mi’kmaq, and at least 18 credits in Mi’kmaq language-related courses in the first degree.

6.4 BACHELOR OF EDUCATION PROGRESSION REQUIREMENTS AND ACADEMIC PENALTIES

To qualify for the B.Ed. degree an average of at least 65 is required in all courses taken in the program. The pass mark in each course is 60.

Given the compressed time frame of the B.Ed. program, students will be reviewed at the end of each term. Students are expected to pass all of their academic courses and practicum each term.

a) Students who fail one academic course in one term will normally be placed on academic probation and may be withheld from practicum.
b) Students who fail more than one academic course in a term will normally be suspended.
c) Students who fail practicum (i.e. a student who receives two unsatisfactory reports in any single practicum term) will normally be suspended.
d) If a student is re-admitted to the program after the suspension period and fails one or more courses or receives two more unsatisfactory practicum reports in a single practicum term, the student will normally be dismissed from the program.

The procedure for appealing two unsatisfactory practicum reports is given in Section VI (G) of the Faculty of Education Field Experience Handbook. The procedure for appealing an academic penalty is given in section 3.12. Students who successfully appeal will be permitted return to the B.Ed. program as soon as course availability permits. Consideration for alternative arrangements to complete coursework will be made at the discretion of the department chair. A student who is suspended from the B.Ed. program may re-apply after a period of one year. Other regulations in 3.11 may apply.

6.5 BACHELOR OF EDUCATION PROFESSIONAL CONDUCT

The Department of Teacher Education has adopted guidelines for the conduct of pre-service teachers enrolled in the Bachelor of Education program. As students and aspiring teachers, all B.Ed. program members must adhere to the guidelines as outlined in the B.Ed. Handbook and the Nova Scotia Teachers’ Union Code of Ethics.

The certificate in Outdoor Education is recognized for a licensing upgrade in Nova Scotia. The Certificate in Elementary Mathematics Education is recognized for a licensing upgrade in Nova Scotia.

6.6 BACHELOR OF EDUCATION CERTIFICATION

Candidates for a teacher’s certificate may be asked to disclose disciplinary actions at an educational institution or violations of the law which resulted in penalty.

Upon completion of the B.Ed. program, students are eligible to apply for the Teacher’s Certificate, ITC, awarded by the Nova Scotia Department of Education.

6.7 DIPLOMA IN ADULT EDUCATION

This program is offered in major centres across Canada throughout the year. The Diploma in Adult Education is a professional designation. The modules are arranged as a series, yet each is a complete unit of learning which may be taken independently of the others at the discretion of the program director. The modules cover knowledge and skills in the following areas and carry credit value as indicated:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADED 311</td>
<td>Module 1 - Assessing Training Needs</td>
<td>1</td>
</tr>
<tr>
<td>ADED 312</td>
<td>Module 2 - Setting Learning Objectives</td>
<td>1</td>
</tr>
<tr>
<td>ADED 321</td>
<td>Module 3 - Evaluation Strategies</td>
<td>1</td>
</tr>
<tr>
<td>ADED 322</td>
<td>Module 4 - Designing Learning Activities</td>
<td>2</td>
</tr>
<tr>
<td>ADED 331</td>
<td>Module 5 - Facilitating Learning</td>
<td>1</td>
</tr>
<tr>
<td>ADED 332</td>
<td>Module 6 - Practicum</td>
<td>6</td>
</tr>
</tbody>
</table>

Upon completion of the first five modules, the Certificate in Adult Education is awarded. The Diploma in Adult Education is awarded upon completion of the six modules. Students may count, in multiples of three, up to 12 credits as electives in BA programs.

6.8 CERTIFICATE IN ELEMENTARY MATHEMATICS EDUCATION

This program has been developed in response to a need identified by the Nova Scotia Department of Education and school board partners. The Certificate in Elementary Mathematics Education is recognized for a licensing upgrade in Nova Scotia. The certificate consists of a sequence of ten courses focusing on content and pedagogy suitable for the elementary and middle years and is offered to cohorts of in-service teachers on a part-time basis.

6.9 CERTIFICATE IN OUTDOOR EDUCATION

This certificate program is designed to fulfill a need identified by teachers across Nova Scotia in response to Physical Education curriculum changes. The Certificate in Outdoor Education is recognized for a licensing upgrade in Nova Scotia. The certificate consists of a sequence of eleven courses which focus on the skills and pedagogy required to offer outdoor pursuits to students Primary to grade 12. This certificate is offered to cohorts of in-service teachers on a part-time basis.

7. FACULTY OF SCIENCE REGULATIONS

7.1 General Regulations

7.1.1 Degrees and Diploma Offered

7.1.2 Subjects Available

7.1.3 Degree Patterns

7.1.4 Declaration of Major, Advanced Major, or Honours

7.1.5 Advancement and Graduation Requirements by Degree

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7.1.7 Bachelor of Science with Joint Honours

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7.2 Engineering

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7.4.3 Pre-Dental Studies

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7.4.6 Education and Teaching

7.1.5 ADVANCEMENT AND GRADUATION REQUIREMENTS

Each degree in the Faculty of Science requires 120 credits, with the exception of the B.Sc. Nursing and B.Sc.Human Nutrition with IDI degrees. The four-year B.Sc. in Nursing requires 120 credits; the accelerated option for post-degree students is 69 credits; and the option for RNs requires 63 credits. The B.Sc.Human Nutrition with IDI degree requires 138 credits. The Diploma in Engineering requires 69 credits. Courses for each degree and diploma must follow the pattern required by the program chosen.

Students wishing to apply for an advanced major or honours program are advised to consult with the department chair as early as possible.

Re-entry to degree programs in the Faculty of Science will not be granted automatically to students who have been absent from the university for more than...
10 years. In each science discipline, an entrance examination may be required to determine the extent to which credit will be awarded for courses completed previously.

7.1.1 Degrees and Diploma Offered
The Faculty of Science offers undergraduate degrees in the natural and applied sciences (biology, chemistry, computer science, earth sciences, environmental sciences, mathematics, physics, psychology) and in the health sciences (human kinetics, human nutrition, nursing) and the diploma in engineering.

Under the science heading there are several degree options:
- Bachelor of Science with Major: in one of seven majors listed below. An optional minor is available in an arts or science subject.
- Bachelor of Science with Advanced Major: in one of seven majors listed below; requires high academic achievement
- Bachelor of Science with Joint Advanced Major: combines the study of two science subjects; see chart 7.1.6 for combinations
- Bachelor of Science with Honours: offered in one of eight subjects listed below; requires superior academic achievement
- Bachelor of Science with Joint Honours: combines study of two science subjects; see chart 7.1.7 for combinations

Bachelor of Science with a Major in Aquatic Resources: a major in biology, earth sciences or mathematics/statistics/computer science and a major in aquatic resources

Under the human kinetics heading there are three degrees, each with a choice of kinesiology or pre-education major:
- Bachelor of Science in Human Kinetics
- Bachelor of Science in Human Kinetics with Advanced Major
- Bachelor of Science in Human Kinetics with Honours

For the BA in Human Kinetics, see chapter 4 and section 9.22.

Under the human nutrition heading there are six degrees (with or without IDI):
- Bachelor of Science in Human Nutrition
- Bachelor of Science in Human Nutrition with Advanced Major
- Bachelor of Science in Human Nutrition with Honours

Under the nursing heading there are four degrees and two certificates:
- Bachelor of Science in Nursing: options for students direct from high school, transfer students, and post-degree students; see sections 1.3g and 1.7
- Bachelor of Science in Nursing with Advanced Major
- Bachelor of Science in Nursing with Honours
- Bachelor of Science in Nursing for Registered Nurses: courses by distance; some opportunity for on-campus courses if a student wishes
- Certificate in Gerontological Nursing
- Certificate in Continuing Care

The Faculty of Arts, jointly with the Faculty of Science, offers
- Bachelor of Arts and Science in Climate and Environment with Major, see section 4.2.
- Bachelor of Arts and Science in Climate and Environment with Honours, see section 4.2.
- Bachelor of Arts and Science in Health with Major, see section 4.2.
- Bachelor of Arts and Science in Health with Honours, see section 4.2.

Under the engineering heading there is one diploma:
- Diploma in Engineering

The Diploma in Engineering can be completed concurrently with the Bachelor of Science degree; see section 7.2.1.

7.1.2 Subjects Available (see chart)
The following chart lists the subjects available for study in the science degrees within the Faculty of Science, where each subject may be used within the degree pattern, and where two subjects may be combined in a joint advanced major or joint honours degree.

7.1.3 Degree Patterns (see chart)
Listed in the chart on the next page are the degrees and the diploma in the Faculty of Science with the course patterns and credit requirements for each. In science, the acceptable arts subjects are anthropology, art, Catholic studies, Celtic studies, classical studies, development studies, economics, English, French, German, history, music, philosophy, political science, psychology, religious studies, sociology, Spanish, and women's and gender studies. Certain restrictions apply; see chart 4.1.2.

For definitions of the humanities and social sciences, see the glossary at the end of this calendar.

7.1.4 Declaration of Major, Advanced Major, or Honours
Students meet with faculty advisors in their major, advanced major, or honours departments to discuss future course selection. In the first year of study, a student applies for admission to the desired program by completing and submitting the appropriate application form, signed by the chair, to the Dean's office by March 29. Students are advised of acceptance to their programs in the summer following submission of their forms. The forms are available at http://sites.stfx.ca/dean_of_science/

7.1.5 Advancement and Graduation Requirements by Degree (see chart)
All students must fulfil the pattern and credit requirements as specified above and the course, seminar, research report, senior paper, or honours thesis requirements of the major, advanced major or honours department(s). For joint degrees, students submit only one research report, senior paper, or honours thesis. Candidates who fail to meet the requirements for the degrees for which they have applied may be eligible for other degrees, provided those degree requirements are met. Exceptions to these requirements need the approval of the Dean and the department chair.

Additional requirements are listed in the chart. The averages and grades specified are the minima required.

### 7.1.2 Subjects Available

<table>
<thead>
<tr>
<th>Code</th>
<th>Subject</th>
<th>A = Science A; B = Science B; C = Science C; E = Elective</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL</td>
<td>Biology</td>
<td>A, B, C, E</td>
</tr>
<tr>
<td>CHEM</td>
<td>Chemistry</td>
<td>A, B, C, E</td>
</tr>
<tr>
<td>CSCI</td>
<td>Computer Science</td>
<td>A, B, C, E</td>
</tr>
<tr>
<td>ESCI</td>
<td>Earth Sciences</td>
<td>A, B, C, E</td>
</tr>
<tr>
<td>MATH</td>
<td>Mathematics</td>
<td>A, B, C, E</td>
</tr>
<tr>
<td>PHYS</td>
<td>Physics</td>
<td>A, B, C, E</td>
</tr>
<tr>
<td>AQUA</td>
<td>Aquatic Resources</td>
<td>See note *</td>
</tr>
<tr>
<td>ECON</td>
<td>Economics</td>
<td>—</td>
</tr>
<tr>
<td>PSYC</td>
<td>Psychology</td>
<td>A, E</td>
</tr>
<tr>
<td>CLEN</td>
<td>Climate and Environment</td>
<td>B, E</td>
</tr>
<tr>
<td>HLTH</td>
<td>Health</td>
<td>E</td>
</tr>
<tr>
<td>HKIN</td>
<td>Human Kinetics</td>
<td>—</td>
</tr>
</tbody>
</table>

*Note: The Aquatic Resources program is available with biology, earth sciences or mathematics/statistics/computer science.*
### 7.1.3 Pattern and Credits Required in Each Degree and Diploma

<table>
<thead>
<tr>
<th>Bachelor of Science (see notes 1-3)</th>
<th>Science A</th>
<th>Science B</th>
<th>Science C</th>
<th>Arts X</th>
<th>Arts Y</th>
<th>Other Req</th>
<th>Approved Elec</th>
<th>Elec</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.Sc. Major (no minor)</td>
<td>36 credits</td>
<td>12 credits</td>
<td>6 credits</td>
<td>12 credits</td>
<td>6 credits</td>
<td>—</td>
<td>18</td>
<td>30</td>
</tr>
<tr>
<td>B.Sc. Major with arts minor, see note 7</td>
<td>36</td>
<td>12</td>
<td>6</td>
<td>24</td>
<td>6</td>
<td>—</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>B.Sc. Major with science minor, see note 8</td>
<td>36</td>
<td>24</td>
<td>6</td>
<td>12</td>
<td>6</td>
<td>—</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td>B.Sc. Advanced Major</td>
<td>42</td>
<td>12</td>
<td>6</td>
<td>12</td>
<td>6</td>
<td>—</td>
<td>18</td>
<td>24</td>
</tr>
<tr>
<td>B.Sc. Advanced Major with arts minor, see note 7</td>
<td>42</td>
<td>12</td>
<td>6</td>
<td>24</td>
<td>6</td>
<td>—</td>
<td>18</td>
<td>12</td>
</tr>
<tr>
<td>B.Sc. Advanced Major with science minor, see note 8</td>
<td>42</td>
<td>24</td>
<td>6</td>
<td>12</td>
<td>6</td>
<td>—</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>B.Sc. Joint Advanced Major</td>
<td>42</td>
<td>36</td>
<td>6</td>
<td>12</td>
<td>6</td>
<td>—</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>B.Sc. Honours</td>
<td>60</td>
<td>12</td>
<td>6</td>
<td>12</td>
<td>6</td>
<td>—</td>
<td>18</td>
<td>6</td>
</tr>
<tr>
<td>B.Sc. Honours with minor in science</td>
<td>60</td>
<td>24</td>
<td>6</td>
<td>12</td>
<td>6</td>
<td>—</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>B.Sc. Honours with minor in arts</td>
<td>60</td>
<td>12</td>
<td>6</td>
<td>24</td>
<td>—</td>
<td>—</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>B.Sc. Joint Honours</td>
<td>Total of 64 in A &amp; B</td>
<td>6</td>
<td>12</td>
<td>6</td>
<td>—</td>
<td>12</td>
<td>6</td>
<td>—</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BA Sc</th>
<th>Core</th>
<th>Concentration 1</th>
<th>Concentration 2</th>
<th>Humanities</th>
<th>Electives</th>
</tr>
</thead>
<tbody>
<tr>
<td>BASc Major</td>
<td>24</td>
<td>48</td>
<td>24</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>BASc Honours</td>
<td>24</td>
<td>54</td>
<td>24</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>Human Kinetics</td>
<td>HKin Req</td>
<td>HKin Elec</td>
<td>Statistics</td>
<td>Science A</td>
<td>Science B</td>
</tr>
<tr>
<td>B.Sc. HKin Major Kinesiology (see note 4)</td>
<td>36</td>
<td>21</td>
<td>3</td>
<td>24</td>
<td>6</td>
</tr>
<tr>
<td>B.Sc. HKin Major Pre-Education</td>
<td>48</td>
<td>12</td>
<td>—</td>
<td>24, see Note 5</td>
<td>6</td>
</tr>
<tr>
<td>B.Sc. HKin Advanced Major or Honours Kinesiology (see note 4)</td>
<td>39</td>
<td>18</td>
<td>3</td>
<td>24</td>
<td>6</td>
</tr>
<tr>
<td>B.Sc. HKin Advanced Major or Honours Pre-Education</td>
<td>54</td>
<td>3</td>
<td>3</td>
<td>24, see Note 5</td>
<td>6</td>
</tr>
<tr>
<td>Human Nutrition (see note 6)</td>
<td>HNU Req</td>
<td>HNU Elec</td>
<td>BIOL</td>
<td>BSAD</td>
<td>CHEM</td>
</tr>
<tr>
<td>B.Sc. HNU and Advanced Major</td>
<td>33 with HNU 491</td>
<td>24</td>
<td>12</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>B.Sc. HNU Honours</td>
<td>39</td>
<td>24</td>
<td>12</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>Nursing</td>
<td>NURS Req</td>
<td>NURS Elec</td>
<td>BIOL</td>
<td>CHEM</td>
<td>HNU</td>
</tr>
<tr>
<td>B.Sc. Nursing</td>
<td>72</td>
<td>—</td>
<td>12</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>B.Sc. Nursing Advanced Major</td>
<td>75</td>
<td>—</td>
<td>12</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>B.Sc. Nursing Honours</td>
<td>75</td>
<td>3</td>
<td>12</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>B.Sc. Nursing for RNs</td>
<td>36, see note 9</td>
<td>9</td>
<td>12</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>B.Sc. Nursing, Accelerated option</td>
<td>72</td>
<td>6</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Engineering</td>
<td>ENGR Req</td>
<td>Discipline Elec</td>
<td>CHEM</td>
<td>PHYS</td>
<td>Arts Elec</td>
</tr>
<tr>
<td>Diploma in Engineering</td>
<td>45</td>
<td>9</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

Note 1: Of science A, B and C, one must be mathematics/statistics, and six credits must be calculus. In the B.Sc. Advanced Major in Science with Business Administration, either science A or B must be mathematics/statistics and must include six credits of calculus.

Note 2: With permission of the chair of the department of the student's major, courses from other science departments may be used to satisfy major, advanced major or honours program requirements: up to 6 credits for the major; up to 12 credits for the advanced major; joint advanced major, or the advanced major with business administration; up to 18 credits for the honours; up to 12 credits for the joint honours.

Note 3: Students may use up to 30 credits of courses from professional programs (business administration, information systems, engineering, human kinetics, human nutrition, nursing) as open or approved electives.

Note 4: For students pursuing the human nutrition minor, there are 15 credits fewer human kinetics electives and 15 credits of additional science requirements. For students pursuing the health sciences minor, the 30 credits of science A and B are a combination of courses from biology, chemistry and physics. See section 9.22.

Note 5: For students pursuing the secondary teaching stream option, a minimum of 24 credits must be in one of the subject fields taught in Nova Scotia schools. For those intending the elementary teaching stream, science A becomes 18 credits and the approved electives become 12 credits.

Note 6: The 12 credits art subject in all human nutrition programs must constitute a pair. See the glossary for definitions of pair, humanities and social sciences.

Note 7: Available minors in arts are anthropology, art, art history, Catholic studies, classics, Celtic studies, climate and environment, development studies, economics, English, French, history, music, philosophy, political science, psychology, religious studies, sociology, Spanish, women's and gender studies.

Note 8: Available minors in science are biology, chemistry, climate and environment, computer science, earth sciences, mathematics, and physics.

Note 9: Includes 12 credits of humanities requirement: NURS 300 and NURS 330.
### 7.1.5 Advancement and Graduation Requirements by Degree

<table>
<thead>
<tr>
<th>Degree</th>
<th>Admission End of Second Year</th>
<th>Advancement End of Third to Fourth Year</th>
<th>Graduation and Fourth-Year Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.Sc. Major</td>
<td>—</td>
<td>—</td>
<td>average 55</td>
</tr>
<tr>
<td>B.Sc. Advanced Major</td>
<td>average 65 in each of first two years; grade of 65 in each course in Science A</td>
<td>average 70; average 70 in Science A</td>
<td>average 70; average 70 in Science A</td>
</tr>
<tr>
<td>B.Sc. Joint Advanced Major</td>
<td>average 65 in each of first two years; grade of 65 in each course in Science A and B</td>
<td>average 70; average 70 in Science A; average 70 in Science B</td>
<td>average 70; average 70 in Science A; average 70 in Science B</td>
</tr>
<tr>
<td>B.Sc. Honours</td>
<td>average 75 in each of first two years; average 75 in Science A courses completed during the first two years; grade of 70 in each course in Science A</td>
<td>average 75; average 75 in Science A courses; grade of 70 in each course in Science A</td>
<td>average 75; average 75 in Science A courses; grade of 70 in each course in Science A</td>
</tr>
<tr>
<td>B.Sc. Joint Honours</td>
<td>average 75 in each of first two years; average 75 in Science A courses and average 75 in Science B courses completed during the first two years; grade of 70 in each course in Science A and B</td>
<td>average 75; average 75 in Science A courses; average 75 in Science B courses; grade of 70 in each course in Science A and B</td>
<td>average 75; average 75 in Science A courses; average 75 in Science B courses; grade of 70 in each course in Science A and B</td>
</tr>
<tr>
<td>B.Sc. Human Kinetics</td>
<td>—</td>
<td>—</td>
<td>average 55</td>
</tr>
<tr>
<td>B.Sc. Human Kinetics with Advanced Major</td>
<td>average 65 in each of first two years; grade of 65 in each HKIN course</td>
<td>average 70; average 70 in HKIN courses</td>
<td>average 70; average 70 in HKIN courses</td>
</tr>
<tr>
<td>B.Sc. Human Kinetics with Honours</td>
<td>average 75 in each of first two years; average 75 in HKIN courses completed during the first two years; grade of 70 in each HKIN course</td>
<td>average 75; average 75 in HKIN courses; grade of 70 in each HKIN course</td>
<td>average 75; average 75 in HKIN courses; grade of 70 in each HKIN course</td>
</tr>
<tr>
<td>B.Sc. Human Nutrition</td>
<td>—</td>
<td>—</td>
<td>average 55</td>
</tr>
<tr>
<td>B.Sc. Human Nutrition with Advanced Major</td>
<td>average 65 in each of first two years; combined average 65 in HNU and science courses in first year; grade of 65 in each HNU course</td>
<td>average 70; average 70 in HNU courses</td>
<td>average 70; average 70 in HNU courses</td>
</tr>
<tr>
<td>B.Sc. Human Nutrition with Honours</td>
<td>average 75 in each of first two years; combined average 75 in HNU and science courses in first year; average 75 in HNU courses in first two years; grade of 70 in each HNU course</td>
<td>average 75; average 75 in HNU courses; grade of 70 in each HNU course</td>
<td>average 75; average 75 in HNU courses; grade of 70 in each HNU course</td>
</tr>
<tr>
<td>B. Sc. Nursing, new curriculum 2016</td>
<td>Successful completion of all mandatory courses; 65 average in mandatory non-nursing courses; minimum grade of 65 in nursing courses; Pass for all clinical practice portions of courses; (see note 1)</td>
<td>Successful completion of all mandatory courses; 65 average in mandatory non-nursing courses; minimum grade of 65 in nursing courses; pass for all clinical practice portions of courses</td>
<td>Successful completion of all mandatory courses; 65 average in mandatory non-nursing courses; minimum grade of 65 in nursing courses; pass for all clinical practice portions of courses</td>
</tr>
<tr>
<td>B.Sc. Nursing, previous curriculum</td>
<td>grade of 60 in each NURS course; (see note 1)</td>
<td>grade of 60 in each NURS course</td>
<td>grade of 60 in each NURS course</td>
</tr>
<tr>
<td>B.Sc. Nursing with Advanced Major</td>
<td>average 65 in each of first two years; grade of 65 in each NURS course; no nursing practice alert in second year; (see note 1)</td>
<td>average 70; grade of 70 in each NURS course; no nursing practice alert</td>
<td>average 70; grade of 70 in each NURS course; no nursing practice alert</td>
</tr>
<tr>
<td>B.Sc. Nursing with Honours</td>
<td>average 75 in each of first two years; average 75 in NURS courses completed during the first two years; grade of 70 in each NURS course; no nursing practice alert in second year (see note 1)</td>
<td>average 75; average 75 in NURS courses; grade of 70 in each NURS course; no nursing practice alert</td>
<td>average 75; average 75 in NURS courses; grade of 70 in each NURS course; no nursing practice alert</td>
</tr>
<tr>
<td>B.Sc. Nursing for Registered Nurses</td>
<td>grade of 60 in each NURS course</td>
<td>—</td>
<td>grade of 60 in each NURS course</td>
</tr>
<tr>
<td>BASc Major</td>
<td>—</td>
<td>—</td>
<td>average 55</td>
</tr>
<tr>
<td>BASc Honours</td>
<td>average 75; grade of 70 in all core and primary concentration courses</td>
<td>average 75; grade of 70 in all core and primary concentration courses</td>
<td>average 75; grade of 70 in all core and primary concentration courses</td>
</tr>
<tr>
<td>Diploma in Engineering</td>
<td>average 60 to advance to second year</td>
<td>—</td>
<td>average 60 over length of program</td>
</tr>
</tbody>
</table>

Note 1: To progress to third year, all first and second year courses must be successfully completed.

### 7.1.6 Bachelor of Science with Joint Advanced Major

It is possible to pursue an advanced major program, which involves combined study of two science subjects; where \( Y = \) yes, possible:

<table>
<thead>
<tr>
<th>with</th>
<th>BIOL</th>
<th>CHEM</th>
<th>CSCI</th>
<th>ESCI</th>
<th>HKIN</th>
<th>MATH</th>
<th>PHYS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL</td>
<td>—</td>
<td>—</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>—</td>
</tr>
<tr>
<td>CHEM</td>
<td>Y</td>
<td>—</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>—</td>
</tr>
<tr>
<td>CSCI</td>
<td>Y</td>
<td>Y</td>
<td>—</td>
<td>Y</td>
<td>—</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>ESCI</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>—</td>
<td>—</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>HKIN</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>—</td>
<td>Y</td>
<td>—</td>
</tr>
</tbody>
</table>

### 7.1.7 Bachelor of Science with Joint Honours

It is possible to pursue an honours program which involves combined study of two science subjects; where \( Y = \) yes, possible:

<table>
<thead>
<tr>
<th>with</th>
<th>BIOL</th>
<th>CHEM</th>
<th>CSCI</th>
<th>ESCI</th>
<th>MATH</th>
<th>PHYS</th>
<th>PSYC</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL</td>
<td>—</td>
<td>—</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>—</td>
</tr>
<tr>
<td>CHEM</td>
<td>Y</td>
<td>—</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>—</td>
</tr>
<tr>
<td>CSCI</td>
<td>Y</td>
<td>Y</td>
<td>—</td>
<td>Y</td>
<td>—</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>ESCI</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>—</td>
<td>—</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>MATH</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>—</td>
<td>Y</td>
<td>—</td>
</tr>
<tr>
<td>PHYS</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>—</td>
<td>Y</td>
<td>—</td>
</tr>
<tr>
<td>PSYC</td>
<td>Y</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>
7.1.8 Co-operative Education Program in Science
A form of work-integrated learning, Co-op Education is a model of education that integrates academic study with related and supervised co-op work experience (12-16 months) with an employer partner in industry, government and not-for-profit across Canada. Students enrolled in biology, climate & environment, computer science, health, human nutrition, or mathematics are eligible to apply. The biology, computer science, and human nutrition co-op programs are accredited by the Co-operative Education & Work-Integrated Learning Canada (CEWIL Canada). COOP 405 (3 credits) can be used as a major subject elective or as an open elective. See section 9.13 for further information.

7.2 ENGINEERING
The Bachelor of Engineering (B.Eng.) program in Nova Scotia is either a two-year diploma program at any of the associated universities followed by two years of study at Dalhousie University in Halifax, or a four-year program at Dalhousie University.

The SIFX Engineering Diploma consists of 69 credits normally taken over two academic years. During the second term of the first year, students apply for conditional acceptance into one of the following engineering programs at Dalhousie University: chemical, civil, electrical, environmental, industrial, mechanical, or mineral resource engineering. Conditional acceptance into a program allows the student to choose the appropriate courses to take in the second year of the diploma program at SIFX.

Dalhousie and the associated universities form a unified system of engineering education. Therefore, all diploma graduates from the associated universities are guaranteed admission into the Faculty of Engineering at Dalhousie University. However, it is not possible for Dalhousie to guarantee that students will gain entry to the program of first choice, since all programs are subject to a maximum number of admissions. Thus, in the second half of the first year, students are required to specify their choices of programs, in preferential order. The Dalhousie Faculty of Engineering notifies the chair of the SIFX department of engineering of conditional admission to specific programs. The notification is normally sent in June. Placement of students into programs is based on academic performance. SIFX, along with the other associated universities, has a formal Memorandum of Understanding (MOU) with Dalhousie University that addresses admissions. Article 4.0/1 of the MOU states that “The Faculty of Engineering at Dalhousie University will treat students from the Associated University programs on an equal basis with students who entered the program as freshmen at Dalhousie University. Academic merit will be the only deciding factor on admission to disciplines.” Students who do not gain entrance to their preferred programs or do not wish to continue their studies at Dalhousie University may apply to an engineering program at any other institution and transfer the credits earned.

Students who transfer to the SIFX diploma program from other universities must obtain at least 36 credits taken at SIFX in order to receive a diploma from SIFX. Students cannot normally use a distance or online course to satisfy the requirement of an engineering science course. An engineering science or design course may normally be taken during spring or summer only if the course was taken during the regular academic term but the student obtained a failing grade.

7.2.1 Bachelor of Science with a Diploma in Engineering
Students who wish to earn the engineering diploma and a B.Sc. degree can do so concurrently. This option exists for a major in biology, chemistry, earth sciences, mathematics/statistics/computer science and physics. Students can also complete a diploma in engineering concurrently with an advanced major in physics.

7.3 BACHELOR OF ARTS AND SCIENCE
The Bachelor of Arts and Science (BASC) is designed to expose students to both Arts and Science knowledge that inform a particular topic. Since many contemporary topics and issues are better understood through thorough engagement with both scientific and humanistic contributions, the degree is structured so that students engage with as many relevant disciplinary contributions as possible. Students completing Bachelor of Arts and Science programs will complete interdisciplinary core courses pertaining to their subject of study as well as science, arts, and humanities requirements.

Currently, SIFX offers a Bachelor of Arts and Science in Health or one in Climate and Environment. Both programs are direct-entry. This degree program is not intended as a compromise for students who cannot decide between an arts and science degree. This degree is rather for students with specific topical interests that are better served by interdisciplinary study.

7.3.1 Climate and Environment
The program was carefully designed to provide students with maximum exposure to knowledge that will contribute directly to their understanding of climate and environmental topics while maintaining a liberal arts approach that encourages commitment to broad critical and scientific inquiry, logical rigour, and creative problem-solving. Students will complete courses across the faculties of arts and science to gain a broad yet inclusive education in both climate and environment. This approach reflects the complexity of addressing climate and environment issues currently facing our planet. Global initiatives in tackling human and environmental issues highlight the need for an interdisciplinary approach, recognizing that solutions will only be found through integrated scientific, socio-political, and economic inquiry.

7.3.2 Health
The program aims to provide students with a contemporary education in health by drawing on knowledge from the natural sciences, social sciences, and humanities to engage students in nuanced and considered discussions about how we think about health, how we approach health, how we create health, what biases contribute to our understanding of health, and how health is intertwined into all aspects of our individual and collective lives. Students will gain a better understanding of the ways in which human health is determined and defined, by emphasizing what biology, chemistry, the social sciences, history, and other disciplinary fields of study contribute to an integrative understanding of health. Students will complete concentrations in biomedical as well as social determinants and health equity as well as a humanities requirement.

7.4 POSSIBLE PATHWAYS IN THE SCIENCES

7.4.1 Architectural Studies
In association with Dalhousie University, SIFX offers the first two years of a minimum of four calendar years of study leading to a Bachelor of Environmental Design Studies.

A student who has successfully completed two years in a BA, BBA, B.Sc. or engineering program may apply to enter the third year at Dalhousie University School of Architecture. Some mathematical facility is required and credit should be earned for at least six credits in statistics and/or calculus. For requirements, interested students are encouraged to contact the School of Architecture, Dalhousie University.

7.4.2 Pre-Medical Studies
The field of medical studies has been evolving over the last few years. Most medical schools do not have specific course requirements. While familiarity in the natural sciences will help a student succeed in medical school, pathways to enter medical school are diverse. Students may enter medical school, for instance, with a BA, B.Sc., or a B.A.Sc. Students should elect to complete a broad, yet structured and rigorous academic degree. Often, medical school admissions committees look for a student that not only excels academically, but also contributes to societal wellbeing through volunteering, and engagement in a variety of social situations. It is important for students to demonstrate, through their experiences in both their academic and personal lives, professionalism, ethical behaviour, excellent communication skills, and empathy.

In 2015, the Medical College Admissions Tests (MCAT) were rewritten to require student familiarity in a broad array of disciplines. To prepare for the MCATs, students may want to complete the following courses: general biology, general chemistry, organic chemistry, biochemistry, physics, introductory psychology, and introductory sociology. Beyond these courses, their education should include a broad study in the physical, life and social sciences, and the humanities.

7.4.3 Pre-Dental Studies
Admission to the four-year Dalhousie Doctor of Dental Surgery program requires the completion of a minimum of 10 full-year academic classes at the undergraduate level. These classes will normally be completed by May 1 of the year of expected entry to the Faculty of Dentistry. Two one-term academic classes in the same discipline are considered equal to one full-year academic class. Academic requirements:

a) One full-year academic class in each of biology, general chemistry, physics, organic chemistry. (Each of these courses must include laboratory instruction.)

b) An approved one-term bio-organic chemistry course may be substituted for the full-year organic chemistry class.

c) Two full-year academic courses (or four one-term courses) chosen from the humanities and/or social sciences.

d) One full-year university course (or two one-term courses) in vertebrate physiology and one university course (full-year or one-term) in each of introductory biochemistry and introductory microbiology. These courses should be at the second-year level or higher and applicants are encouraged to contact the Faculty of Dentistry for approval of selected courses.

7.4.4 Pre-Veterinary Studies
The Atlantic Veterinary College is located at the University of Prince Edward Island. Applicants are required to complete prerequisite courses and supply official Graduate Record Examination – General (GRE) results. Additional information
is available at http://www.upei.ca/programsandcourses/professional-programs/doctor-veterinary-medicine/dvm-academic-requirements

7.4.5 Graduate Studies
Students with an excellent academic record may be interested in moving on to a master's degree. There are many graduate programs to choose from regionally, nationally, and internationally. Faculty are well poised to give advice on potential graduate schools and programs. Students who are interested in pursuing a master's degree at StFX should refer to chapter 8.

7.4.6 Education and Teaching
Students may be interested in moving into the field of education and becoming a teacher. StFX offers a Bachelor of Education degree and students majoring in sciences may pursue teaching specializations in sciences, mathematics, physical education and family studies. Science students may also pursue additional teaching areas in departments in the arts. An option also exists for a degree in elementary education. See chapter 6 for additional information.

8. GRADUATE STUDIES

8.1 Master of Arts and Master of Science

8.1.1 Admission Requirements and Procedures
The M.Ed. program is competitive and based on:

- A minimum of 12 months for candidates with an honours degree, and a minimum residence of 18 months for other candidates.
- Students must earn a total of 36 credits in graduate work; the thesis will count for 18 credits.
- Candidates must satisfy degree requirements as determined by the candidate’s supervisory committee and approved by the department chair.

Students may be interested in moving into the field of education and becoming a teacher. StFX offers a Bachelor of Education degree and students majoring in sciences may pursue teaching specializations in sciences, mathematics, physical education and family studies. Science students may also pursue additional teaching areas in departments in the arts. An option also exists for a degree in elementary education. See chapter 6 for additional information.

8.2.2 Program Requirements
The program requires completion of ADED 505 during the three-week residential institute; completion of ADED 510 in year 1; completion of ADED 520 in year 2; completion of ADED 530 and ADED 600/601 in year 3. There are two routes by which a student may complete the requirements for the M.Ed.: a synthesizing examination route or a thesis route.

For successful completion of the degree, candidates must demonstrate a comprehensive knowledge of the area of study and an understanding of the principles and practices of adult education. To fulfill these requirements candidates must:

a) design a learning program that includes
   i) a learning plan;
   ii) a professional portfolio;
   iii) a comprehensive reading list; and
   iv) a critical review of relevant literature;

b) plan, complete, present, and defend a research project and synthesizing examination or complete and submit an academic thesis to demonstrate
   the learning objectives of the program have been achieved;

c) evaluate the program learning experience with reference to the learning plan.

Graduating students should note that a final copy of the successful thesis must be approved and all grades submitted, no later than April 15 for Spring Convocation and November 15 for Fall Convocation.

8.3 MASTER OF EDUCATION

8.3.1 Admission Requirements and Procedures
The deadline for application to the M.Ed. program is February 15, with courses beginning in July of the same year. Students are responsible for checking with the admissions office to make sure that their application is complete. Only completed applications will be considered.

Admission to the M.Ed. program is competitive and based on:

a) completion of a B.Ed. or its equivalent, with an overall average of at least 70;

b) at least two years of teaching experience prior to enrolment in the first graduate course.

Graduates who do not possess a B.Ed. will normally be considered when they have:

a) met the university’s admission requirements for the B.Ed.;
b) gained a teaching license equivalent to a Nova Scotia Initial Certificate (TC5) or been employed in a teaching capacity for at least two years in a school of nursing or a post-secondary institution;

c) completed a minimum of 12 credits in education;

d) met all other conditions.

Meeting the minimum admission requirements does not ensure acceptance into the program. Admission decisions are final.

8.3.2 Program Requirements

SfX offers the M.Ed. degree with specialization either in educational administration and policy or in curriculum and instruction. In both streams students must complete the specified core courses and six elective credits.

There are two options by which a student may complete the requirements for the M.Ed.: a thesis route and a course-based route; see section 9.17. Students who choose the thesis route must complete 24 credits in graduate education courses and a thesis worth 12 credits. Those in the course-based route must complete 36 credits in graduate education courses.

This degree fulfills the requirements of the Nova Scotia Department of Education for an increase in level of teacher certification. Graduate courses which may be taken for credit towards a M.Ed. are listed in section 9.17.

8.4 PH.D. IN EDUCATIONAL STUDIES

The Ph.D. in Educational Studies is offered in partnership by St. Francis Xavier University, Mount Saint Vincent University, and Acadia University. This research-oriented doctoral program is jointly administered by the Inter-University Doctoral Administrative Committee (IDAC). Applicants are admitted to one university and graduate from that home institution of record.

Doctoral students can focus their studies on one or more of six interrelated themes: curriculum studies, educational foundations and leadership, inclusive education, lifelong learning, literacies, and the psychological aspects of education.

Regulations for students enrolled in the Interuniversity Ph.D. in Educational Studies are determined jointly by the partner institutions. Additional information is available at http://www.nsphdeducation.ca/en/home/default.aspx

8.4.1 Admission Requirements and Procedures

Applicants are encouraged to review the research interests of education faculty members at all three participating universities, available on their respective websites. An average of 14 students will be admitted each year: six at MSVU, four at SfX, and four at Acadia. The IDAC may consider applicants on a case-by-case basis and waive the fixed application date, if deemed warranted and if space is available in the program for that year.

Minimum admission requirements are:

a) A master’s level degree from a recognized university in education or in a related field of study (a cognate discipline);

b) Normally, a graduate thesis in a field related to the proposed doctoral studies. Those applicants who have not completed a thesis are required to submit evidence of their ability to undertake research in education through the completion of a qualifying research paper of sufficient depth and scope to reflect their research competence;

c) Evidence of scholarly preparation to conduct research, normally including graduate level courses in quantitative and/or qualitative research methods and design;

d) Three letters of reference, normally including two academic and one professional;

e) A recent curriculum vitae indicating current initiatives in education and any academic, scholarly work to date;

f) A letter of intent indicating a proposed area of study from among the six interrelated themes of educational studies;

g) A minimum of A+ or 80% average in his or her highest degree.

Qualified applicants will only be admitted if a suitable supervisor and program can be provided. To achieve success in this doctoral program, applicants must demonstrate strong reading, writing and comprehension skills in the English language.

The application package is available from the doctoral program office in the faculty of education and online at the Inter-University Ph.D. website www.educationphd.ns.ca.

a) Applicants apply for their institution of choice (Acadia, MSVU or SfX) through the doctoral program office by November 15 for July 1 entry;

b) The IDAC will review all applications and, by majority agreement, recommend acceptance of applicants to the participating institutions;

c) The SfX admissions office will inform the applicant, in writing after March 1, regarding the decision of the IDAC. SfX becomes the institution of record for all doctoral students formally admitted to SfX.

d) In addition to specific doctoral program requirements and regulations, SfX students are bound by the regulations and procedures pertaining to graduate studies at SfX.

e) Each dissertation supervisor will arrange for an entry meeting for his/her student(s) to develop a preliminary program plan and an initial outline of the proposed research area. This preliminary plan will be submitted in writing to the IDAC for approval (within a time frame specified by the IDAC), through the Doctoral Program Co-ordinator. Normally, this plan is completed before the July 1 start date.

8.4.2 Program Requirements

Students must complete EDUC 9001-9005 and 9010 during four consecutive semesters (14-month residency). Students normally defend their dissertation within two years after the portfolio examination, but no later than six years after entering the doctoral program, unless an extension has been granted. Students must register in a minimum of one course per year. Active students in the program are considered full-time throughout the program.

Students enrol in EDUC 9001 and 9002 on site in July at one of the three universities. The site for these two courses will rotate amongst the three universities from year to year. Students complete EDUC 9010 and 9100 with their dissertation advisor and their committee at their home institution of record. The remaining courses are delivered using an e-learning platform. In some instances, doctoral students may arrange to enrol in an existing topic-related Master level course, augmented with doctoral level analysis and applications. Doctoral students have the right to take courses and seminars and use the academic facilities of any of the three participating universities in accordance with their approved plan of study.

The required courses are: 9001; 9002; 9003; 9004; 9005; 9010, and 9110. At the time of admission, students will be advised if they are required, and they may choose, to complete (in consultation with pro-temp advisor and with approval from IDAC): EDUC 9006, 9007, 9008, and 9009. See section 9.17.3 for course information.

8.5 REGULATIONS

Students are expected to be familiar with all university and department regulations. See chapter 3 and the relevant department in chapter 9.

8.5.1 Program Types and Fees

Graduate programs at SFX are classified as:

a) Flat-fee programs: Students pay a flat fee for their program (based on an expected time to completion). The fee is charged once at the beginning of the program, and is paid in instalments at designated intervals. Flat-fee programs at SFX currently include the Masters of Arts, Masters of Science and the Ph.D. in Educational Studies.

b) Per credit fee programs: Students pay fees based on the number of credits in which they are enrolled in a given semester. Currently, the Masters of Adult Education and the Masters in Education are the only per-credit fee programs at SFX.

8.5.2 Residency, Expected Time to Completion, Maximum Time to Completion

Each graduate program at SFX has a defined minimum residency, and defined expected and maximum times to completion. The residency period is the length of time during which the student is expected to be on campus working full-time toward the completion of program requirements. These timeframes are outlined in the following table:

<table>
<thead>
<tr>
<th>Program</th>
<th>Minimum Residence</th>
<th>Expected time to complete</th>
<th>Maximum time to complete</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA</td>
<td>12 or 18 months*</td>
<td>24 months</td>
<td>5 years</td>
</tr>
<tr>
<td>M.Sc.</td>
<td>12 or 18 months*</td>
<td>24 months</td>
<td>5 years</td>
</tr>
<tr>
<td>M.Ed.</td>
<td>N/A</td>
<td>36 months</td>
<td>36 months**</td>
</tr>
<tr>
<td>M.Ed.</td>
<td>N/A</td>
<td>24 months</td>
<td>6 years</td>
</tr>
<tr>
<td>Ph.D. in Educational Studies***</td>
<td>14 months</td>
<td>4 years</td>
<td>6 years</td>
</tr>
</tbody>
</table>

*12 months for candidates holding an honours degree and 18 months for all other candidates.

** See section 8.5.7.

***Regulations for students enrolled in the Inter-university Ph.D. in Educational Studies are determined jointly by the partner institutions. Please consult http://www.nsphdeducation.ca/en/home/default.aspx for registration and fee information.

8.5.3 Enrolment Status and Withdrawal

Students remain enrolled in the program and are charged all relevant fees until they formally notify the Dean’s office that they are withdrawing from the program.
Continuing students are charged an annual continuation fee until they have completed their degree requirements or until they reach the maximum time to completion.

Students who have outstanding fees at the beginning of a continuation period will not be eligible for continuation status and will, if the situation is not resolved, be designated inactive. Inactive students lose their rights and privileges as StFX students. The Registrar’s Office will notify students who are not eligible for continuation status through the student’s webFX email account; students will have 7 days to resolve the issue with the Business Office.

International and domestic students pay the same continuation fee.

<table>
<thead>
<tr>
<th>Program</th>
<th>Continuation Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.A., M.Sc.</td>
<td>The equivalent of tuition for a 6-credit undergraduate course for a 12-month continuation period</td>
</tr>
<tr>
<td>M.Ed.</td>
<td>Tuition paid at course enrolment</td>
</tr>
<tr>
<td>Ph.D. in Education</td>
<td>As determined by the Interuniversity Ph.D. Committee, see the website: <a href="http://www.educationphd.ns.ca">www.educationphd.ns.ca</a></td>
</tr>
</tbody>
</table>

8.5.5 Full-time and Part-time Status

Students in flat fee programs, such as the MA and M.Sc. programs maintain full-time status for the first 24 months. After the first 24 months, students are automatically classified as part-time until they have reached the maximum time to completion. Students in the MAEd program maintain part-time status throughout the program. Ph.D. in Educational Studies students are considered full-time students throughout their program.

In exceptional cases and for a limited period of time, MA and M.Sc. students may apply to the AVPRGS to be considered full-time after the first 24 months. In order for full-time status to apply, students must demonstrate all of the following:

a) They are geographically available to campus.
b) They visit the campus regularly.
c) They are not engaged in full-time employment on or off campus.
d) They are engaged in their academic work full-time.

If any of these conditions changes, the student will no longer be considered full-time. The continuation fee for full-time students is the same as the continuation fee for part-time students.

Students in per-credit fee programs (M.Ed.) are considered full-time or part-time based on the number of credits in which they are enrolled in a given period. The full- or part-time status is assessed on a term-by-term basis, so a student can be full-time for part of the year and part-time for the remainder. A student is considered full-time if enrolled in 18 or more credits during the period of September to May. Students are also considered full-time when registered in six credits for the period May-June or for the period July-August.

8.5.6 Academic Standing

To maintain satisfactory standing, graduate students must achieve a passing grade of 60 in each course and must maintain an average of 70 throughout the program. Students who fail any course or do not maintain the required average will receive notification from the Registrar’s Office that they have been placed on probation. A student who subsequently fails a second course or does not achieve a program average of 70 will be dismissed; in progress courses will be dropped (with DC entered on the transcript) and refund rules applied.

For Master of Arts or Master of Science students, evaluation of in-progress thesis work is carried out through the annual review process and the completion of the annual progress report form (See ‘Forms’ section of the Graduate Studies website). A student whose thesis progress is rated as ‘not acceptable’ following the annual review may be subject to dismissal.

Notification of dismissal will be sent to the student (copied to the appropriate Dean and Graduate Student Coordinator/Chair) by the Registrar’s Office. A student may elect to appeal a dismissal to the Committee on Graduate Studies. To submit an appeal, students follow the steps described in Sections 3.12 and 3.13 of the Academic Calendar, as applicable to graduate students. The appeal must be received by the AVPRGS, as Chair of the COGS, within three weeks of receiving notification of dismissal.

If a student believes that the work is not proceeding satisfactorily for reasons outside of his/her control, the student may make representation to his/her Supervisory Committee, the department Chair, the Dean, and if the matter remains unresolved, to the Chair of the Committee on Graduate Studies.

8.5.7 Extension

Students who have not completed their program requirements by the maximum time to completion (see section 8.5.2) may apply to the AVPRGS for a maximum one-year program extension.

An application for an extension will normally be submitted at least two months before the maximum time to completion. Extensions are deliberated on a case-by-case basis. They require a plan to outline how the program requirements will be completed in the extension year. If an extension is denied, no further registration or reinstatement will be permitted.

If the extension is approved, students in program-fee based programs will be charged an extension fee (the equivalent of 6-credit tuition) for the extension period. A student who does not complete the degree requirements by the end of the extension period will be declared inactive and removed from the program. Students on extension are normally considered part-time.

8.5.8 Inactive Status

Students who have not met the requirements for graduation by the maximum time for completion are automatically designated inactive unless they have applied for and been granted an extension. Inactive students lose their rights and privileges as StFX students.

Once designated inactive, students must reapply for admission and are subject to all rules and procedures for new admissions. Students on approved leaves of absence are temporarily designated inactive; they need not reapply for admission at the end of the leave.

8.5.9 Leaves of Absence

Circumstances can lead to situations in which graduate students are obliged to step away from their study. A leave of absence may be granted for a specific length of time, up to a maximum of one year.

Examples of exceptional situations where a leave may be considered include:
- Medical reasons
- Family duress or unforeseen family responsibilities
- Pursuing an employment opportunity that makes a positive contribution to the student’s graduate program
- The request should include a plan for the return to the program.

Once an initial leave of absence has been granted, additional leaves are only possible in extraordinary circumstances and require special approval by the AVPRGS.

Students on leaves of absence are designated inactive, and the academic mentorship of the supervisor and access to laboratories is suspended. Students on leaves are charged a nominal fee of $100, which allows them to maintain a StFX email account.

Time that a student spends on a leave of absence does not count toward the maximum time for completion.

8.5.10 Graduation

Students are responsible for ensuring that they have registered for convocation by the required date and that they have fulfilled all degree requirements by the requisite deadline. Supervisors must ensure that all grades (including the thesis grade) have been submitted at least one week prior to convocation.

8.5.11 Non-degree Graduate-level Students

Students without previous admission to a degree program may be permitted to register in graduate courses offered in the MA, M.Sc., and M.Ed. programs provided they meet the program’s admission requirements and obtain the approval of the instructor and/or department chair. The chair of the committee on graduate studies shall decide whether the student is eligible to register. Non-degree courses are distinct from non-degree visiting research students as described in the Guide to Graduate Studies. A student who has registered in courses in compliance with the previous paragraph, and who is later admitted to a degree program without condition, may, upon recommendation of the department chair, be granted advanced standing to a maximum of 6 credits provided they are acceptable as part of the program in which the student is enrolled.

8.5.12 Visiting M.Ed. Students

Normally, only students who have been accepted into the StFX M.Ed. program are eligible to enrol in M.Ed. courses offered by the university. Graduate students in good standing in M.Ed. programs at other universities may also apply to take up
to 6 credits of M.Ed. courses at StFX. Such students are encouraged to contact the continuing and distance education office to determine course availability and eligibility. Students should apply for admission as non-degree students with a letter of permission from their home institution.

8.5.13 Transfer Credit
New applicants may request permission to transfer credits (a maximum of six credits) to the MA, M.Sc. or M.Ed. program prior to acceptance.

8.5.14 Letter of Permission
Once registered in the MA, M.Sc. or M.Ed. program, a student may request a letter of permission from the relevant department chair and Dean to complete a maximum of six credits from another university. These credits can be used to fulfill program requirements.

8.5.15 English Language Requirement
See section 1.5.

8.5.16 Thesis Regulations

Master of Adult Education
Students choosing to follow the thesis route are required to prepare a thesis based on original research under the guidance of the chair or faculty advisor. Theses are evaluated by two faculty members of the Department of Adult Education, and an external examiner. A final corrected copy of the successful thesis must be submitted to the supervisory committee for approval within a timeframe established by the examining committee in consultation with the candidate for approval at least two weeks prior to the date of the convocation at which the candidate expects to graduate. The final copy of any thesis based on a research project requiring ethics approval must include a copy of the appropriate certificate of approval. Students are responsible for providing print and electronic copies of the approved thesis to be deposited with the StFX Library and Archives Canada. More details can be found in the ‘Graduate Thesis Submission Guidelines’ on the Graduate Studies website.

Master of Arts, Master of Science

Upon admission to, or registration in, a thesis program, and after consultation with the candidate and with department faculty members, each candidate will be assigned a thesis Supervisory Committee by the Department Chair. This Committee will include the candidate’s thesis advisor and at least one other faculty member, normally chosen from the Department.

Candidates must make a formal presentation of the thesis proposal. The formal presentation is normally made to the faculty of the department for which the thesis is being written, and it is open to members of the Committee on Graduate Studies, other interested faculty members, and graduate students. The Department Chair (and/or the candidate’s thesis supervisor) will ensure that at least two weeks’ notice is given of the date, time, and place of the presentation of the thesis proposal.

After presentation of the proposal, after obtaining the approval of the appropriate ethics committee(s), and on the recommendation of the candidate’s thesis supervisory committee, and the Department Chair or Director of the School, the candidate will be permitted to register in the thesis.

When completed, the thesis is submitted to the Chair of the candidate’s supervisory committee for approval. The thesis is read by at least one other faculty member, designated by the Department Chair. The thesis is also read by an external examiner chosen by the Department Chair after consultation with the candidate’s Supervisory Committee. The external examiner is a faculty member external to the candidate’s Department and may be, as appropriate, external to the University. After consultation with the candidate’s Supervisory Committee, the Department Chair will appoint a thesis examination committee consisting of the external examiner, the candidate’s thesis advisor, and at least one (but no more than three) other members of the Department. (Members of the Supervisory Committee may serve as members of the Examinating Committee.) The Chair of Graduate Studies or her/ his designate will be a non-voting member of this Committee ex-officio.

The external examiner must submit a report on the thesis to the Chair of the Supervisory Committee and to the Chair of the Committee on Graduate Studies.

A public presentation and defence of the thesis is presented by the candidate after receipt of the external examiner’s report and following the approval of the supervisory committee. Normally, at least two weeks’ notice is given (to the Chair of Graduate Studies) concerning the date, time, and place of the presentation and defence. Immediately following the public presentation, an examination of the candidate is held. Normally, the public presentation and examination will not exceed 120 minutes.

The examining committee will then, in camera, arrive at a unanimous decision, agree on any changes to be made to the thesis, determine who will be responsible for ensuring that these changes are made, and consider whether the student is to be nominated for the Outstanding Graduate Student Research Award. Should the committee not be able to arrive at a decision on the disposition of the thesis, the matter will be referred to the Committee on Graduate Studies.

The decision of the examining committee, along with their names and signatures, will be recorded on the thesis examination form, with a copy retained by the department and a second copy sent to the Chair of Graduate Studies.

A final corrected copy of the successful thesis must be submitted to the supervisory committee for approval within a timeframe established by the examining committee in consultation with the candidate. Students are responsible for providing print and electronic copies of the approved thesis to be deposited with the StFX Library and Archives Canada. Students must also complete and submit the required StFX Thesis Non-exclusive License Form. More details can be found in the ‘Graduate Thesis Submission Guidelines’ on the Graduate Studies website.

8.5.17 Research Ethics Approval
Research undertaken towards a thesis or research project involving human subjects normally requires approval by the university research ethics board (REB); see section 3.24. Before such a research project is initiated and before registration in the thesis is permitted, students must obtain REB approval, or must provide a letter signed by their research supervisor and by the chair of the REB, stating that the project does not require REB approval.

Research undertaken towards a thesis or research project involving animal use or testing normally requires review and approval by the StFX animal care committee.

8.5.18 Outstanding Graduate Student Research Award
Students who have completed their degree with a master’s thesis of outstanding quality may be considered for an outstanding graduate student research award.

9. DEPARTMENTS AND PROGRAMS

9.1 Adult Education
9.2 Anthropology
9.3 Aquatic Resources
9.4 Art
9.5 Biology
9.6 Business Administration
9.7 Catholic Studies
9.8 Celtic Studies
9.9 Chemistry
9.10 Classical Studies
9.11 Climate and Environment
9.12 Computer Science
9.13 Co-operative Education
9.14 Development Studies
9.15 Earth Sciences
9.16 Economics
9.17 Education
9.18 Engineering
9.19 English
9.20 Health
9.21 History
9.22 Human Kinetics
9.23 Human Nutrition
9.24 Interdisciplinary Studies and Service Learning
9.25 Mathematics/Statistics/Computer Science
9.26 Modern Languages
9.27 Music
9.28 Nursing
9.29 Philosophy
9.30 Physics
9.31 Political Science
9.32 Psychology
9.33 Public Policy and Governance
9.34 Religious Studies
9.35 Sociology
9.36 Women and Gender Studies

Unless otherwise noted, all courses meet for three hours of lecture each week. Laboratories are normally three hours each week. Six-credit courses normally meet for a full year, three-credit courses for one term (a half year). In addition to the courses listed, students may request a directed study course as described in section 3.5. Refer to the current timetable listing for course offering, as not all courses listed in the StFX Academic Calendar will be offered every year. Certain advanced-level courses are not offered every year. Others are offered on an alternating basis, as noted in course descriptions. See glossary for degree and subject abbreviations.
9.1 ADULT EDUCATION

M. Coady, Ph.D.
L. English, Ph.D.
C. Roy, Ph.D.
N. Peters, Ph.D.
A. Perry, Ph.D.
R. Neustaefer, Ph.D.

SIFX offers both a master’s degree in adult education (M.Ad.Ed.) and a diploma in adult education (see section 6.7 for Diploma in Adult Education).

Graduate Program

The admission procedures and requirements for the M.Ad.Ed. degree are in chapter 8. Students have three years to complete 36 credits. Further details can be found on the department’s web page: https://sites.stfx.ca/adult_education_graduate_studies/index.html or in section 8.2.

Master of Adult Education Courses

505 Introduction to the Field, Research and Practice

This is an intensive three-week residential institute during which students become familiar with the foundations of, and requirements for, the master’s program. This institute will require intensive reading and writing in a broad range of foundational literature in adult education and learning, as well as the development of a detailed learning plan for completion of the program. Credit will be granted for only one ADED 505 and ADED 500. Six credits.

510 Professional Portfolio and Literature Review

Development and submission of a professional portfolio consisting of learning experiences, accomplishments, and demonstrated professional competencies, supported by documentation. Second, development and submission of a critical review of the literature in the field with an emphasis on the area and aspect of study as seen in the learning plan. Six credits.

520 Practical Research Project

Developing a practical research project to achieve learning intents. This project is typically completed in the student’s place of practice and typically requires approval of the StFX Research Ethics Board. At the end of this phase, the student submits a project report that includes a detailed description of the learning intents, program design, means of implementation, and evaluation of the project. Twelve credits.

530 Learning Program Evaluation

This phase includes a report on the student’s personal and professional learning with reference to the learning plan developed in ADED 505. This reflective report evaluates knowledge gained and changes in practice, and is accompanied by a narrative. Six credits.

Alternate Routes to Graduation

There are two routes by which a student may complete the requirements for the M.Ad.Ed.

1) complete and submit an academic thesis (ADED 600) or
2) complete, present, and defend a project and synthesizing examination which demonstrates that the learning objectives of the program have been achieved (ADED 601).

600 Thesis

The thesis is a scholarly contribution to the field of adult education. Upon completion of the preceding phases of the program, students draft an outline and write a thesis in consultation with their faculty advisor. The thesis provides an opportunity for students to analyze and reflect on their professional project, in light of the relevant adult education literature. The completed thesis is submitted to an external examiner and to the committee on graduate studies for approval. Credit will be granted for only one of ADED 600 or ADED 601. Six credits.

601 Synthesizing Examination

The synthesizing examination is the alternative route to complete the M.Ad.Ed. It follows satisfactory completion of the preceding phases of the program. The synthesizing examination is intended to provide an opportunity for students to reflect on their professional project and bring the relevant literature and student’s research project together with the particular reference to practice. The synthesizing examination will be attended by two faculty members of the adult education department. Credit will be granted for only one of ADED 601 or ADED 600. Six credits.

9.2 ANTHROPOLOGY

C. Fawcett, Ph.D.
M. Haller, Ph.D.
L.J. McMillan, Ph.D.
S. Vincent, Ph.D.

Anthropology is the holistic study of human culture and biology in the past and present. Anthropologists teach about human evolution and global archaeology as well as contemporary cultures around the world. The Department of Anthropology offers honors, advanced major or major degrees. Students may select courses to meet their own interests in a general anthropology core area, or may choose to follow suggested patterns in the following core areas: Archaeology, the Anthropology of Development or Indigenous Peoples. These streams are described on the Department of Anthropology’s website. Students not pursuing degrees in anthropology may take a minor, a pair or electives. For general program regulations, see section 4.1.

Minor and Subsidiary

Requirements include 24 credits as follows:

a) ANTH 111 and 112 (6 credits);

b) 3 credits from ANTH 243, 253;

c) 3 credits from ANTH 218, 223, 233, 234;

d) 12 additional credits in ANTH.

Major and Advanced Major

Requirements include 36 credits as follows:

a) ANTH 111 and 112 (6 credits);

b) 3 credits from ANTH 243, 253;

c) 3 credits from ANTH 218, 223, 233, 234;

d) ANTH 303 (3 credits);

e) 3 credits from ANTH 304, 305;

f) 18 additional ANTH credits, 12 of which must be at the 300/400 level;

g) Advanced major students are required to write a senior paper in a 400 level ANTH course.

Honours

Requirements include 60 credits as follows:

a) ANTH 111 and 112 (6 credits);

b) 3 credits from ANTH 243, 253;

c) 3 credits from ANTH 218, 223, 233, 234;

d) ANTH 303, 304 and 305 (9 credits);

e) 33 additional ANTH credits, of which 12 must be at the 300/400 level;

f) ANTH 400 (6 credits).

Social Justice Colloquium

The Social Justice Colloquium is a first-year option for Bachelor of Arts students. Participants are enrolled in dedicated sections of anthropology, global history and women’s and gender studies. See section 4.5 for further information.

111 Introduction to Physical Anthropology/Archaeology

Archaeology and physical anthropology provide a unique opportunity to examine the development of human society. With their long temporal depth, we can examine how humans, and their ancestors, evolved and populated the entire globe. The nature of modern archaeological and physical anthropological research including topics of hominin evolution, origins of agriculture, rise of state-level societies and First Nations archaeology will be discussed. Students will have an opportunity to apply this knowledge using real archaeological data. Credit will be granted for only one of ANTH 111 or ANTH 110. Three credits. Offered every year.

112 Introduction to Socio-cultural Anthropology

Socio-cultural anthropology involves the comparative study of societies throughout the world. Students will learn how societies differ from each other, as well as observing similarities among them. The course surveys traditional ways of understanding cultures while incorporating current insights and research. Topics include diverse political and economic systems, kinship patterns, religion, forms of ethnic and gender identity, health and medicine, development and migration. Department foci relating to First Nations, development and general anthropology are introduced. Credit will be granted for only one of ANTH 112 or ANTH 110. Three credits. Offered every year.

218 Anthropology of Health and Illness

An examination of global health and illness from an anthropological perspective, this course applies key anthropological concepts to topics such as the meanings of health and illness cross-culturally, cultural construction of the body, medical pluralism, cross-cultural psychiatry, critical medical anthropology and the health of Indigenous peoples in Canada and other parts of the world. Prerequisite: ANTH 110 or ANTH 111/112 or permission of the instructor. Three credits. Offered every year.
223 Anthropology of Globalization
Globalization has affected more than the world economy; people, politics and culture all travel globally, with wide-ranging consequences. This course will examine the history of global processes by focusing on how different peoples around the world have engaged in or resisted them. Ethnographic studies will be used to explore global diversity as well as the effects of efforts to impose global uniformity. Cross-listed as DEV 223. Prerequisite: ANTH 110 or 111/112, or DEV 201, 202 or permission of the instructor. Three credits.

233 Ethnographic Studies
This course explores the rich cultural diversity of human societies around the globe through an ethnographic lens. Using a variety of ethnographic works, students will analyse how anthropologists have represented this diversity. Course material will include classic and current texts about ‘other’ and ‘own’ societies, the representation of Indigenous peoples, ethnographic film, as well as portrayals of culture in new media. Prerequisite: ANTH 110 or 111/112 or permission of the instructor. Three credits.

243 Introduction to Indigenous Anthropology
The diversity and complexity of contemporary cultural, political and legal Indigenous issues are explored using anthropological methods and theories. Beginning with the historical antecedents of colonial relations and leading to contemporary ethnography, this course assesses the impacts of state policies and legislation on Indigenous treaty rights and livelihoods today. Students will study engaged anthropology and the relationships between the State and Indigenous peoples in areas of Indigenous rights, culture, law, governance, politics, environment, media, social development, gender, and health, and examine potential pathways and strategies toward reconciliation and equity. Credit will be granted for only one of ANTH 234 or ANTH 331. Prerequisite: ANTH 110 or 111/112 or permission of the instructor. Three credits.

244 Principles of Archaeology & Prehistoric Societies
This course offers an examination of modern archaeological research including how archaeologists work in the field, their analytical techniques, and some of the principal methodological and theoretical issues facing the discipline. A wide variety of archaeological examples (from lavish Egyptian tombs to simple nomadic settlements) will be used to illustrate the main themes of the course. Students will participate in the process of archaeological research through a series of practical exercises and assignments. Prerequisite: ANTH 110 or 111/112. Three credits. Next offered 2019-2020 and alternate years.

253 Origins of Cities
Urban living is an increasingly common experience for humans across the globe; city life, however, is not a modern phenomenon. This course is a broad introduction to the processes of urbanism and the rise of early pre-industrial cities in both the New and Old Worlds. Specific cases are examined in order to elucidate the varying roles cities played in ancient states and how this knowledge can aid in our current understanding of modern urban life. Prerequisite: ANTH 110 or 111/112. Three credits.

303 Anthropological Theory
This course will give students an understanding of past and present trends in anthropological theory. Students will learn about the purpose of theory and the main elements of major theoretical frameworks. There will be an emphasis on how to apply theory to anthropological material. Prerequisites: ANTH 110 or ANTH 111/112 and at least 6 ANTH credits at the 200 level. Three credits. Offered every year.

304 Principles and Methods of Fieldwork
This course introduces students to qualitative field methods used by anthropologists and social scientists. Through lectures, seminars and field assignments, students will participate in a variety of research techniques including digital data gathering, video ethnography, participant observation, archival searches, oral and life histories, interviewing, sampling, mapping and focus group strategies. In addition to practical application of these skills, students will learn about Indigenous research methods, and collaborative and ethical research design. Prerequisite: ANTH 110 or ANTH 111/112 or permission of the instructor. Three credits.

305 Anthropological Data Analysis
This course introduces students to the basic principles of statistics and quantitative analysis of anthropological data. Through lectures, seminars and lab assignments students will learn skills such as quantitative research design and methods, data analysis, and computer applications in anthropological research. Prerequisite: ANTH 110 or ANTH 111/112. Three credits.

310 Anthropology of Tourism
Tourism is an important industry as well as a source of identity and meaning for individuals, local groups, and nations. This course examines tourism using a variety of theoretical frameworks. Students analyse various forms of tourism, such as historical tourism, cultural heritage tourism, eco-tourism, ethnic tourism and development tourism. Attention is given to gender, ethnicity, nationalism, class, environmental and economic impact, and the political importance of tourism in a globalizing world. Prerequisite: ANTH 110 or ANTH 111/112. Three credits. Offered every year.

320 People and Development
This course critically examines how development policy and practice have affected target populations. Students will develop critical analytical skills and knowledge by examining the strengths and weaknesses of strategies such as those promoting popular participation, gender equality, small-scale business, local knowledge and democratic reform, as well as of different forms of development institutions. The course uses case studies based on long-term, first-hand participant observation that place development processes in larger historical, political and economic contexts. Cross-listed as DEV 321. Prerequisites: ANTH 110 or ANTH 111/112 or DEV 201, 202; ANTH 223 is recommended. Three credits. Offered every year.

321 Celtic Art
Weave your way through Celtic knots and “horror vacui” fear of empty space,” and discover the art of the Celts. From the Battersea Shield to the Book of Kells, we will trace our way through the extraordinary legacy of weaponry, jeweller, illuminated manuscripts, Celtic crosses, and Sheela-na-Gig to arrive at a deeper understanding of the people who made them. Acceptable as a course in history. Cross-listed as ART 321 and CELT 321. Three credits. Not offered 2018-2019.

323 Feminist Anthropology
This course examines how past and present feminist anthropologists have used and problematized categories of difference and identity, such as gender, class, sexuality, race, ethnicity, ability, religion and nationality as they pursue anthropological research. Focusing primarily on socio-cultural anthropological research, but also addressing work by linguistic and biological (physical) anthropologists and archaeologists, the course will highlight the theoretical, methodological, and empirical contributions of feminist anthropologists to anthropology and to women and gender studies. Credit will be granted for only one of ANTH 323 and ANTH 324 and WMGS 324. Cross-listed as WMGS 327. Prerequisites: ANTH 110 or ANTH 111/112 or WMGS 100 or WMGS 200 or permission of the instructor. Three credits.

326 Issues in the Anthropology of Kinship
This course explores current themes and debates about the constitution of families cross culturally. It will examine topics such as: cultural understandings of kinship; historical transformations of kinship systems; current reconfigurations of marriage; partnering strategies; new reproductive technologies; transnational adoption; intra-familial conflict; the role of kinship for individuals and in societies; and the influence of the state on kin patterns. Course material will include ethnographic examples from around the world. Cross-listed as WMGS 326. Prerequisite: ANTH 110 or ANTH 111/112. Three credits.

332 Mi’kmag Studies: Advanced Critical Issues in Indigenous Anthropology
Using theories and methods relevant to researching Indigenous knowledge, self-determination, strategies of resistance and cultural sustainability of the Mi’kmag Nation of Atlantic Canada, we explore Mi’kmag oral histories, cosmology and sociocultural organization. In the second section, we look at the impact of colonization on Mi’kmag cultural practices and governance. In the third section we look at contemporary issues such as the impact of court decisions on treaty implementation, customary law, economic development, resource use and cultural production. Prerequisites: ANTH 110 or ANTH 111/112, or WMGS 100 or WMGS 200 or permission of the instructor. Three credits.

341 North American Archaeology
This course explores past and present Indigenous societies from North America and examines how these societies emerged, developed and were radically transformed by European colonization. Students will discover that even though great spans of time separate modern and ancient Indigenous cultures, cultural continuity exists. Prerequisite: ANTH 243 or 253. Three credits.

342 Ancient Mesoamerica
This course will use archaeological and ethnohistorical information to examine the people who lived in Mesoamerica (currently, Mexico, Belize, Honduras and Guatemala) prior to and at the time of early contact with Europeans. Students will use archaeological data to study the Aztecs, Maya and Zapotecs and their predecessors. Students will also refine their knowledge of archaeological inquiry and methods through practical assignments based on actual archaeological data. Prerequisite: ANTH 243 or 253. Three credits. Next offered 2019-2020 and alternate years.
371 Archaeological Field Methods
This course teaches students the basic archaeological field methods of site survey and excavation through participation in an actual archaeological field project either locally or in another part of Canada or abroad. The course will examine a range of archaeological techniques and methodological approaches. It will also introduce students to the ethical issues they need to consider when conducting archaeological field research in Canada and abroad. Prerequisite: ANTH 243 or permission of the instructor. Three credits. Not offered 2018-2019.

372 Archaeological Laboratory Methods
This course teaches students methods of analysing, cataloguing and reporting on materials recovered from archaeological site survey and/or excavation. Students will learn how to disseminate information to professional and public audiences. Prerequisite: ANTH 371 or permission of the instructor. Three credits. Not offered 2018-2019.

400 Honours Thesis Research
A required course for all senior honours students. Six credits.

425 Power and Change
Power and change can be volatile processes. This course allows students to explore them from an anthropological point of view. In 2018-19, the focus will be on food and power. It will address questions such as: How do gender, class, race, culture or other categories of difference affect who cooks and who eats, as well as what they eat? How has food become central to “gastro-diplomacy”? What are the politics of different kinds of food, locally produced food, food aid? How is food managed in times of crisis? Cross-listed as WMGS 425. Prerequisites: 12 credits ANTH, or HNU 365, or permission of instructor. Three credits.

435 Advanced Indigenous Issues
A course for senior students wanting to use Indigenous research methods and theories to engage anthropologically with specific issues of concern to Indigenous peoples. Topics may include in-depth analyses of Indigenous legal traditions, treaty and Aboriginal rights, politics and governance, natural resource management, cultural production and sustainability, decolonization and reconciliation. Prerequisite: ANTH 234 or permission of the instructor. Three credits.

445 Advanced Archaeological Seminar
This seminar develops on the foundation of archaeological method and theory introduced in previous courses. Through an examination of various topics, students will engage in an in-depth analysis of key concepts and ideas. Past topics have included: Archaeology of Death and Dying; Ancient Colonization and Acculturation in the Mediterranean; Archaeology of Ancient Egypt. Prerequisite: ANTH 341 or 342 or permission of the instructor. Three credits. Next offered 2019-2020 and alternate years.

492 Selected Topics in Anthropology
Three credits.

499 Directed Study
Under the direction of a professor, students will work in an area of anthropology not available in other course offerings. Interested students must consult with a faculty member or with the program co-ordinator. See section 3.5. Three or six credits.

9.3 AQUATIC RESOURCES, INTERDISCIPLINARY STUDIES IN

<table>
<thead>
<tr>
<th>J. Williams, Ph.D.</th>
<th>ISAR Co-ordinator</th>
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<tbody>
<tr>
<td>L. Patterson, M.Sc.</td>
<td>ISAR Program Assistant</td>
</tr>
</tbody>
</table>

Advising Faculty

- D. Garbary, Ph.D.
- L.J. McMillan, Ph.D.
- L. Harling Stalker, Ph.D.
- R. Lukeman, Ph.D.
- D. Risk, Ph.D.
- Y. Grenier, Ph.D.
- P. Withey, Ph.D.

Department

- Biology
- Anthropology
- Sociology
- Mathematics, Statistics & Computer Science
- Earth Sciences
- Political Science
- Economics

Water, a dynamic natural resource, is used as a focal point around which students can examine our changing world in terms of climate change, environmental management, freshwater policy, aboriginal use, erosion and flood events, adaptation of fisheries, cultural perceptions and ancient use, economic valuation, food production and procurement, healthy oceans, to name but a few.

Interdisciplinary Studies in Aquatic Resources (ISAR), a four-year program (comprised of 120 credits) leading to a BA or a B.Sc. degree, offers an integrated approach to the understanding, use and sustained management of aquatic resources as both natural and social systems. Aquatic ecosystems include groundwater, watersheds, wetlands, lakes, rivers, oceans, etc.

ISAR prepares students for careers in natural resource management, government or private sector research and/or policy development, consultancy services, community development, and private enterprise. Depending on their program of study, students will also be positioned favourably for graduate or professional study in such areas as environmental law, public policy and administration, marine biology, oceanography, environmental sciences, human ecology, fisheries science and/or management, geographic information systems, conservation, and social science research.

All students complete two majors, the first in aquatic resources, and a second major in one of: biology; economics; earth sciences; mathematics, statistics, and computer science; or public policy and social research (political science and anthropology or political science and sociology). ISAR students complete a mandatory work term (AQUA 400) and participate in the senior seminar (AQUA 450).

Students may enter the ISAR program in their 1st or 2nd year of study at StFX. Students entering the program in 2nd year will complete AQUA 100 and AQUA 201, 202 simultaneously.

Eligible ISAR students may consider completing an advanced major (B.Sc. students only) or an honours degree in their second major field of study: biology, earth sciences, mathematics/statistics/computer science; honours degree with a subsidiary in AQUA: anthropology, economics, political science, sociology. All students must satisfy the requirements outlined in chapters 4, 5 or 7.

Major Program

Major candidates are required to complete:

a) a core ISAR major program of AQUA 100, 201, 202 (200), 325, and 400, 450; ESCI 171; BIOL 112; ECON 101, 102; and BSAD 101;

b) 36 credits in the second major discipline, or 48 credits for public policy and social research majors, including at least 18 credits of AR-designated courses from your second major;

c) at least 12 credits of AR-designated courses from at least two of the participating academic departments other than the major.

Candidates must also satisfy the requirements outlined in chapters 4, 5 or 7.

Progression Requirements

Students must achieve a minimum grade of 65 in AQUA 100, plus a minimum average of 65 in the first-year AQUA core courses (AQUA 100, BIOL 112, ECON 101 & 102, and ESCI 171) in order to maintain their ISAR major and proceed to the second year of study in the program.

Students are encouraged to meet regularly with the co-ordinator or program assistant to discuss their academic progress, work term opportunities and career aspirations.

BA Major in Economics and Major in Aquatic Resources

| Year 1 | AQUA 100; BIOL 112; ECON 101, 102; ESCI 171; ANTH 111, 112 or PSCI 101/102 or SOCI 101/102; 6 credits arts/science electives at the 100-level. |
| Year 2 | AQUA 201, 202; BSAD 101; ECON 201, 202; and one of ECON 211, 241 or 281; 6 credits AR-designated courses; 6 credits arts or science electives to include MATH 106 or 126, STAT 101 or STAT 231. |
| Year 3 | AQUA 325; 6 credits AR-designated ECON to include 381; 3 credits ECON courses at the 300 and/or 400 level; 6 credits AR-designated courses; 15 credits arts or science electives for pairs. |
| Year 4 | AQUA 400, 450; ECON required and/or elective courses at the 300 and/or 400 level; AR-designated courses as required; arts or science electives. |

BA Major in Public Policy and Social Research (PPSR) (Anthropology and Political Science or Sociology and Political Science)

| Year 1 | AQUA 100; BIOL 112; ECON 101, 102; ESCI 171; PSCI 101, 102; ANTH 111, 112 or SOCI 101, 102. |
| Year 2 | AQUA 201, 202; BSAD 101; 6 credits PSCI at the 200-level; 3 credits AR designated courses; 6 credits arts or science electives for pairs; plus PPSR with ANTH; ANTH 243 or 253 and one of 218, 223, 233 or 234; PPSR with SOCI; SOCI 202 and 3 additional SOCI credits at 200 level. |
| Year 3 | AQUA 325; 3-6 credits AR-designated PSCI at the 300 and/or 400 level; 6 credits AR-designated courses; 12 credits arts or science electives for pairs; plus PPSR with ANTH; 6 credits ANTH, including 304 or 305, at the 300 and/or 400 level; PPSR with SOCI; 3-6 credits SOCI at the 300 and/or 400 level. |
Aquatic Resources, Interdisciplinary Studies in

Year 4
AQUA 400, 450; PSCI courses at the 300 and/or 400 level, as required; AR-designated courses as required; arts or science electives; plus PPSR with ANTH courses at the 300 and/or 400 level; PPSR with SOCI: SOCI courses at the 300 and/or 400 level.

B.Sc. Major in Biology and Major in Aquatic Resources
Year 1
AQUA 100; BIOL 112; ECON 101, 102; ESCI 171; MATH 106/107 or 126/127; 6 credits science electives at the 100-level (CHEM 100 is recommended for those intending to major in biology or earth sciences).

Year 2
AQUA 201, 202; BIOL 111; 12 credits from: BIOL 201, 202, 203, 204 or 315 and STAT 231; 6 credits AR-designated and/or arts electives for Arts X or Arts Y requirement.

Year 3
AQUA 325 or BIOL 307, 9 credits BIOL at the 300 and/or 400 level of which 3-6 credits must be of AR-designated BIOL; BIOL 391 recommended; BSAD 101; 6 credits AR-designated courses; 6 credits arts electives for Arts X or Arts Y requirement; 6 credits science electives to complete Science B.

Year 4
AQUA 400, 450; 9 credits BIOL of which at least 3 credits must be at the 400-level; AR-designated courses as required; arts and/or science electives as required to fulfill degree pattern.

B.Sc. Major in Earth Sciences & Major in Aquatic Resources
Year 1
AQUA 100; BIOL 112; ECON 101, 102; ESCI 171; MATH 106/107 or 126/127; 6 credits science electives at the 100-level (CHEM 100 is recommended for those intending to major in biology or earth sciences).

Year 2
AQUA 201, 202; BSAD 101; ESCI 201, 215, 216, 271, 272; 6 credits arts electives for Arts X or Y.

Year 3
AQUA 325 or 3 credits of 375 or 376; 9-12 credits ESCI including 305 and 366; 6 credits of CHEM or MATH at the 200, 300 and/or 400 level to complete Science B; 3-6 credits AR-designated courses; 6 credits arts electives for Arts X or Y and/or science electives.

Year 4
AQUA 400, 450; 6 credits ESCI at the 300 and/or 400 level; AR-designated courses as required; arts and/or science electives as required to fulfill degree pattern.

B.Sc. Major in Mathematics, Statistics, and Computer Science and Major in Aquatic Resources
Year 1
AQUA 100; BIOL 112; ECON 101, 102; ESCI 171; MATH 106/107 or 126/127; 6 credits science electives at the 100-level.

Year 2
AQUA 201, 202; BSAD 101; MATH 253, 267, 277, 287; STAT 231; 3 credits AR-designated courses; 3 credits arts electives for Arts X or Y.

Year 3
AQUA 325; 6-9 credits from MATH 367, 387, STAT 311, 333, 334; 6 credits science (recommend BIOL or ESCI) at the 200, 300 and/or 400 level for Science B or C; 6 credits AR-designated courses; 6 credits arts electives for Arts X or Y; 3-6 credits science electives.

Year 4
AQUA 400, 450; 6-9 credits MATH/STAT/CSCI courses; 6 credits AR-designated courses; 9-12 credits arts and/or science electives as required to fulfill degree pattern.

AQUA 100, 201, 202, 325, 400 and 450 are restricted to students enrolled in the BA or BSc in Aquatic resources. AQUA courses cannot be taken as electives by non-aquatic resources students, and they cannot be used to make a pair or for Arts X requirements.

100 Introduction to Aquatic Resources: Natural Science Applications
This course explores the living and non-living characteristics that determine the nature of aquatic resource ecosystems, and examines human interaction with these resources. Case studies expose students to the natural as well as some of the social science applications of aquatic resource use, while field trips and laboratory exercises introduce the methodologies used to study these ecosystems. Lab and field trips. Six credits.

201 Rivers, Lakes and Freshwater Governance
This course explores the political, economic and sociological dimensions of freshwater systems. Key concepts and frameworks are applied in both historical and contemporary settings. Topics include power relationships, watershed politics, water democracy and alternative governance arrangements. Credit will be granted for only one of AQUA 201, AQUA 200, 297 or 298. Prerequisite or co-requisite: AQUA 100. Three credits.

202 The Oceans’ Commons and Society
The “tragedy of the commons” has been a recurring concept when discussing ocean resources. In this course students will encounter how social scientists study and understand the use of the resources in the oceans’ commons. The course will explore theoretical paradigms, governance, social class, gender, race, fishing, aquaculture, and oil and gas. Students will gain a foundational understanding in social science approaches to issues relating to the aquatic resources. Credit will be granted for only one of AQUA 202, AQUA 200, 297 or 298. Prerequisite or co-requisite: AQUA 100. Three credits.

325 Aquatic Resources Field Camp
This course is a week-long field camp on integrated watershed management. It consists of assigned reading, talks by experts in watershed management and field trips to watershed sites. Students must complete the field camp prior to the beginning of either their third- or fourth-year of study. Not required for students who take one of BIOL 307, ESCI 375, ESCI 376. Not offered every year, equivalencies will be considered on an individual basis. No credit.

400 Work Experience/Student Internship
Students will spend the equivalent of one term, normally the summer between the junior and senior year, gaining hands-on experience in an aquatics-related work and/or volunteer setting. Placements may include research labs, aquatic resource businesses, community organizations, public policy agencies. To focus the applied learning experience, students develop a topic for special study, in collaboration with an academic advisor or their work experience provider. Prerequisites: AQUA 201, 202; 200 or 297, 298. Three credits.

450 Senior Seminar in Aquatic Resources
The seminar represents the capstone for students completing their aquatic resources major. Each year the seminar considers an important interdisciplinary theme in the aquatic fields, such as tidal power, aquaculture, oil and gas pipeline approval processes, and more. Students will develop their senior projects and present the results of their senior research to the class in a talk, prepare a poster for student research day, and submit a major research paper to their academic advisors. Visits by ISAR guest speakers are co-ordinated with seminar work. Co-requisite: AQUA 400. Three credits.

AQUATIC RESOURCES DESIGNATED COURSES
Departmental prerequisites will apply.

Anthropology

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<td>ANTH 233</td>
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<td>ANTH 234</td>
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<td>ANTH 243</td>
<td>Principles of Archaeology and Prehistoric Societies</td>
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<td>People and Development</td>
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<td>ANTH 332</td>
<td>M’kmaq Studies: Advanced Issues</td>
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Biology

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### 9.4 ART

**S. Gregory, Ph.D.**

**Part Time**

- **K. Brown, BFA**
- **K. Depper, MFA**
- **J. Fecteau, BA**
- **M. Gibson, MFA**
- **A. MacLean, BFA**
- **F. Martin, BFA**
- **A. McFarlane, BFA**
- **M. Nicholson, B.Ed.Sc.**
- **I. Pygott**
- **W. Rogers, B.Ed.**
- **B. Sparks, BFA, MA**
- **O. Tetu**
- **A. Tragakis, BFA**
- **R. Young, M.Ad.Ed.**

Art courses may be used as electives, a pair, or minor. Please see the art department website at http://sites.stfx.ca/art/ for a list of 2018-2019 course offerings.

### Minor in Studio Art

ART 100 or 101 and 102, 141 and 142 and 12 additional credits in studio courses. It is recommended that students take ART 141 and 142 before their senior year.

### Minor in Art History

ART 141, 142, and 18 additional credits in art history courses. Students may take up to six credits of studio art courses for credit toward a minor in art history.

Students may take no more than six credits from the following cross-listed courses for credit toward a minor in art history; ART/HIST 300, ART/PSCI 312, ART/ANTH/C E LT 321, ART/CATH 331/332.

Students with advanced drawing experience and a portfolio can apply to enrol in advanced drawing and painting courses without the prerequisites of ART 101, 102.

#### 101 Introduction to Drawing I

This course will introduce students to the art of drawing. Students will become familiar with conventional drawing materials including graphite, charcoal, conté, ink, and pastel. A disciplined daily working practice and routine will develop throughout the course, offering students transferable skills to all their academic pursuits. This course aims to encourage students to engage in further artistic study and lifelong learning. ART 102 is strongly recommended as a complementary course. Credit will be granted for only one of ART 101 or ART 100. Three credits.

#### 102 Introduction to Drawing II

This course will continue students’ development in drawing based on the foundation of Introduction to Drawing I. Students will explore the use of conventional drawing materials and techniques while learning basic colour theory, advanced study of value and subtractive drawing, figure drawing, and abstract representation. An end-of-term self-directed artwork assignment is a summation of the course’s learning outcomes. Credit will be granted for only one of ART 102 or ART 100. Prerequisite: ART 101, or portfolio demonstrating drawing skills. Three credits.

### 115 Introduction to Design

This course focuses on design principles and elements such as unity, balance, repetition, line, shape, and colour. The course provides students with a vocabulary and working knowledge of visual communication. Students develop their visual problem-solving skills and explore their creativity through studio projects and class discussions. Three credits.

### 125 Materials and Methods

This course will afford students the opportunity of working in a variety of art media, (two-dimensional and possibly three-dimensional) while exploring techniques, presentations, concept and materials. Projects may include painting, printmaking,
sculpture, animation, textiles and more. Students with some prior knowledge of drawing and/or art experience will benefit most from this course. Prerequisite: ART 101, 102 (100) recommended. Three credits.

141 Art & Society I: From Caves to Cathedrals
Long before human beings developed written language, we were making works of art. This introductory survey examines art and architecture within the intellectual and social contexts of their historical production. It provides a working knowledge of the history of art from prehistory through Classical Greece and Rome, to the great cathedrals of the Medieval period. Students will begin to develop critical tools for studying visual culture, and achieve a deeper understanding of cultural history. Three credits.

142 Art & Society II: From Renaissance to Revolution
This section of the art history survey begins with works of art and architecture of the Italian Renaissance, where new ideas (including the notion of genius) had major repercussions for the cultural and artistic history of subsequent periods, including the Baroque, Romanticism, the 20th century, and our contemporary era. Students will learn new ways of observing and interpreting art, enrich their appreciation of art and architecture, and further deepen their understanding of cultural and intellectual history. Three credits.

145 Introduction to Colour
This course deals with the vocabulary, nature and physical properties of colour: hue, value and intensity. Studio assignments provide practice in learning colour relationships in unified and contrasting colour schemes. Prerequisite: ART 101/102 (100) recommended. Three credits.

202 Introduction to Scenic Design
This course will cover the steps in the creation of theatre sets. The course will be, principally, project based with 'hands on' experience at each stage of the growth from conception to finished project. Facts and theory, while covered, will be subordinate to the creative process. There will be a series of smaller projects each week, which in turn will lead to the completion of a major design project for a play chosen by the instructor. Prerequisite: ART 101, 102 (100) or permission of the instructor based on the student's resume of theatre experience or letter of interest. Three credits.

204 Introduction to Painting I
This introductory course will teach students the fundamental principles of representational painting – artworks created through the careful observation from life. Emphasis will be placed on learning techniques of studio painting and brushwork in conjunction with a thorough understanding of the formal qualities of colour: hue, value, and tone. ART 205 is strongly recommended as a complementary course. Credit will be granted for only one of ART 204 or ART 200 or ART 299 ST: Intro to Painting. Prerequisite: ART 101, 102 (100). Three credits.

205 Introduction to Painting II
This course is designed for students to further their technical and conceptual skills of representational painting acquired in ART 204. Subjects of increasing complexity are explored, including an investigation into landscape painting, the figure and independently researched topics. Prerequisite: ART 204, or portfolio demonstrating painting skills. Credit will be granted for only one of ART 205 or ART 200 or ART 299 ST: Intro to Painting. Three credits.

211 Stained Glass Studio I
This course introduces the copper foil method of stained glass. Students will create original designs and learn basic technical skills to complete a two-dimensional stained glass artwork using materials (including coloured, textured glass) and equipment in the studio. Prerequisite: ART 101, 102 (100), 115 or portfolio demonstrating drawing and design skills. Three credits.

212 Stained Glass Studio II
In this intermediate-level course in the copper foil method of stained glass, students will create original designs, and refine the technical skills learned in ART 211 to produce a three-dimensional stained glass art project. Prerequisite: Art 211 or portfolio demonstrating stained glass design and studio skills. Three credits.

221 Batik Studio
Batik is an ancient art form originating in Asia and Africa by which dyes and resist (such as melted wax) are applied to cloth. After learning basic skills for mixing dyes and applying wax to cloth, students will create a series of original batik artworks. The course also touches on other forms of resist art, eg. silk painting, shibori, and tritk. Prerequisite: ART 101, 102 (100), 115 or portfolio demonstrating drawing and design skills. Three credits.

222 Weaving Studio
Tapestry weaving technique is practised by cultures around the world. In the Western tradition tapestries are typically pictorial narratives used as wall hangings. Students will learn the fundamental techniques of tapestry weaving applied to a small tapestry designed in collaboration with the instructor. Students will be introduced to the history and development of tapestry both as a technique and as an art form. Three credits.

231 Etching Studio I
Students will learn the basic techniques of intaglio printmaking: hardground, softground, drypoint and aquatint. They will be required to produce a series of prints demonstrating competence in each technique. Three credits.

233 Introduction to Printmaking
Students will learn two standard techniques of fine-art printmaking: etching and linocut. Students will gain knowledge of printmaking, its materials and tools by means of instructional demonstrations, hands-on printmaking projects balancing technical knowledge with artistic concept and vision, and the study and in-class presentation of other printmakers' work. A public art event will take place at the end of the course: students will demonstrate learned printmaking techniques in a public location of their choice, on- or off-campus. Credit will be granted for only one of ART 233, ART 231 or ART 298 ST: Printmaking. Three credits.

240 Pastels
This studio course introduces pastels as a drawing medium. Pastels consist of crayon-like sticks of compressed pigment in either a chalk or wax binder. It is an expressive, direct medium that has been widely used by the European and English masters. In this course, colour mixing and pastel techniques on a variety of papers will be explored. Students will complete a number of landscape, still life, and portrait paintings. Emphasis will be put on developing compositional skills using pastels. Prerequisite: ART 101, 102 (100). Three credits.

244 History of Photography
From the public announcement of a viable process in 1839, to the present day, photographic images have come to dominate our visual world. This course will examine the history of photography through its technology and through the work of key photographers, styles, and purposes. It will also consider photography as a medium for art in itself, its position and relationships with the traditional arts, and its extraordinary power to construct a world. Three credits.

251 Medieval Art
This course examines major developments in art and architecture of the Middle Ages, from the triumph of Christianity in Imperial Rome through the late Gothic period of the 14th century. The Bible and most early Church theologians associated images with idolatry and paganism, yet this 1000-year period was one of exceptional richness and diversity in Christian visual arts. Students will see how medieval art and architecture reflect and respond to changing theological, devotional and societal needs. Three credits.

252 Baroque Art
This course explores developments in the visual arts in Europe during the 17th century. Works of art and architecture will be examined in their social and cultural contexts, including discussion of the Italian Counter-Reformation and new ideas about the function of religious images and buildings, urban planning and the glory of Rome, absolutist monarchies and visual propaganda, specialization in the art market and Dutch genre painting, and the rise of art academies and art theory. Three credits.

255 Watercolour - Techniques and Approaches
Students familiarize themselves with the materials and the basic techniques of transparent watercolour in this course. Instruction will include various classic and innovative approaches to this versatile medium, using paintings by well-known masters of the art of watercolour as a jumping-off point for their own exploration in the watercolour medium. Prerequisite: ART 101, 102 (100) or equivalent. Three credits.

260 20th Century: Modern Art
This course examines the origins of modernist endeavour in the late 19th century and covers art up to the end of World War II. Attention will be paid to major movements and artists, parallel movements in literature and music, the social and political context, and new technologies. Three credits.

261 Contemporary Art
This course examines art from the end of World War II to the present day. Attention will be paid to major movements and artists, the social and political context, and changing assumptions about what art should be and do. Three credits.

271 Introduction to Digital Photography
This course is designed for students interested in learning to effectively use digital photography as a means for self-expression, artistic medium, or cultural comment. The course aims to provide students with a rigorous training in the mechanics of the digital camera, digital processing, key photography concepts, and the use of electronic devices in these matters. Students will be assessed through written assignments, exams, and photography assignments. A digital camera with manual
297 Selected Topics
The topic for 2018-2019 is Introductory Animation. In this course, students will learn the basics of animation. Projects include simple 2D animation (flip-book and hand drawn animation) and stop-motion. There is a self-directed final project in which students will expand on acquired technical and theoretical knowledge of animation fundamentals. Animation comes in many styles, so a high level of drawing skill is not a requirement for this course. A laptop and digital camera is necessary. Open-access free animation software will be used. No prerequisite. Three credits.

298 Selected Topics
The topic for 2018-2019 is Introduction to Architectural Design. This course will teach students the fundamentals of architectural design. Students will learn the basic elements of architectural graphics, perspective, construction techniques, and knowledge of spatial requirements. Students will then apply this learning to produce a set of working drawings for a small building of their own design. Students will be encouraged to explore their personal interests and identity while working towards this final project. No prerequisite. Three credits.

300 A Cultural and Intellectual History of Canada
This course is an historical analysis of Canadian literature, art, and architecture, and the intellectual forces that have shaped Canadian society. Cross-listed as HIST 300. Six credits.

312 Art and Politics
This course introduces students to what modern artists have to say about politics and what governments do and say about art. It provides some of the historical and theoretical tools needed to analyze the political role of art in our time. Students will examine literary works, painting, music, and architecture, and discuss specific policies on art. Cross-listed as PSCI 312. Three credits.

320 Advanced Painting
A continuation of ART 204/205 with emphasis on composition, technique and materials with special attention to individual creativity and development. Prerequisite: ART 205 or portfolio demonstrating painting skills. Six credits.

321 Celtic Art
Weave your way through Celtic knots and “horror vacui” fear of empty space, and discover the art of the Celts. From the Battersea Shield to the Book of Kells, we will trace our way through the extraordinary legacy of weaponry, jeweller, illuminated manuscripts, Celtic crosses, and Sheela-na-Gigs to arrive at a deeper understanding of the people who made them. Acceptable as a course in history. Cross-listed as ANTH 321 and CELT 321. Three credits. Not offered 2018-2019.

331 Catholicism and the Arts I
This course will trace Catholic themes and ideas about Catholicism in literary, musical, architectural, or artistic works from the beginnings of Christianity to the early Renaissance. Credit will be granted for only one of CATH 331 or CATH 330. Cross-listed as CATH 331. Three credits.

332 Catholicism and the Arts II
This course will trace Catholic themes and ideas about Catholicism in literary, musical, architectural, or artistic works from the Renaissance until the contemporary era. Credit will be granted for only one of CATH 332 or CATH 330. Cross-listed as CATH 332. Three credits.

343 Issues in Canadian Art through World War II
Students will consider Canadian art practice and institutions from pre-European contact up to the Group of Seven. Topics can include aboriginal practice and the representation of native peoples, the construction of wilderness and place, and the role of the church in Quebec in the context of social and political change. Prerequisites: ART 141, 142 or survey of Canadian art or permission of the instructor. Three credits.

344 Issues in Contemporary Canadian Art
Students will consider selected topics which can include: Michael Snow and his contemporaries, post-colonialism and contemporary aboriginal art, landscape and the critique of nature, feminism. Prerequisites: ART 141, 142 or survey of Canadian art, or permission of the instructor. Three credits.

346 Botanical Art and Illustration: Drawing
This course will be concerned with developing drawing to accurately reproduce plant forms. Non-flowering and flowering plant form and diversity will be covered using pencil and watercolour. Prerequisites: ART 101, 101 (100) or BIOL 202 or portfolio demonstrating drawing or painting skills. Three credits.

347 Botanical Art and Illustration: Painting
This course will be concerned with developing drawing to accurately reproduce plant forms. Non-flowering and flowering plant form and diversity will be covered using pencil and watercolour. Prerequisites: ART 101, 101 (100) or BIOL 202 or portfolio demonstrating drawing or painting skills. Three credits.

351 Anatomy for the Artist: Drawing
This course provides intensive study of human anatomy with the purpose aimed towards figure drawing. Students will focus on the skeletal and muscular systems, studying both bone specimens and live models. Using graphite and charcoal, students will gain the knowledge to accurately draw the human figure and place their work within the historical context of figurative art. Prerequisite: ART 101, 102 (100) or portfolio submission. Three credits.

356 Iconography of Christian Art: The Life of Christ
Iconography is the identification and interpretation of images. This course is an introduction to the iconography of Christian art, with an emphasis on images of the Life and Passion of Christ. The course will examine how images develop over history, and how they may be understood in light of historical events, changes in theological thought, and in the artist’s own spirituality. Cross-listed as RELS 353. Three credits.

357 Iconography of Christian Art: The Saints
This course is an introduction to the iconography of Christian art, with an emphasis on images of Mary and the saints. The course will examine how images develop over history, and how they may be understood in light of historical events, changes in theological thought, and in the artist’s own spirituality. Discussion will include how such images were used as objects of personal devotion but also for the conveying of important theological and social values. Cross-listed as RELS 354. Three credits.

363 Advanced Drawing I
A continuation of Art 100, this course covers the direct observation of still-life, figure drawing, composition, expression, and critical analysis. A variety of drawing media, both colour and black and white, will be used. Projects to be done outside of class will be assigned on a regular basis. Prerequisite: ART 101, 102 (100) or a portfolio approved by the instructor. Three credits.

364 Advanced Drawing II
This course will concentrate on the development of individual expression. There will be greater emphasis on the expressive potential of the figure. Projects to be completed outside the class will be assigned on a regular basis. Prerequisite: ART 363. Three credits.

371 Italian Renaissance Art I
During the Italian Renaissance, humanists began to look back to the Classical past for inspiration. At the same time, some religious leaders led followers to an increased interest in the natural world and contemporary everyday life. These new trends deeply affected the visual arts. This course will examine this period of profound innovation in painting, sculpture and architecture, from the time of Giotto to the precursors of High Renaissance style in Florence and Venice. Three credits.

372 Northern Renaissance Art
This course explores the innovative artistic legacy of Northern Renaissance Europe. New technical developments such as oil painting allowed artists to create unprecedented levels of realistic illusion in paintings. The rise of the printing press opened up new avenues for the dissemination of imagery in the form of woodcuts and engravings. The religious turmoil of the Protestant Reformation also had profound consequences for the development of art - and its subject matter - in the North. Three credits.

373 Italian Renaissance Art II
This course examines Italian art and architecture during the late 15th and 16th Centuries, beginning with the monumental “High Renaissance” style established by Leonardo da Vinci, Michelangelo, and Raphael. The role these artists and others played in the rise of the notion of artistic genius led to problems linked to artistic license as the century progressed. We will consider works of art from the point of view of style and technique, but also how art functions in its social and political context. Three credits.

399 Directed Study
See section 3.5. Three or six credits.

435 Seminar in Italian Renaissance Art
This course is an intensive investigation into an aspect of Italian Renaissance art. Topics may include, among others: Michelangelo and his biographers; Giorgio Vasari’s Lives of the Artists; Raphael in Rome; Renaissance art in Venice; Italian Mannerism. Students will learn to use and assess important primary sources from the Renaissance period, and will also examine the secondary scholarly literature in some depth. See http://sites.stfx.ca/art/ for more information. Prerequisites: ART 142, or 371, or 373, or permission of the instructor. Three credits.

499 Directed Study
See section 3.5. Three or six credits.
Biology is the science of living organisms and their interactions in the world around us. Many biology courses deal with the human condition, as well as the influence that humans have on the global environment. The biology department offers courses that emphasize the structure and function of organisms from the molecular level to the level of global ecology.

The major, advanced major, and honours degrees prepare students for advanced training and careers in basic and applied biology and in the biomedical sciences; for graduate study in biology, medicine, dentistry, physiotherapy, and veterinary science; and for teaching at both the primary and the secondary level.

Biology is a highly integrative science that is informed by a conceptual background in other sciences including mathematics, chemistry, physics, and earth sciences. Joint degree programs with these and other sciences are available. In addition to the regular biology programs, students may also study biology through the Interdisciplinary Studies in Aquatic Resources program.

First year biology students normally register for BIOL 111, 112; CHEM 100 or 120; MATH 106 and 107 or 126 and 127; 6 credits in each of 2 different arts subjects for a total of 12 credits. See glossary for definitions of the humanities and social sciences. Students with a minimum high school average of 85 may consider a third science, usually PHYS 101/102 or ESCI 171 and 172 instead of 6 credits of arts.

**Department Requirements**

- **a)** The biology core program is BIOL 111, 112, and four of the following courses: 201, 202, 203, 204 and 315.
- **b)** Students wishing to complete a pair in biology should take BIOL 111, 112, and any two second year biology courses. BIOL 201, 202, 203, 204 are normally taken in the second year.
- **c)** Credit for BIOL 111 and 112 with an average of 55 is required for all students continuing in biology major, advanced major or honours programs.
- **d)** BIOL 221 cannot be used as science A in biology major, advanced major or honours programs.
- **e)** CHEM 100 or 120 is a prerequisite for BIOL 201, 202, 203 and 204.
- **f)** Advanced major and honours students normally take CHEM 225, 255 and STAT 231 in second year. Students interested in the health professions should take CHEM 220 in second year.
- **g)** Biology students may take no more than six credits of cross-listed courses as BIOL credits.

**Major Program**

Program requirements are given in chapter 7. Students in the major program must take BIOL 111, 112, and four of the following courses: 201, 202, 203, 204, 315; and 18 additional biology credits, of which 12 credits must be at the 300 or 400 level, to complete 36 credits for science A.

**Advanced Major and Honours Programs**

Program requirements are given in section 7.1. Honours and advanced major students select their courses in consultation with the department chair. PHYS 101/102 or 121/122 is required in the honours program and may count as science A. In the advanced major program PHYS 101/102 or 121/122 is strongly recommended but may not count as science A. BIOL 391 and 491 are required non-credit courses taken in third and fourth years. Course requirements are shown below.

**Concentrations**

Biology offers six areas of concentration, health sciences, ecology, cell and molecular biology, animal biology, plant biology, and aquatic biology. A concentration is included in the student’s official academic record and appears on any transcript issued. Advanced major and honours students may fulfill the requirements for a concentration by completing a minimum of 15 credits, including at least 3 credits at the 400 level, from a specified concentration. Courses assigned to each concentration are listed below.

- **Health Sciences:** BIOL 301, 304, 315, 317, 320, 331, 335, 343, 374, 395, 416, 417, 419, 452, 453, 454, 481, 484
- **Ecology:** BIOL 301, 302, 308, 311, 315, 331, 342, 343, 345, 360, 407, 468, 472, 474, 484
- **Cell and Molecular:** BIOL 302, 304, 315, 317, 320, 331, 335, 391, 411, 416, 417, 419, 452, 481
- **Animal:** BIOL 301, 302, 304, 307, 308, 311, 315, 317, 320, 335, 342, 343, 360, 395, 411, 416, 417, 419, 452, 453, 454, 481, 484
- **Plant:** BIOL 302, 307, 308, 311, 317, 360, 472, 474
- **Aquatic:** BIOL 301, 307, 311, 342, 343, 345, 360, 468, 472, 474

**Advanced Major Program**

Students must take BIOL 111, 112, and four of the following courses: 201, 202, 203, 204, 315; and 391, 491; CHEM 100 or 120, CHEM 225 (or 220) and 255; MATH 106 and 107 or 126 and 127; STAT 231; an additional 24 BIOL credits, of which 18 must be at the 300 (may include 315) or 400 level (at least 3 credits must be BIOL at the 400 level, other than 491 and 499); 18 credits arts electives, to include one pair; 15 credits approved electives; 24 credits open electives.

**Honours Program**

Students must take BIOL 111, 112, and four of the following courses: 201, 202, 203, 204, 315; and 391, 491, 493; CHEM 100 or 120, 225 (or 220) and 255; MATH 106 and 107 or 126 and 127; PHYS 101/102 or 121/122; STAT 231; an additional 33 credits of BIOL or other approved science courses, of which 24 credits must be at the 300 (may include 315) or 400 level (at least 3 credits must be BIOL at the 400 level, other than BIOL 475, 491, 493 and 499); 18 credits arts electives to include one pair; 15 credits approved electives; 6 credits open electives.

**Joint Honours and Joint Advanced Major**

Joint honours and joint advanced major programs may be offered with other departments. For course patterns see sections 7.1.3. Students considering a joint honours or advanced major should consult with the relevant department chairs as early as possible. A concentration in health sciences, ecology, cell and molecular biology, animal biology, plant biology or aquatic biology may be completed for students having biology as their Science A. Requirements are as listed for advanced major and honours programs.

**BSc Advanced Major in Biology with Business Administration**

- **Science A** BIOL 111, 112, 12 credits from 201, 202, 203, 204, 315; and BIOL 391, 491; 18 additional BIOL credits must include at least 12 credits at the 300 (may include 315) or 400 level (at least 3 credits must be BIOL at the 400 level, other than 491 and 499)
- **BSAD/ECON** BSAD 101; 102, 221, 223, 231, 241, 261 and 471; 6 additional BSAD credits; ECON 101, 102
- **Science B** MATH 126, 127; BIOL/STAT 331; 3 additional MATH, STAT credits
- **Science C** CHEM 100 or 120
- **Arts X** 12 credits humanities or social science
- **Arts Y** 6 credits
- **Approved electives** CSCI 235; 9 additional credits

**Co-operative Education Program in Biology**

This optional academic program allows students to have the opportunity to gain 12 months of professional, paid work experience in a range of opportunities in industry, government and not-for-profit across Canada. Students can gain technical and professional experience in field and lab work, research, policy and education to reinforce classroom-based instruction and to increase students' networks and employability. The Biology Co-op Program is accredited by the Co-operative Education & Work-Integrated Learning Canada (CEWIL Canada). COOP 405 (3-credits) can be used as BIOL elective or as an open elective. For further information on work term sequencing options and professional development training topics see section 9.13.

**105 Introduction to Cell and Molecular Biology**

This course will focus on the structure and function of cells, cell division, patterns of inheritance, and the molecular basis of inheritance. Restricted to nursing students. Three credits and tutorial.
111 Introductory Cell Biology
An introduction to cells, their structure and function, and the techniques used to study them. Provides a basic introduction to cells as the building blocks of all life. Required for all students continuing in biology. Three credits and lab.

112 Diversity of Life
This course emphasizes the interrelationships of living systems and their roles in the global ecosystem. Students explore evolution and the origins of life, organismic diversity, adaptations, and ecology. Human interactions with the diversity of life are considered throughout the course. Basic skills that underpin success as an undergraduate student are also emphasized. Required for all students continuing in biology. Three credits and lab.

115 Microbes in Human Biology
An introduction to microorganisms from a human perspective for students in the nursing program. Topics include bacterial structure and function, bacterial genetics and antibiotic resistance, and viral structure and infection. Credit will be granted for only one of BIOL 115 or BIOL 215. Restricted to nursing students. Three credits and tutorial.

151 Fundamentals of Human Anatomy & Physiology I
An integrated approach to the study of the anatomy and physiology of the following: the integumentary, skeletal, muscular, nervous and endocrine systems. The course provides students with a comprehensive working knowledge of the anatomic and physiologic aspects of these systems Required for first-year nursing. Credit will be granted for only one of BIOL 151, BIOL 251, HKN 151. Three credits and lab.

152 Fundamentals of Human Anatomy & Physiology II
An integrated approach to the study of the anatomy and physiology of the following: cardiovascular, respiratory, immune, digestive, urinary and reproductive systems. The course provides students with a comprehensive working knowledge of the anatomic and physiologic aspects of these systems. Required for first-year nursing. Credit will be granted for only one of BIOL 152, BIOL 252, HKN 152. Prerequisite: BIOL 151. Three credits and lab.

201 Animal Biology
An introduction to major groups of animals, emphasizing the structure, physiology and way of life of certain species. Prerequisites: an average of 55 in BIOL 111, 112 for biology majors, advanced majors or honours students. Three credits and lab.

202 Plant Biology
An introduction to the diversity, form and function of plants emphasizing the biology of land plants. Organisms are treated from the perspectives of evolution, reproduction, physiology, and ecology. Prerequisites: an average of 55 in BIOL 111, 112 for biology majors, advanced majors or honours students. Three credits and lab.

203 Introductory Ecology
An introduction to the fundamental concepts of ecology, exploring how organisms interact with their environment and with each other, at the levels of populations, communities and entire ecosystems. Interactions from competition to food chains are considered from an evolutionary perspective recognizing the role of the physical environment and humanity. Prerequisites: an average of 55 in BIOL 111, 112 for biology majors, advanced majors or honours students. Three credits and lab.

204 Introduction to Genetics
An introduction to the mechanisms of inheritance, genome structure, and genetic analysis. Concepts include: DNA structure and function; gene regulation, mutation, repair, linkage; gene manipulation. Laboratory involves problem solving and genetic crosses with fruit flies. Prerequisites: an average of 55 in BIOL 111, 112 for biology majors, advanced majors or honours students. Three credits and lab.

215 Microbiology for Human Nutrition
An introduction to microorganisms from a human health perspective, that focuses on immunological concepts, viruses, bacteria and fungi. Laboratories cover basic microbiological techniques and tutorials cover microorganisms from the food perspective. Credit will be granted for only one of BIOL 215 or BIOL 115. Restricted to Human Nutrition students and Human Kinetics students with Nutrition minor. Prerequisites: BIOL 111 and CHEM 100 or 120. Three credits and lab/tutorial.

220 Biological Perspective of Health and Environmental Issues
This course is for non-science students. The course deals with how scientific principles are established. Topics include evolution and diversity, ecology and food, human evolution and population, diabetes, homeostasis, HIV and vaccines, antibiotic resistance, and cancer. Offered through distance education. Acceptable for credit only in the Faculties of Arts and Business and as an open elective in the B.Sc. Nursing. Six credits.

221 Issues in Resource Management
This course introduces the basic science necessary to understand current resource issues such as forestry and wildlife management with the goal of understanding resource decision making, and how human activities can alter terrestrial ecosystems. Prerequisite: BIOL 112 or upper-year status in non-science programs. Cannot be used as science A for biology students. Three credits.

251 Human Anatomy and Physiology I
An integrated approach to the study of the anatomy and physiology of the following: the integumentary, skeletal, muscular, nervous and endocrine systems. The course provides students with a comprehensive working knowledge of the anatomic and physiologic aspects of these systems. Credit will be granted for only one of BIOL 251, BIOL 151, HKN 151. Required for students in human kinetics and human nutrition. Three credits and lab.

252 Human Anatomy and Physiology II
An integrated approach to the study of the anatomy and physiology of the following: cardiovascular, respiratory, immune, digestive, urinary and reproductive systems. The course provides students with a comprehensive working knowledge of the anatomic and physiologic aspects of these systems. Credit will be granted for only one of BIOL 252, BIOL 152, HKN 152. Required for students in human kinetics and human nutrition. Prerequisite: BIOL 251. Three credits and lab.

285 Paleontology: The History of Life
Covers the principles of paleontology including methods of analysis of fossil individuals, populations and species; biostratigraphy; paleoecology; biogeography; evolution and extinction; the origin and major events in the history of life from an evolutionary and ecological perspective. Laboratory study of selected fossil groups, field and laboratory techniques. Cross-listed as ESCI 285. Prerequisite: ESCI 171, 172 or BIOL 111, 112 or permission of the instructor. Three credits and lab. Offered 2018-2019 and in alternate years.

302 Evolution
Life on our planet, in all its wonderful diversity, has evolved to be this way. This course will introduce the student to the core concepts of Darwinian natural selection, the process of speciation, methods of phylogenetic construction, the relationship between phylogenetics and taxonomy, analysis of evolutionary patterns, the history of life on Earth, and selected topics including human evolution and social behaviour. Prerequisites: BIOL 201, 204 or permission of the instructor. Three credits and tutorial.

304 Vertebrate Physiology
This course uses an integrative approach to study the function of organ systems, including neural, cardiovascular, muscular, respiratory, renal, reproductive and endocrine. Examples of how vertebrates, including humans, respond to different demands imposed by their environment and activities will be discussed. Prerequisite: BIOL 201. Three credits and lab.

307 Field Biology
Provides practical experience in the observation, collection, identification and quantification of organisms in nature. Held for two weeks in the spring session, the course emphasizes field ecology, dealing with some or all of the following groups of organisms: birds, small mammals, fish, plants, marine algae, marine invertebrates and insects. Prerequisite: BIOL 203. Three credits and lab.

308 Biology of Populations
This course covers the principles of plant and animal population dynamics. The great diversity in growth, survival, reproduction, and dispersal patterns in aquatic and terrestrial populations is examined. Contents include theory, evidence from experimental studies and the interaction between the environment and populations. Prerequisite: BIOL 203 or permission of the instructor. Three credits. Not offered 2018-2019; next offered 2019-2020.

311 Coastal Marine Ecology
An introduction to coastal marine habitats and the factors that influence the population and community structure of primary producers and consumers. The course includes an overview of marine ecological theory, field work, and laboratory observations, focusing on Nova Scotia shores. Prerequisite: BIOL 203. Three credits, lab and research project.

315 Introductory Microbiology
Provides a broad perspective on the microbial world and its role in the biosphere. The diversity, morphology and physiology of prokaryotic microorganisms will be discussed. Laboratories stress basic microbiological techniques including microscopic examination, isolation from natural environments, enumeration and examination of physiology. Prerequisites: BIOL 201, 204; CHEM 220, or CHEM 225 and 255. Open to human kinetics students upon completion of BIOL 204 and CHEM 220, or CHEM 225 and 255. Three credits and lab.

317 Molecular Biology
An introduction to the analysis of peptides and nucleic acids using standard molecular methodology. Topics include electrophoretic techniques; manipulation...
of DNA, the introduction of foreign DNA into host bacterial cells and the use of gene cloning, gene amplification, and DNA sequencing. During labs, students will apply these methods to interpret gels and to generate genetically modified bacteria. Prerequisites: BIOL 204, 315. Three credits and lab.

320 Biology of Cancer
An introduction to the problem of cancer, emphasizing the cellular and molecular biology of carcinogenesis in humans. The multi-causal, multi-step nature of the process will be highlighted, including the role of viruses, oncogenes, carcinogens and ionizing radiations. Prerequisite: BIOL 201 and 204 or BIOL 251 and 252. Three credits and lab.

331 Statistical Methods
An investigation of statistics and experimental design in the context of biological and health science issues. Topics include analysis of variance, categorical data; distribution-free tests; linear and multiple regression. Students will learn to analyze data and interpret conclusions using a statistical software package. Recommended strongly for all major, advanced major, and honours students. Credit will be granted for only one of STAT 331, PSYC 394, PSYC 390. Cross-listed as STAT 331. Prerequisite: STAT 101(201) or 224 or 231. Three credits and a one-hour lab.

335 Developmental Biology
The course provides an introduction to the means by which animals replicate themselves. Students will be introduced to experimental methods, intercellular communication, the diversity of different ways that animals develop and the role of gene regulation therein. Laboratories will highlight topics covered in lecture and introduce students to some experimental techniques. Prerequisites: BIOL 201, 204. Three credits and lab.

342 Invertebrate Zoology
A comparative study of invertebrate animals and their adaptations, including their morphology, behaviour, physiology, ecology and evolution. Students will learn the remarkable diversity of both form and function in these animals. At the same time, students will refine their powers of observation, improve their ability to ask and answer critical questions about organisms, and design experiments that will lead to further insight into invertebrate zoology. Prerequisite: BIOL 201. Three credits and lab. Not offered 2018-2019.

343 Comparative Anatomy of Vertebrates
A comparative study of the anatomy and evolution of chordate animals with emphasis on the vertebrates, including humans. In the laboratory, students will study the anatomy of representative vertebrates and will complete a project focusing on local wildlife. Prerequisite: BIOL 201. Three credits and lab.

345 Communities and Ecosystems
An outline of the essential theory of community and ecosystem ecology, including climate drivers, mineral cycles, energy flow and community structure. The concepts of succession, food webs and biodiversity are illustrated with comparative examples drawn from a variety of aquatic and terrestrial ecosystems. Prerequisites: BIOL 201, 202, 203. Three credits.

360 Global Change Biology
This course analyzes major anthropogenic phenomena that are currently affecting natural systems at a global scale. Topics include global warming, ocean acidification, species invasions, habitat fragmentation, and overfishing, focusing on the effects of such processes on aquatic and terrestrial organisms. Successful mitigation and conservation strategies are evaluated. Prerequisites: BIOL 201, 202, 203. Three credits.

374 Human Neuropsychology
Neuropsychology is the study of how damage to the brain causes changes in thoughts and behaviours. Cognitive changes associated with specific diseases/conditions will be the focus of the course (e.g., Alzheimer’s disease, multiple sclerosis, Parkinson’s disease, stroke, etc.). Examples of cognitive and behavioural symptoms will be presented via videos, audio recordings, and performance on neuropsychological tests. The assessment of cognitive processes will be introduced and relevant structural and functional neuroanatomy will be reviewed. Cross-listed as PSYC 373. Prerequisite: 12 credits PSYC, PSYC 230 recommended but not required. Three credits.

381 Selected Topics
The topic for 2018-2019 is Insect Biology. Insects represent a significant portion of the planet’s biological diversity and make up the vast majority of animal species. This course provides a comprehensive introduction to this extraordinary diversity, and explores key features of insect structure, function, behaviour, ecology, and classification, integrating appropriate molecular studies throughout. A comparative and evolutionary approach is employed to examine the various adaptations that have allowed insects to become the most successful group of animals on the planet. The numerous ways in which insects impact human life and health will be discussed. Prerequisite: BIOL 201. Three credits.

382 Selected Topics
The topic for 2018-2019 is Time. Time is a concept we encounter every day and yet one that we rarely, if ever, consider beyond checking it on our wall clock (or iPhone). However, our seemingly familiar relationship with time deceives us into believing that the concept of time is a simple one. This course will explore the, meaning and relevance of time from the perspectives of four different disciplines: religion and philosophy, physics, biology, and music. It will seek answers to questions such as: What is the meaning of time and how can it be defined? What is the space-time continuum and what does the theory of relativity imply about time? How do organisms perceive time and what is a biological clock? How is time divided to create rhythms and how do we keep a beat? Restricted to third- and fourth-year students. Three credits.

391 Junior Seminar
This course will assist students in choosing a career, gaining admission to graduate or professional school and help honours students choose a supervisor and prepare for their honours thesis work. Required for all biology advanced major and honours students in their third year. No credit.

395 Cell Biology
An introduction to the eukaryotic cell, including relationships between biochemical mechanisms and organelle functions, and techniques used to study cell function. Prerequisites: BIOL 201, 204; CHEM 220 or 255. Three credits and lab.

407 Integrated Resource Management
An introduction to integrated resource management planning and land-use decision-making in an industrial landscape, using the principles of landscape ecology, ecosystem management and conservation biology. Lectures examine the challenges of biodiversity conservation, and wildlife and water management using these methods within the context of forest management. Guest lecturers from industry and other land user groups will discuss the opportunities, constraints, and problems presented by multi-stakeholder approaches. Prerequisite: BIOL 203. Three credits and lab.

411 Evolutionary Developmental Biology
This course is a contemporary discipline that examines the interplay between how organisms reproduce and how they evolve. This course explores several themes, including (i) how natural selection acts on development, (ii) whether development constrains evolution, (iii) developmental mechanisms of evolutionary change, (iv) environmental regulation of development and (v) developmental genetics. Prerequisite: BIOL 302 or 335 or permission of instructor. Three credits. Offered 2018-2019 and in alternate years.

416 Immunology
This course provides an overview of human innate and acquired immune responses. Development of inflammation, vaccine protection, specific aspects of cancer immunology as a well as immunopathology in relation to allergy, and select autoimmune diseases will be addressed. Credit will be granted for only one of BIOL 416 or BIOL 417. Prerequisite: BIOL 315. Three credits and lab.

419 Microbial Pathogens
This course explores host-pathogen interactions at the cell and molecular level, describing various strategies bacteria, virus, parasites, and fungi use to evade human defenses and establish a disease state. Credit will be granted for only one of BIOL 419 or BIOL 417. Prerequisite: BIOL 416. Three credits and lab.

452 Bioinformatics
Biography is now in the digital age. DNA and protein sequences are accumulating at an exponential rate. Bioinformatics uses computers to archive, organize, retrieve and analyze biological information. This course will focus on how data are generated, accessed and managed, how to retrieve particular types of data and what some of the end users of these data are. No computing background required. Prerequisite: BIOL 317 or permission of the instructor. Three credits. Not offered 2018-2019; next offered 2019-2020.

453 Advanced Behavioral Neuroscience I: Neurobiology of Psychological Disorders
Topics in the field of behavioural neuroscience will be considered. The precise topics covered in the seminar will change from year to year, however the focus of the course content will be on various aspects of the behavioural neuroscience, including, but not limited to the etiology, diagnosis and treatment of neurological disorders, broadly defined. Credit will be granted for only one of BIOL 453 or BIOL 450. Cross-listed as PSYC 431. Three credits. Offered 2018-2019 and in alternate years.

454 Advanced Behavioral Neuroscience II: Contemporary Issues
This is a seminar course in which current topics in the field of behavioural neuroscience are considered. Credit will be granted for only one of BIOL 454 or BIOL 450. Cross-listed as PSYC 432. Three credits.

468 Restoration Ecology
This integrative course introduces students to the variety of ways that degraded
ecosystems, terrestrial and aquatic, can be restored by the application of ecological principles. These ideas are illustrated with Nova Scotia case studies involving invasive species, stream restoration, reforestation and contaminated sites. Prerequisites: BIOL 201, 202, 203; BIOL 345 recommended. Three credits. Not offered 2018-2019; next offered 2019-2020.

472  Freshwater Ecology
A study of the structure of freshwater ecosystems and how aquatic communities are shaped by the unique physical and chemical properties of flowing and standing fresh waters. Field trips to local streams and lakes illustrate the distributions and adaptations of freshwater organisms, while providing hands-on experience with limnological methods. Prerequisites: BIOL 201, 202, 203. Three credits and lab.

474  Environmental Biology of Soils
An introduction to the diversity of soil organisms and their roles in ecosystem processes. The nature of soil as habitat for bacteria, fungi, and animals, and the connections between soil and the aboveground environment will be considered along with the role of soils and soil organisms in decomposition, nutrient cycling, plant nutrition and ecosystem succession. Students must complete a semester-long lab project. Prerequisite: BIOL 203. Three credits and lab. Offered 2018-2019 and in alternate years.

475  Accessing the Biological Literature
Library resources and on-line databases will be used to write an essay relevant to the honours student’s interest or thesis. Restricted to honours students. Three credits.

481  Selected Topics

484  Animal Behaviour
An introduction to the principles of ethology drawing on examples from all animal phyla, with an emphasis on vertebrates. Students learn both the physiological and evolutionary bases of behaviour. Topics covered will span simple reflexes through complex social behaviours, including survival, predation, habitat selection, communication, and mating behaviours. Participation in field trips is required. Prerequisite: BIOL 201 or PSYC 230. Three credits and lab. Not offered 2018-2019.

491  Senior Seminar
Seminars on topics of major biological interest are presented by faculty members and visiting scientists. Required for all biology advanced major and honours students in their final year of study. No credit.

493  Honours Thesis
For details, see the department website or the chair. Honours students must identify a faculty member who will act as a thesis advisor before March 15 of their third year. Three credits.

499  Directed Studies
Students with an average of at least 75 may, on a tutorial basis under the guidance of a professor, pursue an area of interest not normally offered by the department. Three credits and seminar.

GRADUATE COURSES

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Welcome to business administration at StFX, where students graduate with the knowledge, skills and attitudes needed to become effective contributors to a variety of organizational types (including for-profit, not-for-profit, entrepreneurial start-ups, and the public sector) or to begin graduate study. This program puts students on the fast track to careers in a wide range of business capacities, and we are known to produce some of the world’s most influential business and industry leaders. To attain this objective, the BBA program combines the acquisition of conceptual knowledge with applied and experiential learning approaches that include projects, presentations, simulations, field trips, class discussions, case analyses, lectures, readings, films, guest speakers, service learning, and much more. BBA students work with faculty who blend research excellence with significant practical business experience and whose research interests are relevant to practicing managers.

The BBA program provides three program options of major, advanced major and honours within each of the following seven streams or functional areas: accounting, enterprise systems, entrepreneurship, finance, international business, management and leadership, and marketing. Students can also earn a BBA joint honours in business administration and economics. All BBA students must declare a major at the end of their second year in one of the streams previously listed, except for students who meet the eligibility criteria detailed in chapter 5 who may instead opt to apply for an advanced major or honours degree path in one of these streams.

Each stream in the BBA program consists of an integrated set of required courses in BSAD, ECON, MATH, and STAT, complemented by elective courses in the arts and/or sciences. Regardless of program and stream, students may also choose a Co-op work-study option and/or may participate in an international exchange and earn credits abroad that may count toward their BBA degree.

Students who wish to study business administration and another discipline may choose the B.Sc. with advanced major in a science with business administration (see chapter 7), or the BA with major or advanced major in economics and a minor in business administration (see section 9.16).

To earn a BBA degree, students must successfully complete courses with a combined value of 120 credits. All BSAD courses are one-term, three-credit courses. Normally BBA students earn 30 credits per year for each of four years. At least 36 of each student’s 60 BSAD credits must be earned at StFX.

Transfer students should consult with the academic advising office prior to registration to confirm their course selections.
Admission to the BBA Program
Admission to the BBA program may be restricted based on quotas, general average, and course grades. See chapter 1 for general admission requirements.

Advancement in the BBA Program
BSAD 200-level courses are prerequisites for 300-level courses. Admission to 400-level courses normally requires completion of one or more courses at the 300 level. Permission of the department chair to register in a course may override the normal prerequisites.

Substitutions
ABBA student may substitute courses in subjects other than business administration for BSAD electives. Substitutions are not automatic. Students must apply in writing to the department chair indicating the career or program rationale for requesting a substitution. For example, students with credit for MATH 106 or 126 may wish to substitute MATH 106 or 126 for the MATH 105 requirement. ECON 271 may also be substituted for MATH 105 for students who are interested in finance.

Affiliations with Professional Associations
The Department of Business Administration maintains ongoing relationships with Chartered Professional Accountants (CPA) Atlantic and graduates may earn credit for most courses that serve as prerequisites for entry into the CPA Professional Education Program. Graduates may also earn credit for courses toward the Canadian Institute of Management designations (e.g. CIM), the Chartered Professional in Human Resources (CPHR) designation, Canada’s association of Information Technology professionals (CIPS) and other professional certification programs.

300- and 400-Level BSAD Electives
Many BSAD electives at the 300 and 400 level may be taken in either the third or fourth year. Students should be mindful of the course prerequisites and consider the appropriate sequencing of their courses. Permission of the department chair to register in a course may override the normal prerequisites.

Co-operative Education Programs in Business Administration
This optional academic program offers BBA students the opportunity to gain 12 months of professional, paid work experience in a range of opportunities in industry, government and not-for-profit across Canada. Students can gain professional experience within the fields of accounting, finance, marketing, management, enterprise systems and more, to reinforce classroom-based instruction and to increase students’ networks and employability. The Business Co-op Program is accredited by the Co-operative Education & Work-Integrated Learning Canada (CEWIL Canada). COOP 405 can be used as BBA elective or as an open elective. For further information on work term sequencing options and professional development training topics see section 9.13.

BBA Major Degrees
The BBA program offers majors in accounting, enterprise systems, entrepreneurship, finance, international business, management and leadership, and marketing.

Accounting
Year 1
BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12 credits arts/science electives
Year 2
BSAD 221, 223, 231, 241, 261, 281; 12 credits arts/science electives
Years 3 & 4
BSAD 321, 322, 323, 324, 471; 9 accounting credits from list below*; 15 credits BSAD electives; 12 credits arts/science electives; 9 credits open electives

* Accounting credits may be earned from this list of eligible courses: BSAD 342, 345, 351, 424, 425, 426, 427, 428, 454.

Enterprise Systems
Year 1
BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12 credits arts/science electives
Year 2
BSAD 221, 223, 231, 241, 261, 281; 12 credits arts/science electives
Years 3 & 4
BSAD 382, 384, 385, 386, 471, 482, 483, 485; 15 credits BSAD electives; 12 credits arts/science electives; 9 credits open electives

Entreprenuership
Year 1
BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12 credits arts/science electives
Year 2
BSAD 221, 223, 231, 241, 261, 281; 12 credits arts/science electives
Years 3 & 4
BSAD 331, 332, 356, 456, 471; 9 entrepreneurship credits from list below*; 15 credits BSAD electives; 12 credits arts/science electives; 9 credits open electives

* Entrepreneurship credits may be earned from this list of eligible courses: BSAD 321, 335, 352, 357, 358, 381, 383, 386, 431, 453.

Finance
Year 1
BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12 credits arts/science electives
Year 2
BSAD 221, 223, 231, 241, 261, 281; ECON 201, 202; 6 credits arts/science electives
Years 3 & 4
BSAD 342, 344, 346, 471; 12 finance credits from the list below*; 15 credits BSAD electives; 12 credits arts/science electives; 9 credits open electives

* Finance credits may be earned from this list of eligible courses: BSAD 345, 348, 349, 444, 445, 449, 453, 454, 497.

International Business
Year 1
BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12 credits arts/science electives
Year 2
BSAD 221, 223, 231, 241, 261, 281; 12 credits arts/science electives
Years 3 & 4
BSAD 357, 358, 451, 452, 471; 9 IB credits from list below*; 15 credits BSAD electives; 12 credits arts/science electives; 9 credits open electives

* IB credits may be earned from this list of eligible courses: BSAD 349, 382, 433, 473, 474.

Management and Leadership
Year 1
BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12 credits arts/science electives
Year 2
BSAD 221, 223, 231, 241, 261, 281; 12 credits arts/science electives
Years 3 & 4
BSAD 358, 361, 363, 461, 471; 9 management credits from list below*; 15 credits BSAD electives; 12 credits arts/science electives; 9 credits open electives

* Management credits may be earned from this list of eligible courses: BSAD 346, 362, 367, 382, 386, 387, 427, 435, 456, 462, 466, 467, 473, 472, 474.

Marketing
Year 1
BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12 credits arts/science electives
Year 2
BSAD 221, 223, 231, 241, 261, 281; 12 credits arts/science electives
Years 3 & 4
BSAD 331, 333, 335, 358, 471; 9 marketing credits from list below*; 15 credits BSAD electives; 12 credits arts/science electives; 9 credits open electives

* Marketing credits may be earned from this list of eligible courses: BSAD 383, 431, 432, 433, 434, 435, 436, 437, 439, 495.

BBA Advanced Major Degrees
The BBA program offers advanced majors in accounting, enterprise systems, entrepreneurship, finance, international business, management & leadership, and marketing. All advanced major degree options require the achievement of a grade average (specified in chapter 5) and the completion of additional courses within the stream, including a Consulting Project (BSAD 492; except for advanced majors in accounting and finance).

Accounting
Year 1
BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12 credits arts/science electives
Year 2
BSAD 221, 223, 231, 241, 261, 281; 12 credits arts/science electives
Years 3 & 4
BSAD 321, 322, 323, 324, 471; 9 accounting credits from list below*; 15 credits BSAD electives; 12 credits arts/science electives; 9 credits open electives

* Accounting credits may be earned from this list of eligible courses: BSAD 342, 345, 351, 424, 425, 426, 427, 428, 454.

Enterprise Systems
Year 1
BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12 credits arts/science electives
Year 2
BSAD 221, 223, 231, 241, 261, 281; 12 credits arts/science electives
Years 3 & 4
BSAD 382, 384, 385, 386, 471, 482, 483, 485; 15 credits BSAD electives; 12 credits arts/science electives; 9 credits open electives

Entrepreneurship
Year 1
BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12 credits arts/science electives
Year 2
BSAD 221, 223, 231, 241, 261, 281; 12 credits arts/science electives
Years 3 & 4
BSAD 331, 332, 356, 456, 471; 9 entrepreneurship credits from list below*; 15 credits BSAD electives; 12 credits arts/science electives; 9 credits open electives

* Entrepreneurship credits may be earned from this list of eligible courses: BSAD 345, 346, 351, 454 [plus sublist A: 425, 426, 427, 428].
Entrepreneurship
Year 1  BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12 credits arts/science electives
Year 2  BSAD 221, 223, 231, 241, 261, 281; 12 credits arts/science electives
Years 3 & 4 BSAD 331, 332, 356, 453, 456, 471, 492; 9 entrepreneurship credits from list below*; 9 credits BSAD electives; 12 credits arts/science electives; 9 credits open electives

Finance
Year 1  BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12 credits arts/science electives
Year 2  BSAD 221, 223, 231, 241, 261, 281; ECON 201, 202; 6 credits arts/science electives
Years 3 & 4 BSAD 342, 344, 346, 444, 471; 15 finance credits from the list below*; 9 credits BSAD electives; 12 credits arts/science electives; 9 credits open electives

* Finance credits may be earned from this list of eligible courses: BSAD 345, 348, 349, 445, 449, 453, 454, 497.

International Business
Year 1:  BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12 credits arts/science electives**
Year 2:  BSAD 221, 223, 231, 241, 261, 281; 12 credits arts/science electives**
Years 3 & 4***: BSAD 357, 358, 451, 452, 471, 492; 12 IB credits from list below*; 9 credits BSAD electives; 12 credits arts/science electives**; 9 credits open electives

* IB credits may be earned from this list of eligible courses: BSAD 349, 382, 433, 473, 474.
** Advanced major and honours students are required to complete 12 credits (one arts pair) in a second language; this requirement will be waived for multilingual students providing acceptable evidence.
*** Advanced major and honours students are required to complete a minimum of one term abroad with an international exchange partner.

Management and Leadership
Year 1  BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12 credits arts/science electives
Year 2  BSAD 221, 223, 231, 241, 261, 281; 12 credits arts/science electives
Years 3 & 4 BSAD 358, 361, 363, 461, 471, 473, 492; 9 management credits from list below*; 9 credits BSAD electives; 12 credits arts/ science electives; 9 credits open electives

Marketing
Year 1  BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12 credits arts/science electives
Year 2  BSAD 221, 223, 231, 241, 261, 281; 12 credits arts/science electives
Years 3 & 4 BSAD 331, 332, 333, 335, 358, 371, 492; 9 marketing credits from list below*; 9 credits BSAD electives; 12 credits arts/ science electives; 9 open electives

* Marketing credits may be earned from this list of eligible courses: BSAD 383, 431, 432, 433, 434, 435, 436, 437, 439, 495.

BBA Honours Degrees
The BBA program offers honours in accounting, enterprise systems, entrepreneurship, finance, international business, management and leadership, and marketing, and a joint honours degree in business administration and economics. Honours degree options require the achievement of a grade average (specified in chapter 5) and the completion of an honours thesis (BSAD 494) along with a research methods course as its prerequisite (typically BSAD 391).

Accounting
Year 1  BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12 credits arts/science electives
Year 2  BSAD 221, 223, 231, 241, 261, 281; 12 credits arts/science electives
Years 3 & 4 BSAD 321, 322, 323, 324, 342, 391, 424, 471, 494; 3 accounting credits from list below*; 9 credits BSAD electives; 12 credits arts/science electives; 9 credits open electives

* Accounting credits may be earned from this list of eligible courses: BSAD 425, 426, 427, 428.

Enterprise Systems
Year 1  BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12 credits arts/science electives
Year 2  BSAD 221, 223, 231, 241, 261, 281; 12 credits arts/science electives
Years 3 & 4 BSAD 382, 384, 385, 386, 391, 471, 482, 483, 485, 494; 9 credits BSAD electives; 12 credits arts/science electives; 9 credits open electives

Entrepreneurship
Year 1  BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12 credits arts/science electives
Year 2  BSAD 221, 223, 231, 241, 261, 281; 12 credits arts/science electives
Years 3 & 4 BSAD 331, 356, 391, 453, 456, 471, 494; 9 entrepreneurship credits from list below*; 9 credits BSAD electives; 12 credits arts/science electives; 9 credits open electives

* Entrepreneurship credits may be earned from this list of eligible courses: BSAD 321, 335, 352, 357, 358, 381, 383, 386, 431.

Entrepreneurship
Year 1  BSAD 101, 102; ECON 101, 102; MATH 105; STAT 101; 12 credits arts/science electives
Year 2  BSAD 221, 223, 231, 241, 261, 281; 12 credits arts/science electives
Years 3 & 4 BSAD 331, 356, 391, 453, 456, 471, 494; 9 entrepreneurship credits from list below*; 9 credits BSAD electives; 12 credits arts/science electives; 9 credits open electives

* Entrepreneurship credits may be earned from this list of eligible courses: BSAD 321, 335, 352, 357, 358, 381, 383, 386, 431.
BBA Joint Honours Degree
The normal course sequence for the BBA with joint honours in business administration and economics.

Year 1  
- BSAD 101, 102; ECON 101, 102; MATH 106 or 126 or 105; STAT 101; 12 credits arts/science electives

Year 2  
- BSAD 221, 223, 241, 281; ECON 201, 202, 301, 302; 6 credits arts/science electives

Years 3 & 4*  
- BSAD 231, 281, 391, 471, 494; ECON 493; 12 credits BSAD electives at the 300/400 level; 12 credits ECON electives at the 300/400 level; 18 credits arts/science electives

* If the honours thesis is done in the economics department, BSAD 494 is replaced by ECON 494, BSAD 391 may be replaced by ECON 372, and six credits ECON electives are replaced by six credits BSAD elective.

Business Administration Courses
All BSAD courses are one-term, three-credit courses. Normally students take 200-level courses in second year, primarily 300-level courses in third year and primarily 400-level courses in fourth year. Not all BSAD electives at the 300 or 400 level are offered every year.

101 Introduction to Business
An introduction to the Canadian business environment including exposure to the issues, trends, forces, organizations and personalities affecting businesses in Canada. The course exposes students to the types of teaching/learning experiences they will encounter in the BBA program, including case studies, teamwork, exercises, presentations, simulations, readings and lectures. Three credits and lab.

102 Business Decision-Making
Introduces students to the challenge of making business decisions, to the primary areas of business (management, marketing, operations, finance), and to the role of the general manager. The course provides an introduction to the core vocabulary and analytical tools appropriate to the functional areas, and helps students develop their analytical, presentation, small group management, and self-management skills. Prerequisite: BSAD 101. Three credits and lab.

221 Introductory Financial Accounting
An introduction to the basic concepts, principles and procedures underlying financial accounting and financial statement preparation and interpretation. Prerequisites: BSAD 101, 102. Three credits.

223 Introductory Managerial Accounting
An introduction to the basic concepts of management accounting and the use of accounting information for managerial decisions. Prerequisite: BSAD 221, completed or concurrent. Three credits.

231 Foundations of Marketing
Customers do not buy products: they buy benefits, satisfactions, and solutions to their problems. This course provides students with the customer and marketplace focus central to effective marketing. The course employs exercises and cases to develop students’ analytical skills and provides opportunities to demonstrate these skills through memos and reports. Prerequisites: BSAD 101, 102. Three credits.

241 Financial Management I
Covers fundamental aspects of financial decision-making, including financial analysis and planning, valuing stocks and bonds, capital budgeting, accessing capital markets, the cost of capital, and working capital management. Prerequisites: BSAD 221; MATH 105 completed or concurrent. Three credits.

261 Organizational Behaviour
Organizational behaviour introduces students to the context, concepts, principles and theories of human behaviour in organizations. The topics explored range from motivation to teamwork to communication. The objective is twofold: to understand how an organizational member might experience, interpret, and manage human relations as an individual and a group member; and to understand how the influence on human behaviour in turn contribute to organizational effectiveness. Prerequisites: BSAD 101, 102. Three credits.

281 Foundations of Business Information Technology
This course provides an introduction to information technology and management in modern organizations. Key topics include innovation and competitive advantage through IT, enterprise systems, web 2.0 and social media, web analytics and business intelligence, security, privacy and ethics. The course will use cases of technology intensive organizations to illustrate concepts. Credit will be granted for only one of BSAD 281 or INFO 102. Prerequisites: BSAD 101, 102. Three credits.

321 Intermediate Managerial Accounting I
Develops the ability to request and use accounting information in the process of planning and control. Topics include cost accounting, cost and revenue analysis for decision-making, budgeting, and performance analysis. Prerequisite: BSAD 223. Three credits.

322 Intermediate Managerial Accounting II
Examines in greater depth the topics introduced in BSAD 321, applying the concepts to more complex cases. Essential for students pursuing a career in accounting; useful to non-accounting students with an interest in managerial uses of accounting information. Prerequisite: BSAD 321. Three credits.

323 Intermediate Financial Accounting I
An examination of accounting and reporting issues of the public reporting companies as they relate to published financial statements. The course examines controversial aspects of financial accounting with reference to current writings and the pronouncements of professional accounting bodies including IFRS. Emphasis is placed on income measurement and accounting for assets. Prerequisite: BSAD 221. Three credits.

324 Intermediate Financial Accounting II
A continuation of the examination of accounting and reporting issues of the public reporting companies as they relate to published financial statements. Emphasis is placed on accounting for debt, equity and special topics. Prerequisite: BSAD 323. Three credits.

331 Marketing Management
Marketing strategies are developed to capitalize on marketplace opportunities and overcome marketplace problems. The key components of an overall marketing strategy are selection, positioning, product-service, pricing, distribution, and promotion. Students will create and implement marketing strategies in a variety of settings, using cases and projects to develop effective communication skills. Prerequisites: BSAD 231; 223 completed or concurrent. Three credits.

332 Marketing Research
The role of marketing research is to provide relevant, timely, valid information to reduce uncertainty in decision-making. This course examines the research process, including problem definition, data sources, research types, sampling, measurement, data collection and data analysis. Although the context is marketing, the research process examined is applicable to all areas of business research. Credit will be granted for only one of BSAD 332 or BSAD 391. Prerequisite: BSAD 231. Three credits.

333 Professional Sales: Building Relationships
This course addresses the nature of professional selling. The course covers changes in the traditional selling process; strategically planning sales within a larger account strategy; strengthening communications; and building partnerships. Prerequisite: BSAD 231. Three credits.

335 Consumer Behaviour
Marketers study consumer behaviour to understand and predict how and why products and services satisfy consumer’s needs. This course examines the internal and external influences on consumers’ purchase decision-making process including perception, motivation, attitude, culture, and reference groups in an interactive class setting. Students will complete exploratory consumer behaviour projects and will use theoretical concepts to create marketing solutions to cases. Prerequisite: BSAD 231. Three credits.

342 Financial Management II
Enhances students’ knowledge of the financial management topics covered in BSAD 241 through the application of financial decision-making techniques and theories to business cases. Topics include risk and capital budgeting, dividend policy, leasing, and bond refunding. Prerequisite: BSAD 241. Three credits.

344 Investment Management
Examines marketable securities as an investment medium, and the analytical techniques that may be employed in selecting a security and meeting an individual investor’s requirements. Credit will be granted for only one of BSAD 344 or BSAD 443. Prerequisite: BSAD 241. Three credits.

345 Personal Financial Management
This course draws on the principles of finance and applies them to decisions faced by individuals in the management of their personal finances. The course explores the planning process using readings, cases and problems. Prerequisite: BSAD 241. Three credits.

346 Financial Statement Analysis
This course provides participants with the tools to make informed managerial decisions regarding a company’s investments, financings, and operations. Techniques learned in this course will be used to understand the biases, limitations, and messages conveyed via the financial statements of a business. The course will examine issues such as revenue recognition, cash flow, profitability, and business valuation principles. Credit will be granted for only one of BSAD 346 or BSAD 498 (2013-2014). Prerequisites: BSAD 221, 241. Three credits.
348 Financial and Banking Institutions
This course aims at providing students with a general understanding of Canadian financial institutions like commercial banks, mutual funds, pension funds, insurance companies, brokerage firms, hedge funds, credit unions, savings institutions and their importance for efficient working of the financial markets. The structure of each financial institution and regulations like capital adequacy and deposit insurance pertaining to each institution is explored. Major risk associated with financial institution like interest rate risk, credit risk, off-balance sheet activities risk, liquidity risk, foreign exchange risk and other operational risks are also discussed. Emphasis is also laid on management of all these risks associated with different financial institution. Credit will be granted for only one of BSAD 348 or BSAD 496 (2014-2015, 2015-2016). Prerequisite: BSAD 241, 342, completed or concurrent. Three credits.

349 International Financial Management
This course focuses on financial management of the firm in the international marketplace. It provides grounding in the academic literature on international financial management, and develops professional decision-making skills. Students will read extensively and class discussions will include current issues and business cases. Credit will be granted for only one of BSAD 349 and BSAD 448. Prerequisite: BSAD 241. Three credits.

351 Business Law
Introduces the legal system in Canada and provides a practical examination of laws affecting Canadian businesses, including: forms of ownership; the management and composition of corporations; the powers and duties of the board of directors; contract law (sale of goods, employment, insurance, real estate); creditor-debtor rights including bankruptcy; and the initiation and conduct of civil court actions. Prerequisites: BSAD 241; third or fourth-year status. Three credits.

352 Social Entrepreneurship
The context, models, trends, opportunities, and challenges associated with social entrepreneurship focus on areas of public concern such as economic development, education, community welfare, and healthcare. These issues are examined using case studies, group projects, and experiential learning. Emphasis is on how entrepreneurship is combined with the tools of business to create effective responses to social needs and innovative solutions to social problems. Credit will be granted for only one of BSAD 352 or BSAD 457. Cross-listed as DEV 352. Prerequisite: BSAD 241. Three credits.

356 Entrepreneurship/New Venture Development
This course uses a new venture context to examine small business and entrepreneurship. Students will develop, operate, and wind down a campus-based business, building the knowledge and skills to launch a new venture successfully, and learning that both technical business knowledge and entrepreneurship are needed to deal effectively with uncertainty and change. Prerequisites: BSAD 221, third or fourth-year status. Three credits.

357 International Business
This course examines the theory and methods of engaging in business internationally. The course involves selected aspects of globalization, culture, international trade theory, political economy, foreign direct investment, regional economic integration, the global monetary system, global strategy and international operations. Prerequisites: BSAD 221, 223, 231, 241, 261. Three credits.

358 Business Ethics
An application of philosophical theory to a variety of current issues relevant to business. By examining the consequences of business decisions upon a wide range of stakeholders, students are provided with an overview of the many ways in which business interacts with society and the social and moral responsibilities that this interaction may generate. Prerequisite: BSAD 261 or permission of the instructor. Three credits.

361 Organizational Analysis
Introduces students to important organizational theories and organizational design principles. The course focuses on topics ranging from organizational strategy, structure and culture to organizational change. It also addresses the historical development of the modern business corporation and its changing role in society currently as an agent and vehicle of globalization. Classes feature lectures and discussions, student presentations, and case-based applications of the covered material. Prerequisite: BSAD 261. Three credits.

362 Career Dynamics
Introduces students to key concepts, theories, and principles of career management from the perspective of the individual and the organization. The course focuses on topics ranging from occupational choice, individual career patterns, and organizational career systems to career performance. The course provides students with conceptual knowledge which will be helpful not only for developing their own career strategies and tactics but also for making informed decisions as organizational leaders. Classes feature lectures, discussions, and workshops. Prerequisite: BSAD 261. Three credits.

363 Human Resource Management
A review of the many functions of human resource management, including but not limited to employee selection, development, appraisal and compensation, in addition to the broader social and legal context which influences the HR practice. This course makes a case for the strategic role that proper management of human resources plays in successful organizations while providing an important critique of the practice. Credit will be granted for only one of BSAD 363 or SMGT 322. Prerequisite: BSAD 261. Three credits.

367 Gender and Management
Reviews the recent growth of women managers in today’s organizational world. Students examine gender roles in organizations and identify some of the barriers women experience in reaching the top. The course explores the systemic discrimination facing women, and presents potential management models for women and men. Cross-listed as WMGS 367. Prerequisite: BSAD 261. Three credits.

381 Operations Management
This course takes an integrated, systems-oriented approach to the operations function of manufacturing and service organizations. Students will explore operations decision-making using the underlying disciplines: behavioural, quantitative, economic, and systems. Prerequisite: BSAD 281. Three credits.

382 Introduction to Enterprise Systems using SAP
This course introduces enterprise systems and its role in achieving effective business process integration (BPI). The course will discuss enterprise systems theory, the limitations of conventional information systems, and the challenges and business value of effective integration across departments along the supply chain. The SAP enterprise systems will be used to illustrate course concepts, with students receiving exposure to SAP navigation, modelling ontology and administration. Credit will be granted for only one of BSAD 382, INFO 245 or INFO 348. Prerequisite: BSAD 281. Three credits.

383 Mobile Commerce
This course focuses on concepts that will help business managers to take advantage of the evolving world of mobile commerce (m-commerce) and social media opportunities. The various concepts include e-business models, e-business technology infrastructure, building e-commerce mobile presence, social networks and mobile platforms for marketing and advertising, digital content and media, online retail mobile commerce from various industries, supply chain management and collaborative commerce, m-commerce security and payments, and ethical issues in m-commerce. Credit will be granted for only one of BSAD 383 or BSAD 415/INFO 446. Prerequisite: BSAD 281. Three credits.

384 Data Management and Analytics
Databases and database management systems (DBMS) provide the foundation for virtually all modern information systems. In this course, students develop an understanding of databases with a focus on relational database technology. Students learn to use the ‘language’ of relational databases, Structured Query Language (SQL), and how to design and implement databases. The course outlines how databases are designed to support both transaction processing and business intelligence applications. A major component of the course is a group project where student collaborate to conceive, design and build a computer-based application and database. Credit will be granted for only one of BSAD 384 or CSC/INFO 275. Prerequisite: BSAD 281. Three credits.

385 Management Reporting Using ABAP
This course will focus on how to use the ABAP development suite to better understand a system, create custom management reports, and develop drilldown reports. The course will assume no prior knowledge of programming and will focus on the key knowledge needed for systems analysts to effectively interact with systems developers. Credit will be granted for only one of BSAD 385 or INFO 346. Prerequisites: BSAD 382, 384 (completed or concurrent). Three credits.

386 Project Management and Practice
This course covers the factors necessary for successful management of system development or enhancement projects. Technical and behavioural aspects of project management are discussed. Credit will be granted for only one of BSAD 386 or BSAD 416/INFO 416. Prerequisites: BSAD 281, 286. Three credits.

387 Organizational Design Using SAP
Effective organizational design is critical to enhancing the performance and innovativeness of today’s complex and global companies. This skills-based course explores organizational design using SAP. Through a case study, students will use the SAP Human Capital Management module to develop the structure of an organization, with an emphasis on the design of departments, jobs, and positions,
and the application of key recruitment and qualification management processes. This course is open to students in all BBA streams. Prerequisites: BSAD 261, 281. Three credits.

391 Foundations of Management Research
An introduction to effective research in business and management. Topics include the scientific method in management research; approaches to issues in management; developing conceptual models and hypotheses; defining a thesis; conducting a literature search; evaluating research; and understanding the limitations of management research. Credit will be granted for only one of BSAD 391 or BSAD 332. Required for all honours students; open to other third- and fourth-year BBA students with an average of at least 70 as a BSAD elective. Three credits.

424 Financial Accounting Theory
A study of the development of accounting theory and the relationship of theory to practice. Major contributions to accounting theory will be examined. Prerequisite: BSAD 323. Three credits.

425 Auditing
An examination of audit strategy, procedures, and risk, as well as reporting standards and ethical and legal considerations in the current business environment. Emphasis is placed upon the theory of auditing in the context of the attest function. Prerequisite: BSAD 323. Three credits.

426 Advanced Accounting I
Develops an understanding of the financial reporting process by examining theory and practice in the management of financial disclosure. The course also deals with the accounting treatment of inter-corporate investments and consolidations. Prerequisite: BSAD 324. Three credits.

427 Management Control Systems
Focuses on managing organizational performance to optimize the implementation of organizational strategies. Within an established framework, this course reviews the process through which an organization manages performance, and specific techniques that are used to control the implementation of strategy. Concepts are reinforced via case analysis. Prerequisite: BSAD 321. Three credits. Not offered 2018-2019.

428 Advanced Accounting II
Examines such accounting topics as the financial reporting of international activities, non-business organizations, and estates and trusts. The reporting requirements for interim and segmented financial statements and bankruptcy and receivership are examined. Prerequisite: BSAD 426. Three credits.

431 Services Marketing
This course augments other marketing electives by focussing on (intangible) services. Services now account for more than 78% of Canada’s GDP and most graduates will work in a service firm. Unlike products, most services are intangible, time constrained, co-produced by the provider and the customer, perishable and highly variable. These characteristics pose unique challenges to services as diverse as insurance, investment advice, banking, entertainment, tourism and hospitality, healthcare, consulting, transportation and education. Course methods are highly experiential and include presentations, exercises, cases and journals. Prerequisites: BSAD 331, 335. Three credits. Not offered 2018-2019.

432 Retailing
Focuses on improving the management of retail institutions in Canada using a marketing orientation. Areas of retail strategy include the retail environment, store location, product mix control, channel effort, store layout and financial management. Exercises, cases and projects will be used to develop analytic proficiency and emphasize evidence-based solutions. Prerequisites: BSAD 331, 335. Three credits.

433 International Marketing
This course will focus on understanding the application of marketing principles across national borders. Topics to be covered in this course are principles and theories of marketing in International context; segmentation and targeting approaches for International markets, new product development for multiple foreign markets, International pricing, promotional and distribution strategies. Prerequisite: BSAD 337 or 331. Three credits.

434 Integrated Marketing Communications
Focuses on the design and implementation of integrated marketing communication strategies. Advertising and sales promotion activities are emphasized. Topics include defining the roles and objectives of marketing communications; selecting media; creating advertisements; and evaluating results. Prerequisites: BSAD 331, 335. Three credits.

435 Sales Force Management
An introductory course in sales force management. Topics include organizing the sales effort; establishing territories and quotas; hiring, training, compensating and supervising sales people; analyzing and evaluating the sales effort; and the ethical responsibilities associated with a sales career. Prerequisite: BSAD 333. Three credits.

436 Brand Management
This course is designed to teach students about brand strategy and brand management. It will cover the brand strategy development process and help students to understand the possible ways to position or reposition a brand. It will address ways that a brand can be integrated across all consumer touch points. It will also cover key brand management concepts such as brand health tracking, the role of the brand manager and the unique considerations in corporate and product brand marketing. Credit will be granted for only one of BSAD 436 and BSAD 498 offered from 2016-2018. Prerequisites: BSAD 331, 335. Three credits.

437 Digital Marketing
Focuses on aligning and executing a digital marketing strategy sensitive to the ways in which consumers interact with their brands and make purchasing decisions today’s hyper-connected media environment. By embracing the changing digital marketing landscape, students will learn to shape a digital strategy that allows insights come to life in the right channel, for the right consumer, at the right time. Prerequisite: BSAD 331. Three credits.

439 Customer Relationship Management and Loyalty Marketing
Customer relationships are the fundamental element of today’s competitive strategy that is central to marketing activities. This course adopts both a consumer and manager perspective on the strategic implications of customer relationships. This course utilizes a mix of lectures, readings, cases, and projects to explore relationship marketing theory and practices. This course will provide students with the opportunity to discern and understand the role of customer relationships as a core component of marketing strategy and consumer experiences. Prerequisites: BSAD 331, 335. Three credits.

444 Advanced Financial Management
Considers a broad range of financial management issues using the theory and procedural skills developed in earlier courses and applied to comprehensive case situations. Topics include working capital management, capital structure, dividend policy, cost of capital, capital budgeting, and mergers and acquisitions. Prerequisites: BSAD 342, 344. Three credits.

445 Derivatives
This comprehensive course in derivative markets and instruments focuses on analyzing standard derivative instruments such as forwards, futures, swaps, and options. By the end of the course, students will have a good knowledge of how these products work, how they are used, how they are priced, and how financial institutions hedge their risks when they trade the products. Additionally, they will better understand the social and economic consequences of derivatives, and their implications for the larger investment community. Prerequisite: BSAD 344. Three credits.

449 Portfolio Management
This course provides an exploration of the theory and practice of portfolio management. Students will learn tools for managing risk, allocating funds among asset classes, and measuring the success of managers. Students will also learn how market factors, at both the macro and micro level, impact portfolio performance. By the end of the course, participants will be able to construct an investment portfolio based on a solid understanding of investment principles and be able to use available financial market information to assess its on-going performance. Prerequisite: BSAD 344. Three credits.

451 Cases in International Business
This course enables students to explore topics addressed in the introductory course BSAD 357 in more detail and requires students to apply the knowledge in a cross-functional manner for decision-making and problem solving. Students are required to systematically work in teams and analyze cross-functional problems from an international business perspective. Course methods: cases; simulations; exercises. Prerequisite: BSAD 357. Three credits.

452 Comparative International Strategy
The course examines topics in international management such as varieties of markets; importing and exporting; licensing and franchising; turnkey operations; strategic alliances and joint ventures; multiregional and global business strategies. The course also includes a comparative analysis of different market systems and national business cultures. Course methods may include lectures, guest speakers, cases, presentations and traditional examinations. Prerequisites: BSAD 357, 471 completed or concurrent. Three credits.

453 Entrepreneurial Finance
Entrepreneurial finance is designed for students who aspire to start or expand an
entrepreneurial or small firm as well as others who anticipate working with the Small and Medium Sized Enterprise (SME) sector such as lenders, investors, accountants or suppliers. In combining theory and practice students will gain knowledge and utilize tools in identifying appropriate financing sources, strategies and skills in analysis and forecasting that are distinct from those drawn upon by large established companies in the corporate sector. Prerequisite: BSAD 356 or 342. Three credits.

454 Taxation
Examines the Canadian tax system with emphasis on the Income Tax Act and its effect on business decisions. The course examines the determination of income for corporations and individuals, the taxation of corporate distributions, and the computation of tax. Prerequisite: BSAD 241. Three credits.

456 Small Business Management
This course examines the unique aspects of managing a small firm, its growth and its harvest. The course incorporates current theory and practice in dealing with a variety of general management topics, and students will gain practical decision-making experience in small business management issues. Prerequisite: BSAD 356. Three credits.

461 Leadership
A theoretical and a practical exploration of leadership. Using a range of materials and individual examples, students will develop an understanding of the leadership role in organizations and the behaviours of exemplary leaders. Experiential learning techniques will allow students to perform, observe and reflect upon leadership to gain a better sense of themselves as a leader. Prerequisite: BSAD 361. Three credits.

462 Employee and Labour Relations
This course examines the history, current structure, and future of industrial relations in Canada, including trade unions and management, collective bargaining, and contract administration, plus topics in workplace health and safety and more. Students will benefit from guest lectures and from engaging in negotiation-simulation exercises. Prerequisite: BSAD 363. Three credits.

466 Lessons in Leadership from Film & Literature
This course extends students’ knowledge of leadership theory to analyze case studies in leadership. Cases are drawn largely from film, both fiction and non-fiction, and lessons are applied to a modern business context. Prerequisite: BSAD 361; 461 recommended. Three credits. Not offered 2018-2019.

467 Leading Change: The Challenge of Creating and Sustaining Organizational Change
A major challenge facing all organizations is how to adapt to change. Pressures for change come from many areas, including social, technological, demographic, environmental, and political. This course explores the challenge of leading and sustaining organizational change, including starting a change process, the challenges leaders face when initiating change, and sustaining change. Prerequisite: BSAD 361. Three credits.

471 Strategic Management
This is the capstone course in business and is required of all students. The course takes a strategic approach to integrating concepts from management, marketing, accounting, finance and information systems. From the perspective of senior executives, students study strategy and mission statements, analyze internal and external environments, and the formulation, implementation and monitoring of business and corporate strategy in order to achieve sustainable competitive advantage. Course methods may include lectures, guest speakers, cases, presentations, simulations and traditional examinations. Prerequisites: BSAD 241; fourth-year standing. Three credits.

472 Environmental Sustainability for Organizations
This course explores the relationship between organizations and the natural environment, how organizations can be both negative and positive actors, both causing environmental degradation and driving sustainability, and how corporations and other types of organizations (NGOs etc) respond to issues of climate change and environmental degradation. Managing change effectively is essential to the long-term survival of an organization, and smart organizations adapt to changing demands and responsibilities. Case studies draw from different sectors and different organizational types. Cross-listed as CLEN 302. Prerequisite: BSAD 358 or permission of the instructor. Three credits.

473 Advanced Topics in Responsible Management
This course introduces students to advanced topics in corporate social responsibility, providing students with deeper insights into management’s responsibilities to various stakeholders. Responsible management involves a triple-bottom line approach to business decision-making, which is realized through the organizational culture (e.g. employee selection; training; codes; leadership), operations (e.g. sustainability; outreach; reporting systems; performance measurement) and oversight/governance (e.g. Boards; ethics officers; regulators). Classes feature lectures and discussions, analyses of corporate reporting, media analysis, and a team project. Prerequisite: BSAD 358. Three credits.

474 International Human Resource Management
Students will explore the challenges of managing human resources in an increasingly international business context. The course covers a range of topics relevant for HRM practitioners including the role of culture, international business strategies and IHRM models, international recruitment, expatriation and repatriation, international compensation, and performance management. A comparative approach to selected topics like employment governance and industrial relations is included. Key international employment regulators and regulatory frameworks are also covered. Methods: lectures, cases, presentations. Prerequisites: BSAD 363 or 357. Three credits.

482 Business Intelligence and Analytics
Organizations must sense and respond to changes internally and externally. Therefore, modern organizations implement business intelligence (BI) and analytics systems that support analysis and decision making. Through case studies and hands-on labs and assignments, this course helps students understand the value of information to managers and provides an overview of how BI systems are designed and deployed. Topics covered include information-driven decision making, BI system architecture, BI tools and BI development methodology. Prerequisites: BSAD 382, 384. Three credits.

483 Systems Analysis and Design
This course introduces systems analysis as an IT discipline and describes the role of the systems analyst in the development of enterprise systems. The course introduces system development methodologies and key systems analysis and design tools and techniques, including requirements discovery methods and data and process modelling. Credit will be granted for only one of BSAD 483 or INFO 415. Prerequisites: BSAD 384, 385. Three credits.

484 SAP Implementation
This course provides a practical understanding of ERP configuration with reference to SAP. The course familiarizes students with SAP implementation methodologies and tools. Students will learn to configure the financial and materials management functionality enabling a company to do basic procurement, inventory management, and financial accounting activities. The implementation will be expanded to enable the capturing of costs (controlling) and manufacturing (production) functionality. Credit will be granted for only one of BSAD 484 or INFO 448. Prerequisite: BSAD 382. Three credits.

485 Enterprise Systems Strategy
This course provides a strategic perspective on how organizations can effectively deploy information technology (IT) with a specific focus on enterprise systems. IT is a strategic resource that is expensive, risky to implement and changes rapidly. As such, extracting value from IT requires that an organization have the right human resources, develops effective and adaptive strategic plans, and employs a robust implementation process. Credit will be granted for only one of BSAD 485 and BSAD 419 completed beginning in 2016-2017. Prerequisites: BSAD 382; 471 (completed or concurrent). Three credits.

492 Consulting Project for Advanced Majors
Exposes students to applied research in business through completion of a consulting assignment. Required for and restricted to all advanced majors in entrepreneurship, enterprise systems, international business, management and leadership, and marketing. Three credits over the full academic year.

494 Honours Thesis
Under the supervision of a faculty member, honours students will prepare and submit a thesis. Normally students develop and present draft proposals as part of BSAD 391, then complete the proposal, conduct the fieldwork and present/defend their theses as part of BSAD 494. Prerequisite: BSAD 391. Three credits over the full year.

495 Selected Topics
The topic for 2018-2019 is Visual Communications. We live in a visual world. Effective communications include economy of language and powerful visuals, including impact graphics to effectively convey key information. As information overload increasingly becomes a challenge for professionals, the ability to clearly and powerfully convey information, in the simplest terms, is becoming a key success factor. Students in this class will gain strategies for organizing complex information in simple terms and learn approaches for visually presenting information in common business contexts. Prerequisites: BSAD 331, 335. Three credits.
BBA with Minor in Sport Management
New for 2018-2019, students may earn an arts minor in sport management, consisting of 24 credits of students’ arts/science and open electives. Course requirements and the normal course progression are as follows:

Year 1  SMGT 101
Year 2  HKIN 264, 352
Year 3  SMGT 322, 327; 3 credits SMGT designated courses
Year 4  SMGT 423; 3 credits SMGT designated courses

101 Introduction to Sport Management
An introduction to sports management. Primary focus is on sport industry, including professional sport entertainment, amateur, for-profit & nonprofit sport participation, sporting goods, and sport services. Students will examine applications of managerial concepts and processes, and look at the ways in which sport organizations interact with each other, and with corporations, the government and non-governmental organizations. Micro aspects of management applied to sport, including human resources, sport marketing, sponsorship, finance, event management, and sport law. Credit will be granted for only one of SMGT 101 and HKIN 241. Restricted to students in BBA and HKIN. May be used as a minor in sport management or an elective in BBA or HKIN. Three credits.

322 Human Resource Management in Sport Organizations
This course covers the theory and practice of building, developing and optimizing a competitive workforce within the context of sport organizations, teaching students the personnel related knowledge leveraged in the management and leadership of such organizations. Credit will be granted for only one of SMGT 322 and BSAD 363. Restricted to students in the sport management minor program. Prerequisite: SMGT 101. Three credits. Not offered 2018-2019.

327 Sport Management Ethics and Law
This course investigates moral issues in sport and judgments about right and wrong behavior amongst all stakeholders in sport. Examination of ethical theories, principles and applications, with case study analyses, and personal and professional ethical issues in sport management. Focus on the three major areas of the law that have a direct impact on the management of sport: tort liability and risk management; contract law, employment law, and constitutional law. Restricted to students in the sport management minor program. Prerequisite: SMGT 101. Three credits. Not offered 2018-2019.

423 Sports Marketing and Event Management
This course introduces the concepts, theories, and marketing strategies utilized in the context of the sport industry. Topics include, but are limited to the marketing planning process, components of the marketing mix, branding, event planning, operational logistics, media marketing and sponsorship. Restricted to students in the sport management minor program. Prerequisites: BSAD 101; SMGT 101. Three credits. Not offered 2018-2019.

Sport Management Designated Courses for BBA
Departmental prerequisites will apply.

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<tr>
<th>Economics</th>
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<tr>
<td>ECON 291</td>
<td>Economics of Leisure, Recreation and Sports</td>
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<tr>
<th>Human Kinetics</th>
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<th>Sociology</th>
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<td>SOCI 387</td>
<td>Hockey and Canadian Culture</td>
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9.7 CATHOLIC STUDIES

G. Lalande, Ph.D., Co-ordinator

Advising Faculty

<table>
<thead>
<tr>
<th>Department</th>
<th>Name</th>
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<tbody>
<tr>
<td>Philosophy</td>
<td>S. Baldner, Ph.D.</td>
</tr>
<tr>
<td>Chemistry</td>
<td>J. Cormier, Ph.D.</td>
</tr>
<tr>
<td>Art</td>
<td>S. Gregory, Ph.D.</td>
</tr>
<tr>
<td>Philosophy</td>
<td>L. Groarke, Ph.D.</td>
</tr>
<tr>
<td>English</td>
<td>J. Khoury, Ph.D.</td>
</tr>
<tr>
<td>Human Kinetics</td>
<td>A. Kolen, Ph.D.</td>
</tr>
<tr>
<td>Business Administration</td>
<td>K. MacAulay, MA</td>
</tr>
<tr>
<td>History</td>
<td>B. Murphy, Ph.D.</td>
</tr>
<tr>
<td>Earth Sciences</td>
<td>M. Satri, MA</td>
</tr>
<tr>
<td>Philosophy</td>
<td>S. Stewart, Ph.D.</td>
</tr>
<tr>
<td>English</td>
<td>W. Sweet, Ph.D., D.Ph.</td>
</tr>
</tbody>
</table>

Catholicism stands essentially for a universal order in which every truth of the natural or social order can find a place.

- Christopher Dawson

Catholic studies is an interdisciplinary program in the history, artistic culture, theology, literature, philosophy, and institutions associated with Roman Catholicism.

Students who major in Catholic studies must take CATH 101 and 102; 18 additional credits from the following core courses in Catholic studies; and 12 credits from the designated courses listed below.

101 The Catholic Story
An introduction to Catholic studies, the course focuses on a survey of major developments in the history of the Catholic Church: Early Christianity, the Papacy, Ecumenical Councils, Mission, Internal Reforms, Reformation and Counter-Reformation, the Enlightenment, World Wars, and the Catholic Church today. Intertwined in this chronology are several themes: Freedom, Faith and Reason, Concepts of History, Sacraments, Spirituality, and Faith. Credit will be granted for only one of CATH 101 or CATH 100. Three credits.

102 The Catholic Imagination
Through a study of key texts of the Catholic intellectual tradition, students will investigate and examine themes such as: persecution, martyrdom, sin, moral life, death, faith, and divine love. Texts used will draw from different historical periods, a range of genres (autobiography, drama, poetry, fiction and non-fiction prose), and various types of authors (male, female, saints, mystics, religious, and secular). Credit will be granted for only one of CATH 102 or CATH 100. Three credits.

241 Sin and Salvation
This course will study the themes of sin and salvation as they appear in the Bible, in literature, and in two great theological controversies, the Pelagian controversy of the 5th century, and the Protestant Reformation of the 16th century. Three credits.

245 Christ in the Catholic Tradition
This course will examine the person, nature, and work of Christ as these are understood in the Catholic tradition. Topics and texts will include: the Bible, theological works from different historical periods, literary presentations of Christ, and artistic depictions of Christ. Three credits.

251 The End of the World
The purpose of this course is to give students an interdisciplinary understanding of eschatology, which is the study of theological and religious views about ‘last things’ (death, heaven, purgatory, hell). This topic will be presented from three points of view: historical sources, including scripture; doctrinal issues; artistic depictions. Three credits.

297 Selected Topics
The topic for 2018-2019 is Angels & Demons. This course will trace the evolution of the Catholic doctrine of angels, or ‘angellology.’ As a parallel to angellogy, we will also study the nature and role of demons in Catholicism. By the end of the course, we will examine what the contemporary Church teaches about the role of angels in everyday life, about demons, and exorcism. Consideration of the testimony of other faiths – particularly Judaism and Islam – will also help us to cultivate a complete understanding of angels in Catholicism. Three credits.

298 Selected Topics
The topic for 2018-2019 is Souls, Sins, and Sorrows: Catholicism in Canada Past and Present. This course will explore the history of the Catholic Church in Canada, from its early origins as a missionary force during the ancient régime in the 17th and 18 centuries, to its role in an increasingly secular contemporary society in 2018. Three credits.
299  **Selected Topics**  
The topic for 2018-2019 is Dante’s *Inferno*. This course will examine Dante’s *Inferno*, one of the most celebrated depictions of Hell in the western literary canon. By way of a complete reading of the poem (and selections of related works, such as Purgatory), the course will introduce students to the philosophical, historical, political, and literary themes underlying this great work. No previous background in Dante is required, and all works will be read in English translation. Three credits.

322  **Contemporary Issues in Christianity & Science**  
This course examines the contemporary interaction between the sciences and Christianity. Topics may include: recent Christian responses to methodologies in the sciences; evolutionary theory and the interpretation of creation narratives in the book of Genesis; the meaning of human embodiment and its relevance to understanding sexuality and issues in bioethics; neuroscience and the phenomenon of religious experience; the impact of contemporary cosmology, technology, and biology on Christian theology. Credit will be granted for only one of CATH 322 or CATH 320. Three credits.

331  **Catholicism and the Arts I**  
This course will trace Catholic themes and ideas about Catholicism in literary, musical, architectural, or artistic works from the beginnings of Christianity to the early Renaissance. Cross-listed as ART 331. Credit will be granted for only one of CATH 331 or CATH 330. Three credits.

332  **Catholicism and the Arts II**  
This course will trace Catholic themes and ideas about Catholicism in literary, musical, architectural, or artistic works from the Renaissance until the contemporary era. Credit will be granted for only one of CATH 332 or CATH 330. Cross-listed as ART 332. Three credits.

341  **Catholic Social Thought**  
Rooted in scripture, philosophy, and theology, Catholic social thought proposes principles of justice that emphasize the dignity of the person, the value of economic and political institutions, and the importance of a common good. This course explores these principles and their application to contemporary social, political, and economic issues with reference to official documents of the Catholic Church. Three credits.

398  **Selected Topics**  
Three credits.

**CATHOLIC STUDIES DESIGNATED COURSES**

The following courses may be chosen as designated courses to complete the program in Catholic studies. Normally a student will take no more than 9 credits from any one of these subject areas. Should a student take CATH 331 and 332, only 6 further credits may be taken from the art electives.

### Art

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ART 251</td>
<td>Medieval Art</td>
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<tr>
<td>ART 252</td>
<td>Baroque Art</td>
</tr>
<tr>
<td>ART 371</td>
<td>Italian Renaissance Art I</td>
</tr>
<tr>
<td>ART 372</td>
<td>Northern Renaissance Art</td>
</tr>
<tr>
<td>ART 373</td>
<td>Italian Renaissance Art II</td>
</tr>
<tr>
<td>ART 435</td>
<td>Seminar in Italian Renaissance Art</td>
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### Celtic Studies

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<tr>
<th>Course</th>
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<tr>
<td>CELT 230</td>
<td>Celtic Christianity</td>
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### English

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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>ENGL 207</td>
<td>World Masterpieces II: Medieval and Renaissance</td>
</tr>
<tr>
<td>ENGL 388</td>
<td>Heroic Literature of the Middle Ages</td>
</tr>
<tr>
<td>ENGL 399</td>
<td>Chaucer’s Contemporaries</td>
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### French

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<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>FREN 318</td>
<td>Classical French Theatre</td>
</tr>
<tr>
<td>FREN 319</td>
<td>Literary Works of the grand siècle (Les Moralistes)</td>
</tr>
<tr>
<td>FREN 410</td>
<td>Medieval French Literature</td>
</tr>
<tr>
<td>FREN 415</td>
<td>Renaissance French Literature</td>
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### History

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<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>HIST 363</td>
<td>Reformation Europe</td>
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### Music

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<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>MUSI 315</td>
<td>History of Music I</td>
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</table>

### Philosophy

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<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PHIL 245</td>
<td>Philosophy of Religion</td>
</tr>
<tr>
<td>PHIL 361</td>
<td>Early Medieval Philosophy</td>
</tr>
<tr>
<td>PHIL 362</td>
<td>Philosophy in the High Middle Ages</td>
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### Sociology

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<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>SOCI 322</td>
<td>The Antigonish Movement as Change &amp; Development</td>
</tr>
</tbody>
</table>

9.8 **CELTIC STUDIES**

R. de Vries, Ph.D.  
M. Linkletter, Ph.D.

Professor Emerita  
Sr. M. MacDonell, Ph.D.

Celtic studies encompasses a wide range of history, geography, and culture: from the ancient Celts of continental Europe to the modern Celtic peoples of Scotland, Ireland, Wales, Cornwall, Brittany, and the Isle of Man. The program focuses on the Gaelic language, history, and culture of Scotland, Nova Scotia, and Ireland.

Interest in Celtic studies has grown in recent years. Some graduates have pursued advanced degrees in Celtic or related fields. Others have found employment in the region involving Gaelic.

Students may count courses in Celtic history (Celt 131, 132, 321, 331, 332) as courses in the Department of History. Students may count SOCI 373 as a credit in Celtic studies.

**Major Program**

See chapter 4.

**Honours Program**  
Honours candidates are required to complete: CELT 100; 131 and 132, or 327 and 328; 100 or 300; 480 (thesis); 33 credits CELT.

**Master of Arts**  
The Master of Arts degree may be offered in Celtic studies. See chapter 8.

100 **Scottish Gaelic Language and Culture**  
An introduction to the Gaelic language and culture of Scotland and Nova Scotia. Students will learn the basics of spoken and written Gaelic as well as aspects of Gaelic culture rooted in the language. Six credits.

131 **Celtic Civilizations I**  
This course will provide an introduction to the Celtic peoples from the earliest times to the Middle Ages. Topics will include history, language, art, literature, mythology and early Celtic Christianity. Acceptable as a course in history. Three credits. Offered 2018-2019.

132 **Celtic Civilizations II**  
This course covers the Celtic cultures of Scotland, Ireland, Wales, Brittany, Isle of Man and Cornwall from the medieval to modern period. Topics will include history, language, music, folklore, and literature. Acceptable as a course in history. Three credits. Offered 2018-2019.

200 **Second-Year Scottish Gaelic**  
Includes selected readings of riddles, proverbs, poetry, and folktales as well as conversation and composition. Prerequisite: CELT 100 or permission of the instructor. Successful completion of high school Gaelic may be considered as a prerequisite for CELT 200, consult the department chair. Six credits. Offered 2018-2019.

219 **Celtic Music**  

220 **Celtic Paganism**  
This course examines the religious practices and beliefs of the ancient Celtic peoples that we can glean from archaeology, reports of Greek and Roman commentators, place-name evidence, and the mythology in medieval Irish and Welsh narrative tradition. Other topics include syncretism, the adaptation of pagan festivals into Christian holidays, the persistence of elements of paganism into the Christian era, witchcraft in Scotland and Ireland in the context of the European phenomenon of witchcraft. Celtic studies encompasses a wide range of history, geography, and culture: from the ancient Celts of continental Europe to the modern Celtic peoples of Scotland, Ireland, Wales, Cornwall, Brittany, and the Isle of Man. The program focuses on the Gaelic language, history, and culture of Scotland, Nova Scotia, and Ireland.

Interest in Celtic studies has grown in recent years. Some graduates have pursued advanced degrees in Celtic or related fields. Others have found employment in the region involving Gaelic.

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**Major Program**

See chapter 4.

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219 **Celtic Music**  

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This course examines the religious practices and beliefs of the ancient Celtic peoples that we can glean from archaeology, reports of Greek and Roman commentators, place-name evidence, and the mythology in medieval Irish and Welsh narrative tradition. Other topics include syncretism, the adaptation of pagan festivals into Christian holidays, the persistence of elements of paganism into the Christian era, witchcraft in Scotland and Ireland in the context of the European phenomenon of witchcraft.

### Celtic Christianity

This course is an exploration of the development of Christianity amongst the Celtic peoples. A major facet will be the medieval hagiographic tradition and saints' cults from the fourth to the twelfth centuries. Other topics include monasticism, peregrini, the Hiberno-Scottish mission to the continent, conflict with Roman Catholicism, material culture, the modern use of the term "Celtic Christianity." Cross-listed as RELS 229. Three credits. Not offered 2018-2019.

### Third-Year Scottish Gaelic

An advanced-level course with emphasis on attaining fluency. The course will concentrate on the Gaelic of Nova Scotia with readings from local publications. The class will also work on transcribing recordings of local speakers. Prerequisites: CELT 100, 200. Six credits. Offered 2018-2019.

### Celtic Art

Weave your way through Celtic knots and "horror vacui" “fear of empty space," and discover the art of the Celts. From the Batterssea Shield to the Book of Kells, we will trace our way through the extraordinary legacy of weaponry, jeweller, illuminated manuscripts, and Sheela-na-Gigs to arrive at a deeper understanding of the people who made them. Acceptable as a course in history. Cross-listed as ANTH 321 and ART 321. Three credits. Not offered 2018-2019.

### The Celts in Popular Culture

Shamrocks, banshees, leprechauns, fairies, magic, and white robed druids cutting mistletoe by moonlight. These are only some of the popular images associated with the Celtic peoples. Through a selection of media (including film, television, and novels) this course will explore the complexities of identity and the popular perception of Celtic culture, broadly defined. Among other topics, students will examine the pervasive association between Celtic culture and the supernatural. Credit will be granted for only one of CELT 325 and CELT 361 (2013-2014). Three credits. Offered 2018-2019.

### Celtic Kings, Heroes and Monsters-Medieval Wales

From hot-headed heroes to terrifying monsters and death-tales, this course will examine topics and texts from medieval Welsh literary tradition in detail. Credit will be granted for only one of CELT 327 and CELT 221. Cross-listed as ENGL 327. Three credits. Offered 2018-2019.

### Celtic Kings, Heroes and Monsters-Medieval Ireland

From hot-headed heroes to terrifying monsters and death-tales, this course will examine topics and texts from medieval Irish literary tradition in detail. Credit will be granted for only one of CELT 327 and CELT 222. Cross-listed as ENGL 328. Three credits. Offered 2018-2019.

### Scottish History

This course is an exploration of the development of Christianity amongst the Celtic peoples. A major facet will be the medieval hagiographic tradition and saints' cults from the fourth to the twelfth centuries. Other topics include monasticism, peregrini, the Hiberno-Scottish mission to the continent, conflict with Roman Catholicism, material culture, the modern use of the term "Celtic Christianity." Cross-listed as RELS 229. Three credits. Not offered 2018-2019.

### Irish Folklore

Studies in the oral traditions of Gaelic Ireland including the folktale, the storyteller, folklore collectors, folksong tradition, fairies and calendar customs. Credit will be granted for only one of CELT 351 or CELT 350. Three credits. Not offered 2018-2019.

### Folklore of Scotland and Nova Scotia

An introduction to the Gaelic folklore of Scotland and Nova Scotia, with an emphasis on wonder tales, clan sagas, Fenian tales, calendar customs, rites of passage, the supernatural and the history of folkloristics. Credit will be granted for only one of CELT 352 or CELT 350. Three credits. Not offered 2018-2019.

### Honours Thesis

Consult the department chair for a list of available courses.

### 9.9 Chemistry

Chemistry deals with matter at the molecular and atomic levels, seeking to explain structures, properties, and reactions, and to develop syntheses of new substances and new uses for known substances. The study of chemistry prepares graduates for advanced work in biology, engineering, geology, medicine, and other professions; for careers in industry, government agencies, science journalism, and teaching. StFX chemistry graduates can be found carrying out tasks as varied as art conservation, pharmaceutical research, and industrial product development.

Faculty members are actively engaged in pure and applied chemistry research, and opportunities exist for students to participate. Chemistry laboratories are equipped with a wide range of modern instrumentation, including spectroscopic equipment chromatographic analyzers; and instrumentation to carry out calorimetry, capillary electrophoresis, differential thermal analysis, polarography, and thermogravimetric analysis. Junior and senior courses involve frequent practical experience with this equipment.

The department offers honours, advanced major and major programs at the B.Sc. level. Joint honours and advanced major programs are offered in conjunction with other science departments and business administration. General requirements are given in chapter 7.

### Department Requirements

Students must choose their courses in consultation with the department chair; programs and required courses are listed below. Students considering an advanced major or honours degree must complete the physics and second mathematics requirements (see below) by the end of their second year and take CHEM 220, 245, 265 in their second year. Potential honours students should also take CHEM 231, 232 in their second year. All chemistry students are required to take CHEM 325 in the first term of their junior year. For the recommended course sequence, see the department’s website at sites.stfx.ca/chemistry.

Chemistry students are required to attend all department seminars during their third and fourth years. Credit for a course may not be earned if the lab component is not reasonably completed. Students who are concerned that their health may be adversely affected by a lab should consult the professor or department chair. As well, students who are subject to a medical condition, e.g., frequent fainting,
Chemistry

Major

The course pattern for major in chemistry is:

CHEM 6 credits introductory (100 or 120); 3 credits analytical (265); 3 credits inorganic (245); 6 credits organic (220); 3 credits physical (231); 3 credits structural (325); 6 credits electives from 255, 321, 322, 331, 332, 341, 342, 355, 361, 362, 421, 422; 6 credits CHEM (or other science with permission of the department chair); for a total of 36 credits; plus 391, 491 (department seminars); if 331 is taken then CHEM 232 is also required.

Science B 12 credits in another science
Science C 6 credits in another science (science B or C must be MATH and include MATH 106 or 126, 112 or 121 and 122)
Arts X 12 credits in a humanities or social science discipline
Arts Y 6 credits in a humanities or social science discipline

Approved Elect 18 credits approved electives; unless it is taken as a science B or C course, these electives must include PHYS 121, 122. The balance must come from science, MATH, or CSCI courses or PHIL 213

Open Elect 30 credits

Advanced Major

The course pattern for advanced major in chemistry is:

CHEM 6 credits introductory (100 or 120); 9 credits analytical (265, 361, 362); 6 credits inorganic (245, 341); 6 credits organic (220); 6 credits physical (231, 232); 3 credits biochemistry (255); 6 credits electives from 331, 332, 342, 421, 422; for a total of 42 credits; plus 391 and 491

Science B 12 credits in another science
Science C 6 credits in another science (science B or C must be MATH and include MATH 106 or 126, 112 or 121 and 122)
Arts X 12 credits in a humanities or social science discipline
Arts Y 6 credits in a humanities or social science discipline

Approved Elect 18 credits approved electives; unless it is taken as a science B or C course, these electives must include CHEM 325 (structural), PHYS 121, 122, and 6 credits must be from MATH 253, 254, 267, 367 (or 221). The balance must come from science, MATH, or CSCI courses or PHIL 213

Open Elect 24 credits

Honours

The course pattern for honours in chemistry is:

CHEM 6 credits introductory (100 or 120); 9 credits analytical (265, 361, 362); 9 credits inorganic (245, 341, 342); 12 credits organic (220, 241, 422); 12 credits physical (231, 232, 331, 332); 3 credits biochemistry (255); 3 credits honours thesis (493); 6 credits electives (may be in another science with permission of the department chair); for a total of 60 credits; plus 391 and 491

Science B 12 credits in another science
Science C 6 credits in another science (science B or C must be MATH and include MATH 106 or 126, 112 or 121 and 122)
Arts X 12 credits in a humanities or social science discipline
Arts Y 6 credits in a humanities or social science discipline

Approved Elect 18 credits approved electives; unless it is taken as a science B or C course, these electives must include CHEM 325 (structural), PHYS 121, 122, and 6 credits must be from MATH 253, 254, 267, 367 (or 221). The balance must come from science, MATH, or CSCI courses or PHIL 213

Open Elect 24 credits

The honours and advanced major degrees are accredited by the Canadian Society for Chemistry.

B.Sc. with Joint Honours and B.Sc. with Joint Advanced Major Degrees

Joint honours and joint advanced major degree programs are available between chemistry and each of the following: biology, computer science, earth sciences, mathematics, physics, and business administration (advanced major only). Please note that a joint program may take more than four years to complete, and, where applicable, the physcis and second six credits of mathematics must be completed by the end of the sophomore year. Interested students should consult the chair of the chemistry department.

Chemistry and Environmental Sciences

See section 9.19

Master of Science

Research fields available include various aspects of analytical, environmental, inorganic, organic and physical chemistry. General requirements for graduate degrees are outlined in chapter 8. For specific requirements, consult the chemistry faculty or department chair.

Note: All 200-level and higher chemistry courses require CHEM 100 or 120 as a prerequisite.

100 General Chemistry

The fundamental principles of chemistry, including atomic and molecular structure, bonding, elementary thermo-chemistry and thermodynamics, oxidation-reduction reactions, kinetics and equilibrium reactions with particular reference to the behaviour of solutions, and an introduction to organic chemistry. This course emphasizes the application of chemical principles in areas of interest to students in the life sciences. Credit will be granted for only one of CHEM 100 or CHEM 120. Six credits and lab.

120 Principles of Chemistry

Reaction types and stoichiometry; applications of equilibria; principles of chemical thermodynamics; electrochemistry; atomic structure and models of chemical bonding; chemical kinetics; properties of gases, liquids, solids, and solutions; chemistry of the representative elements; introduction to organic chemistry. The applications are in areas of interest to students contemplating further studies in chemistry, engineering, mathematics, and the physical sciences. Credit will be granted for only one of CHEM 120 or CHEM 100. Six credits and lab.

151 Fundamentals of General Organic, Biological Chemistry

Topics include basic concepts of general chemistry; introduction to organic nomenclature and the reactivities of functional groups; coverage of the fundamentals of biological chemistry. May not be used as a prerequisite for any other chemistry course. Open to students in nursing, human kinetics, and arts; may not be taken for credit by other science students. Restricted enrolment. Three credits and lab.

220 Organic Chemistry

Areas of study include: the properties and reactions of common classes of organic compounds; relationships between the structures of organic compounds and their physical and chemical properties; relationships between these properties and their technological uses and biological activities; reaction mechanisms; spectroscopic techniques with emphasis on nuclear magnetic resonance; and stereochemistry. Credit will be granted for only one of CHEM 220, 221, 222, 225. Prerequisite: CHEM 100 or 120. Six credits and lab.

222 Organic Chemistry II

The second term of CHEM 220; topics include aromatics, reaction mechanisms and spectroscopy. Prerequisite: CHEM 221. Three credits and lab.

225 Principles of Organic Chemistry

An introduction to organic chemistry. The course focuses on the properties and reactions of common classes of organic compounds; the relationship between the structures of organic compounds and their physical and chemical properties. Some reaction mechanisms are also covered. Credit will be granted for only one of CHEM 225, 220, 221, 222. Prerequisite: CHEM 100 or 120. Three credits and lab.

231 Physical Chemistry I

An introduction to physical chemistry, this course begins with the properties of ideal and real gases; covers the fundamental principles of thermodynamics (the three laws of thermodynamics) and their application to physical and chemical transformations, and chemical reaction equilibrium and concludes with the chemical potential and its application to phase equilibria. Prerequisites: CHEM 100 or 120; MATH 106/126 and 107/127 or 121 and 122. Three credits and lab.

232 Physical Chemistry II

Building upon the principles developed in CHEM 231, this course describes the thermodynamics of real systems. Students will learn the applications of chemical thermodynamics, including phase equilibria in multi-component systems, ideal and real solutions, and electrochemistry; the principles governing the dynamics of systems, including the kinetic molecular theory of gases, transport properties, and the rates of chemical reactions. Prerequisite: CHEM 231. Three credits and lab.

245 Basic Inorganic Chemistry

An introductory course on the properties and uses of the main group elements; the practical and commercial uses of various inorganic compounds and elements; and the factors contributing to the energies and types of chemical bonds. Prerequisite: CHEM 100 or 120. Three credits and lab.
255 Introductory Biochemistry
Areas of study include the chemistry of carbohydrates, fats, proteins, nucleic acids and some enzymes. Biochemical energetics, metabolism pathways and some commonly used experimental biochemical techniques are also examined. Prerequisite: CHEM 220 completed (recommended) or concurrent or CHEM 225 or 221. Three credits and lab.

265 Basic Analytical and Environmental Chemistry
An introductory course which includes a survey of aqueous titration methods, the evaluation of analytical data, and an introduction to electrochemistry, UV visible absorption spectroscopy and chromatography. Prerequisite: CHEM 100 or 120. Three credits and lab.

321 Intermediate Organic Chemistry
A continuation of CHEM 220, this course covers: addition and condensation polymerization; di-valent carbon compounds; pericyclic reactions; Woodward Hoffmann rules; mass spectrometry of organic compounds; organic chemistry of sulfur, phosphorous, and silicon compounds; mechanisms of nucleophilic substitutions. Prerequisite: CHEM 220. Three credits and lab. Not offered 2018-2019.

325 Organic Structural Methods
Methods for deducing the structural features of organic compounds will be examined, with emphasis on the use of spectroscopic techniques. While the theory and instrumentation of each technique will be presented, the course will focus on the interpretation of spectral data to provide information on functional groups, bonding, and stereochemistry. Use will be made of spectral data correlation charts, compilations and databases. Prerequisites: CHEM 220, PHYS 121, 122 (120). Three credits and tutorial.

331 Introduction to Quantum Mechanics
The course deals with quantum mechanics and its applications to the structure of atoms and molecules. The topics covered are: the postulates of quantum mechanics and their applications to simple physical systems, including particle in a box; the quantum mechanical model for vibration and rotation of molecules; the hydrogen atom and many electron systems; introduction to the Variation Principle and Hückel’s molecular orbital method. Credit will be granted for only one of CHEM 331 or CHEM 330. Prerequisite: CHEM 232. Three credits and lab/tutorial.

332 Introduction to Molecular Spectroscopy & Statistical Thermodynamics
The course deals with the characterization of patterns of molecular quantized energy levels in rotational, vibrational and electronic spectra of both linear and non-linear molecules. Other topics include photoelectron spectroscopy and magnetic resonances; introduction to statistical thermodynamics including partition functions and calculations of various thermodynamics properties, equilibrium constants and rate constants. Credit will be granted for only one of CHEM 332 or CHEM 330. Prerequisite: CHEM 331. Three credits and lab/tutorial.

341 Inorganic and Theoretical Chemistry I
An introduction to molecular symmetry and group theory and its applications to vibrational spectroscopy. Also included are basic coordination chemistry of the transition metals, including discussion of some common inorganic techniques, as well as electronic magnetic properties of transition metal compounds. Prerequisite: CHEM 245. Three credits and lab.

342 Inorganic and Theoretical Chemistry II
Electronic and magnetic properties of transition metal compounds. Introduction to organometallic chemistry, homogeneous and heterogeneous catalysis, inorganic reaction kinetics and mechanisms and bio-inorganic chemistry. Prerequisite: CHEM 341; CHEM 232 recommended. Three credits and lab.

355 Advanced Biochemistry
The course focuses on the biosynthesis and metabolism of important biological molecules. Topics include lipids, amino acids, nucleotides, other carbohydrate metabolism pathways, and plant hormones. Prerequisites: CHEM 220, 255. Three credits and lab.

361 Instrumental Analytical Spectroscopy
The course deals with instrumental design and the analytical application of UV/visible, atomic, and infrared absorption spectrometers, Raman spectrometers, and fluorimeters. Topics include sample preparation, data analysis, method optimization and radiochemistry. Credit will be granted for only one of CHEM 361 or CHEM 360. Prerequisite: CHEM 265. Three credits and lab/tutorial.

362 Instrumental Separations & Analysis
This course deals with liquid and gas chromatography, capillary electrophoresis and electrochemistry. Included are sample preparation, data analysis, and method optimization. Credit will be granted for only one of CHEM 362 or CHEM 360. Prerequisite: CHEM 361. Three credits and lab.

391 Chemistry Seminar I
Introduction to seminar techniques using topics in modern chemistry, chemical information sources, basic molecular modeling and drawing. Required for, and restricted to, students in degree programs where chemistry is science A. Required in the first term of the junior year. No credit.

421 Physical Organic Chemistry
A survey of theoretical models and experimental tools to correlated data related to the structure, property, and reactivity of organic compounds. This course is intended for advanced majors and honors students in chemistry. Topics include qualitative models (resonance, hybridization, VSEPR, qualitative molecular orbital theory), quantitative computational chemistry methods (Hartree-Fock, semi-empirical and density functional theory methods), and spectroscopic methods (IR and NMR). Extensive use is made of theoretical and spectroscopic studies in assignments, computational and experimental labs. Credit will be granted for only one of CHEM 421 or CHEM 420. Prerequisites: CHEM 220, 232; PHYS 121, 122 (120). Three credits and lab.

422 Advanced Organic Chemistry: Structure & Mechanism
Building on the structures and energetics of organic reactive intermediates, this course will examine their role in reaction mechanisms. Several important classes of reactions will be analyzed in detail with respect to stereoelectronic effects. This course will also examine some of the methodology used to determine organic reaction mechanisms. The synergy between experimental and computational results will be discussed. Credit will be granted for only one of CHEM 422 or CHEM 420. Prerequisite: CHEM 220; CHEM 421 recommended. Three credits and lab.

432 Electrochemical Methods
This course investigates modern electrochemical techniques, including potential step and potential sweep methods, pulse voltammetry, controlled-current experiments, hydrodynamic voltammetry, and AC impedance. Particular attention will be given to processes that occur at the electrode-solution interface in the use of these techniques (mass transport, charge transport kinetics, current-time and current-potential profiles). Topics of current interest, such as fuel cells, chemically modified electrodes, corrosion, ion-selective electrodes, ultramicroelectrodes, and catalysis are included. Prerequisite: CHEM 232, 361, 362 (concurrent). Three credits and lab. Not offered 2018-2019.

434 Colloids and Interfaces
Covers the properties of colloids, surfaces, interfaces, and polymers, and provides a qualitative description of the colloidal state, including colloids and their preparation and properties. Topics include experimental techniques used to determine colloidal properties; interfacial phenomena; the properties of surface active agents; the stabilization of colloidal systems. Prerequisites: CHEM 231, 232. Three credits and lab.

435 Introduction to Polymer Chemistry
This course introduces the basic principles and techniques employed in polymer chemistry. The following topics are emphasized: polymerization reactions and mechanisms; kinetics of polymerization; molecular mass methods; molecular sizes and shapes; polymer morphology; thermal, mechanical and rheological properties; and the thermodynamics of polymer solutions. Prerequisites: CHEM 220, 231, 232. Three credits.

445 Introduction to Photochemistry and Applications in Sustainable Catalysis
An introduction to photochemistry with a focus on current catalytic applications. The course will focus on the fundamental concepts of photochemistry and light-induced chemistry of common organic functional groups. Modern applications of photochemistry in catalysis involving transition metals, semiconductors, supramolecular materials, and nanomaterials will also be discussed. Prerequisites: CHEM 220 (221, 222) CHEM 225. Three credits and tutorial.

455 Medicinal Chemistry
Topics include the drug development process, receptors, drug interaction, pharmacodynamics, pharmacokinetics and quantitative structure activity relationships. Chemical properties and mode of action of some of the following classes of drugs will be discussed: antibacterial drugs, drugs that work on the central nervous system, anticancer drugs, antiviral drugs, and analgesics. Case studies of current drugs going through approval processes will be included. Prerequisites: CHEM 220, 255. Three credits and lab.

471 Selected Topics
The topic for 2018-2019 is Industrial Organic and Inorganic Chemistry. An introduction to the manufacture and use of common organic and inorganic materials. Sources, manufacturing processes and applications will be discussed. Prerequisites: CHEM 220 (completed or concurrent), CHEM 231. Three credits.
491 Chemistry Seminar II
Presentations by visitors, faculty, staff, senior honours and advanced major students on aspects of chemical science. Attendance is mandatory for students in all B.Sc. and M.Sc. degree programs where chemistry is science A. No formal credit is given for this course, but satisfactory completion of senior essays for students in the major program, senior essays and presentations for students in the advanced major program, and presentations based on their theses for students in the honours program are requirements for the B.Sc. degree.

493 Honours Thesis
Based upon a program of experimental research involving the use of modern chemical techniques to solve a problem in the areas of analytical, inorganic, organic, or physical chemistry. An acceptable thesis based on the research must be submitted before the conclusion of lectures for the academic year to satisfy the department requirements for the B.Sc. with Honours in chemistry. Three credits and lab.

499 Directed Study
Designed for students with high academic standing. Explores current topics in chemistry and new methods in chemical research. See section 3.5. Three credits.

GRADUATE COURSES
Credits
511 Computational Chemistry 3
521 Advanced Organic Chemistry 3
530 Physical Chemistry III 3
532 Electrochemical Methods 3
534 Colloids and Interfaces 3
535 Polymers 3
536 Advanced Topics in Colloid Chemistry 3
540 Advanced Topics 6
542 Advanced Inorganic Chemistry 3
543 Inorganic Materials 3
561 Advanced Analytical Chemistry I 3
561 Topics Instrument & Analysis 3
562 Advanced Analytical Chemistry II 3
591 Advanced Instrument I: Bioanalysis 3
593 Advanced Instrument II: Capillary 3
594 Instrumentation III Electronic 3
595 Nucleic Acids 6
598 Research 6
599 Thesis 18

Additional courses are available depending on the requirements and interests of the student and the availability of faculty.

9.10 CLASSICAL STUDIES
S. Baldner, Ph.D., Co-ordinator
C. Byrne, Ph.D.
E. Carle, M.D. Litt.
K. Penner, Ph.D.

Students in arts, science, and applied programs may take any of the courses listed below as electives or use 12 credits for a pair in classical studies.

111 Introductory Latin I
For students with no knowledge of Latin, this course introduces students to Latin grammar and vocabulary. Recommended for students interested in classical languages, literature, philosophy, history, and religious studies. Credit will be granted for only one of CLAS 111 and CLAS 110. Three credits.

112 Introductory Latin II
This course is the sequel to CLAS 111, providing the second third of Latin grammar and vocabulary. Recommended for students interested in classical languages, literature, philosophy, history, and religious studies. Credit will be granted for only one of CLAS 112 and CLAS 110. Three credits.

120 Introductory Greek
The aim of this course is to familiarize students with the basic structural features of classical Greek. In addition to grammar and vocabulary, the class will consider simple texts from classical Greek philosophy and literature as well as from the New Testament. Six credits.

215 Introductory Latin III
This course is the sequel to CLAS 112, providing the final third of Latin grammar and vocabulary. At the completion of this course, students will be ready to read classical Latin texts. Recommended for students interested in classical languages, literature, philosophy, history, and religious studies. Credit will be granted for only one of CLAS 215, CLAS 230, and CLAS 399 offered in 2014-2015. Prerequisites: CLAS 111, 112. Three credits.

216 Classical Latin Texts
In this course, students who have learned Latin grammar and vocabulary, begin to ready classical Latin texts. Authors such as Cicero, Caesar, Catullus, and Ovid will be read. Recommended for students interested in classical languages, literature, philosophy, history, and religious studies. Credit will be granted for only one of CLAS 216 and CLAS 230. Prerequisite: CLAS 211. Three credits.

240 Greek Literature in Translation
The study of selected works of ancient Greek literature, read in translation, concentrating on the principal figures and themes of ancient Greek mythology. Texts will include the epic poetry of Homer and the tragedies of Aeschylus, Sophocles, and Euripides. Six credits. Not offered 2018-2019.

9.11 CLIMATE AND ENVIRONMENT
L. Kellman, Ph.D., Co-ordinator

Advising Faculty

<table>
<thead>
<tr>
<th>Department</th>
<th>Advising Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada Research Chair in Climate Dymanics</td>
<td>H. Beltrami, Ph.D.</td>
</tr>
<tr>
<td>Coady International Institute</td>
<td>C. Cash, Ph.D.</td>
</tr>
<tr>
<td>Climate and Environment</td>
<td>A. MacDougall, Ph.D.</td>
</tr>
<tr>
<td>Earth Sciences</td>
<td>D. Risk, Ph.D.</td>
</tr>
<tr>
<td>Economics</td>
<td>P. Withey, Ph.D.</td>
</tr>
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</table>

The Bachelor of Arts and Science in Climate and Environment is a new interdisciplinary offering that seeks to support student development and intellectual capacity in problem-solving and academic discourse pertaining to climate and environment. The complexity of environmental issues facing societies across the planet as a result of the growth of technology, globalization of economies, and rapid increases in population and per capita consumption requires an integrative approach provided by the BASc structure. While there is an obvious link and some overlap between the two fields of study, they are distinct, both in terms of their focus, and their methodological approaches. The field of environment focuses on the physical and chemical composition, nature, and the societal relationship we maintain with our physical setting, while the field of climate focuses on how the Earth's energy balance affects our environment. The BASc in climate and environment will appeal to students whose interest in the environment is partially or wholly motivated by their awareness of climate issues. Students are required to meet with their program coordinator or an academic advisor every year to assess their academic progress.

Major Requirements
Core courses are CLEN 101, 102, 201, 202, 301, 401, 402.

a) 100-level restriction: For the primary concentration, students may complete maximum of 18 credits at the 100-level, and for secondary concentration, students may complete a maximum of 12 credits at the 100-level.

b) 300- and 400-level: 9 credits in the primary concentration and 3 credits in the secondary concentration. The total number of 300- and 400-level credits needed for major students in BASc, including core courses is 24 credits.

c) Arts: a minimum of 24 credits

d) Science: a minimum of 24 credits, 12 of these credits must include a laboratory component at the 200-level or above.

e) Humanities: 12 credits of humanities in addition to the above-mentioned arts requirement from the humanities designated course list.

Honours Requirements
a) same as the major requirements, see above

b) honours student are required to complete 15 credits of 300- and 400-level in their primary concentration, including CLEN 490, as opposed to the 9 credits required of the major, for a total of 30 credits.

Major with Climate Concentration (CLIM)

Year 1:
- CLEN 101, 102; BIOL 112; CSCI 161 or MATH 106; ECON 101; SOCI 101, 102; one of PGOV 101, PSCI 101, 102; CHEM 100 or PHYS 101 and 102 or PHYS 101 and MATH 107;

Year 2:
- CLEN 201, 202; 6 credits environment to include BIOL 203; ECON 281; 15 credits climate including ESCI 265 and SOCI 202; 3 credits humanities

Year 3:
- CLEN 301, 302; 12 credits climate; 6 credits humanities; 3 credits environment; 3 credits open electives

Year 4:
- CLEN 401, 402; 9 credits climate; 3 credits environment; 3 credits humanities; 9 credits open electives

Physics is highly recommended with climate concentration.
## Honours with Climate Concentration (CLIM)

<table>
<thead>
<tr>
<th>Years 1 &amp; 2</th>
<th>same as above</th>
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<tbody>
<tr>
<td>Year 3:</td>
<td>CLEN 301, 302, 15 credits climate; 6 credits humanities; 3 credits open electives</td>
</tr>
<tr>
<td>Year 4:</td>
<td>CLEN 401, 402, 490; 6 credits climate, 6 credits environment; 3 credits humanities; 3 credits electives</td>
</tr>
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</table>

Physics is highly recommended with climate concentration.

## Major with Environment Concentration (ENVS)

| Year 1: | CLEN 101, 102; BIOL 112; ECON 101; SOCI 101, 102; CSCI 161 or MATH 106; one of PGOV 101, PSCI 101, 102; CHEM 100, or PHYS 101 and 102, or PHYS 101 and MATH 107 |
| Year 2: | CLEN 201, 202; 3 credits humanities; 15 credits environment including BIOL 203, ECON 281; 6 credits climate to include ESCI 265, SOCI 202 |
| Year 3: | CLEN 301, 302; 12 credits environment; 6 credits humanities; 3 credits climate; 3 credits open electives |
| Year 4: | CLEN 401, 402; 3 credits environment; 3 credits climate; 3 credits humanities; 9 credits open electives |

Credit will be granted for only one of CLEN 102, ENSC 115 or ESCI 271. Three credits and lab.

### Co-operative Education Program in Climate & Environment

This optional academic program allows BASc in Climate & Environment students the opportunity to gain 12 months of professional, paid work experience in a range of opportunities in industry, government and not-for-profit across Canada. Students can gain valuable technical and professional experience in field and lab work, research, policy education to reinforce classroom-based instruction and to increase students’ networks and employability. COOP 405 can be used as CLEN elective or as an open elective. For further information on work term sequencing and professional development training topics see section 9.13.

### 101 Introduction to the Climate System

This course introduces the climate system. It provides students with an overview of the Earth energy balance and the mechanisms for energy transfer among climate subsystems. Specifically, it focuses on understanding the physical processes determining Earth’s climates and how the current Earth energy imbalance affects the dynamics of the climate system (climate change). The course is intended for students who are new to the study of climate. Three credits and lab.

### 102 Introduction to Environmental Systems

This course introduces students to the global environmental systems and processes necessary to address scientifically complex and diverse issues associated with environmental change. Through the study of interconnected global biogeochemical, atmospheric, landscape scale, and hydrological processes, students will learn about the science that underpins many environmental issues associated with resource availability and contamination. Case studies will be used to illustrate concepts; and students will develop an understanding of the fundamentals of environmental measurement, and an introduction to major groups of environmental contaminants. Credit will be granted for only one of CLEN 102, ENSC 115 or ESCI 271. Three credits and lab.

### 201 Climate Change and People: Issues, Interventions, Citizen-led Actions, and Solutions

Conducted from a global perspective, this course is intended for students who wish to broaden their understanding of the present and future impacts of climate change on societies, including the social justice elements of the issues. The course also focuses on the interventions that are being made to combat the impacts of climate change - from global policies to community-level actions. Students will be equipped to articulate the world-wide impacts of climate change, how it impacts people at a community level, and how citizen led action can lead to positive change. Cross-listed as DEVS 203. Prerequisite: CLEN 101, or permission of the coordinator. Three credits.

### 202 Understanding Climate Change

An understanding of the impacts of climate change has become crucial for areas of governance, business, engineering and diverse fields of science. This course will provide students with a qualitative understanding of climate processes and climate models as well as an understanding of uncertainty in future climate change and limitations to model simulations. In addition, the impacts of climate change to many aspects of human societies will be explored. Cross-listed as ESCI 272. Prerequisite: CLEN 101 or ESCI 172. Three credits and lab.

### 301 Introduction to Science Policy and Science-Based Public Policy Decision-Making

This course introduces concepts, approaches, and trends associated with science policy and science-based policy decision making in Canada. Students will be introduced to key concepts and structures in Canadian public administration, the evolution of key policy actors and organizations that have contributed to science policy decisions in Canada with a focus on the federal level of government, learn the development of science policy in Canada, as well as understand Canadian approaches to science-based policy decisions with a focus on environment-related examples and case studies. Credit will be granted for only one of CLEN 301 and PSCI 389 offered from 2016-2018. Cross-listed as PGOV 307. Prerequisite: PGOV 101 or 3 credits PSCI; ECON 101, or permission of the coordinator. Three credits.

### 302 Environmental Sustainability for Organizations

Managing change effectively is essential to the long-term survival of an organization, and smart organizations will strategically adapt to changing demands and responsibilities. This course looks at organizational strategy through the ‘lens’ of sustainability. It explores how corporations and other types of organizations are re-aligning and in some cases re-inventing their corporate strategies to move toward more sustainable business models. This includes initiatives undertaken within the firm, as well as initiatives pursued outside the firm (such as through partnerships). Several frameworks are offered for assessing the degree to which principles of sustainability are embraced within an organization’s strategies. In addition, tools for formulating and implementing a sustainability strategic plan are presented. Case studies draw from different sectors and different organizational types. Cross-listed as BSAD 472. Prerequisite: third year CLEN standing. Three credits.

### 303 Climate Dynamics

An exploration of the fundamental properties of the Earth systems that generate planetary climate. The course explores the intricate links between the hydrosphere, atmosphere, cryosphere and biosphere. It includes an introduction to the fundamental theories of the properties and dynamics of ocean and atmosphere systems. Earth system models are examined with emphasis on simple intuition-building mathematical models as well as discussion of large computer models. Prerequisites: CLEN 101 or ESCI 172, MATH 106, PHYS 101 or 121, ESCI 265 or 246 or permission of the coordinator. Three credits and lab.

### 304 Regional Weather and Climate

An introduction to the micro-meteorological and land surface processes which generate micro, local and regional scale climate and weather. Topics include: surface energy and mass balance, atmospheric stability and exchange, turbulence, climates of non-vegetated surfaces and soils, the control of vegetation on local climate, land surface models and air pollution. Prerequisites: CLEN 101 or ESCI 172, PHYS 101 or 121, ESCI 246 or 265 or 224 or permission of the coordinator. Three credits and lab.

### 401 Strategies for Addressing Climate and Environmental Issues

This course provides students with the tools and strategies necessary to solve problems in climate and environment. Through case studies students will learn about best practices for addressing interdisciplinary problems in climate and environment. Students will then apply these principles to develop and workshop a proposal. Restricted to fourth-year students in the BASc Climate and Environment program. Three credits.

### 402 Addressing Climate and Environmental Issues – Senior Practicum

This capstone course is designed to empower students with interdisciplinary and skills to deploy ideas. In this course, interdisciplinary groups of students will work to launch initiatives and take a project from conception to an outcome. The students will work closely with faculty advisors, and in some cases other outside experts, to define goals, methods, outcomes, and indicators of success. Restricted to fourth-year students in the BASc Climate and Environment program. Prerequisite: CLEN 401. Three credits.

### 403 Advanced Topics in Climate Dynamics

An advanced examination of current topics in climate science intended to acquaint students with the state-of-the-art in climate science and modelling. Topics include:
the stability of meridional overturning circulation, permafrost carbon cycle feedbacks
to climate change, climate ice-sheet interactions and sea-level rise, abrupt climate
change, and climate intervention. The laboratory component will include practical
exercises intended to introduce the students to handling, analyzing and displaying
large data sets from global and regional climate model simulations. Prerequisite:
CLEN 303 or 304. Three credits and lab.

490 Honours Thesis
Students undertake an independent research project related to climate or
environment, under the supervision of a faculty member associated with the
CLEN program. Students will have the opportunity to gain hands-on experience
in conducting original research. Students will also develop skills in written and
oral communication by submitting a scholarly paper, and defending their Thesis
by presenting the results of their research in a public presentation. Restricted to
students in BASc Climate and Environment honours program. Six credits.

FOUNDATION COURSES
Students complete 24 credits of foundation courses as per the progression outlined
above. It is recommended that students complete these 24 credits during their first
30 credit hours in the program. Students may complete more than the required
24 credits of foundation courses so long as they do not violate any of the degree
regulations listed above.
BIOL 112 Diversity of Life
CHEM 100 General Chemistry
CSCI 161 Introduction to Programming
ECON 101 Introductory Microeconomics
ECON 102 Introductory Macroeconomics
MATH 106/126 Calculus I
MATH 107/127 Calculus II
PGOV 101 Modern Challenges in Public Policy and Governance
PSCI 101 Introduction to Power and Politics
PSCI 102 Introduction to Comparative and Global Politics
PHYS 101 Physics for the Life and Health Sciences I
PHYS 121 Physics for the Physical Sciences and Engineering I
PHYS 102 Physics for the Life and Health Sciences II
PHYS 122 Physics for the Physical Sciences and Engineering II
SOCI 101 Foundations of Sociology
SOCI 102 Key Issues in Contemporary Sociology

CLIMATE CONCENTRATION
Departmental prerequisites will apply.

Dynamics
CLEN 303 Climate Dynamics
CLEN 304 Regional Weather and Climate
CLEN 403 Advanced Topics in Climate Dynamics
ESCI 472 Ocean-Atmosphere Interactions

Modelling
MATH 253 Matrix Algebra
MATH 287 Natural Resource Modelling
MATH 367 Differential Equations

Quantitative Measurements
ESCI 265 Data Analysis in Earth and Environmental Sciences
ESCI 374 Geographic Information Systems
ESCI 376 Environmental Earth Science Field Course
PHYS/ESCI 278 Introduction to Atmospheric Physics

Water Resources
AQUA 201 Rivers, Lakes and Freshwater Governance
AQUA 202 The Ocean’s Commons and Society
ESCI 266 Hydrology
ESCI 386 Oceanography

Socio-Political Perspectives
PSCI 325 Indigenous Politics
SOCI 202 Social Research Methods
SOCI 307 Qualitative Research Methods

Demography and Overconsumption
HNU 405 Food Availability
SOCI 243 Consumerism
SOCI 364 Food and Society

Resource Management and Policy
BIOL 407 Integrated Resource Management
ECON 281 Environmental Economics
SOCI 248 Environmental Social Science II: Power and Change

ENVIRONMENT CONCENTRATION
Departmental prerequisites will apply.

Chemistry, Monitoring and Contaminants
CHEM 265 Basic Analytical and Environmental Chemistry
ESCI 305 Geochemistry
ESCI 406 Environmental Biogeochemistry

Communities, Ecologies, and Ecosystems
BIOL 203 Ecology
BIOL 311 Coastal Marine Ecology
BIOL 345 Communities and Ecosystems
BIOL 360 Global Change Biology
BIOL 488 Restoration Ecology
BIOL 472 Freshwater Ecology

Geosciences
ESCI 171 Understanding the Earth
ESCI 215 Sedimentology
ESCI 216 Earth History
ESCI 265 Data Analysis in Earth and Environmental Sciences
ESCI 465 Hydrogeology
ESCI 365 Geomorphology
ESCI 373 Remote Sensing

Socio-Political Perspectives
DEV 321 People and Development
PSCI 325 Indigenous Politics
SOCI 202 Social Research Methods
SOCI 307 Qualitative Research Methods

Demography and Overconsumption
HNU 405 Food Availability
SOCI 243 Consumerism
SOCI 364 Food and Society

Resource Management and Policy
BIOL 407 Integrated Resource Management
ECON 281 Environmental Economics
MATH 287 Natural Resource Modeling
SOCI 248 Environmental Social Science II: Power and Change

Issues in Environment and Sustainability
BIOL 221 Issues in Resource Management
ESCI 273 Health and the Environment
ESCI 274 Health Impacts of Climate Change
IDS 305/306 Service Learning
PHIL 333 Environmental Ethics

HUMANITIES

ENGL 100 Introduction to Literature and Critical Writing
ENGL 111 Literature and Academic Writing I
ENGL 112 Literature and Academic Writing II
HIST 111 Introduction to Global History 1300-1795
HIST 112 Introduction to Global History from 1789
PHIL 213 Philosophy of Science
PHIL 251 Critical Thinking
PHIL 331 Introduction to Ethics
PHIL 333 Environmental Ethics

REL 111 Compassionate Global Citizenship: World Religions I
REL 112 Compassionate Global Citizenship: World Religions II
REL 221 Religion and the Environmental Crisis

Any Modern Languages course
Any Celtic Studies course
Computer science is the study of computation. For any given problem, a central question is whether a solution can be computed, and, if so, what are the most efficient and practical ways to carry out the computation. Computer science also involves questions that have the potential to change how we view the world. What is the nature of intelligence and can we reproduce it in a machine? How do we represent the knowledge we have about the world and apply this knowledge to help make better decisions?

A computer is a mechanical device that manipulates symbols according to specific rules. As a discipline, computer science lies at the intersection of mathematics, science, and engineering, but it also has very strong ties to many other disciplines. Bioinformatics employs computers for storing and analyzing protein and genome sequences in order to interpret and predict biological structure and function. Business is served by providing the means to perform complex calculations and to interpret large amounts of data to make informed business decisions. The film industry relies on computer-generated graphics for three-dimensional animation. Psychology and philosophy share with computer science the desire to understand the nature of reasoning, learning and intelligence. Computer science has many subfields, such as algorithms, artificial intelligence, automated theorem proving, databases, graphics, high-performance computing, networking, programming languages, robotics, security, and verification. A common misconception is that computer science is equivalent to programming. Programming is a necessary tool, but it is not the focus.

The Department of Mathematics, Statistics, and Computer Science offers courses leading to BA and B.Sc. degrees with Major, Advanced Major, and Honours in Computer Science as well as a B.Sc. Advanced Major degree in Computer Science with Business. Students must meet the general requirements of both the faculty and the department in which they are registered; course and program regulations for mathematics and statistics are listed in sections 9.25.

Students completing a program in computer science have a wide variety of options, including graduate studies in emerging areas of computer science such as big data, robotics, computer-aided vision, and artificial intelligence; and employment in areas such as systems and network analysis, software engineering and computer programming, database, information technology consulting, and data communications. Students are advised to choose their program of study in consultation with faculty and the chair of the Department of Mathematics, Statistics, and Computer Science.

Students pursuing a major or advanced major or honours degree in computer science must take certain core courses: CSCI 161, 162, 255, 263, 275, 277, 491; B.Sc. students are required to complete MATH 106 or 126(111) and 107 or 127(112). BA students may replace MATH 106 or 126(111), 107 or 127(112) by MATH 101 and 102. For advanced major and honours students MATH 106/126 or MATH 107/127 and MATH 101/102 cannot be counted in the advanced major or honours credits. For advanced major and honours B.Sc. students CSCI 128, 135(235), may be available only as approved or open electives.

Those students planning a career in secondary education with computer science as their second teachable must take at least 18 CSCI credits; it is recommended that these credits be chosen from: CSCI 128, 135(235), 161, 162, 215, 255, 263, 275, 277, 364. In addition, it is highly recommended that they take either MATH 101 and 102, or MATH 106 or 126 and MATH 107 or 127.

BA or B.Sc. Minor in Computer Science

Students pursuing a minor degree in computer science must take 24 credits in CSCI.

BA or B.Sc. Major in Computer Science (Computing Concentration)

In addition to the core requirements, students must take CSCI 263, 375, and an additional 9 credits chosen from CSCI.

BA or B.Sc. Major in Computer Science (Analytics Concentration)

In addition to the core requirements, students must take CSCI 223; MATH 253 or 223; STAT101(201) or 231 and an additional 6 credits chosen from CSCI.

BA or B.Sc. Major in Computer Science (Pre-education Concentration)

In addition to the core requirements, students must take CSCI 215, 263 and an additional 9 credits chosen from CSCI 128, 135, 223, 345, 364, 375; MATH 253; STAT101(201) or 231.

BA or B.Sc. Advanced Major in Computer Science (Computing Concentration)

In addition to the core requirements, students must take CSCI 263, 368, 375, 485; MATH 253; 3 credits of STAT, plus an additional 3 credits of CSCI at the 300- or 400-level. B.Sc. students require an additional 6 credits chosen from CSCI. Typical Pattern:

Year 1 CSCI 161, 162; MATH 106 or 126(111), 107 or 127(112) (B.Sc. or BA) or MATH 101/102 (BA)

Year 2 CSCI 255, 263, 275, 277; MATH 253; STAT101(201) or 231

Year 3 CSCI 368, 375; additional CSCI courses

Year 4 CSCI 485, 491; additional CSCI courses

BA or B.Sc. Advanced Major in Computer Science (Analytics Concentration)

In addition to the core requirements, students must take CSCI 223, 263; STAT101(201) or 231, STAT 331; MATH 253 or 223 and 3 credits chosen from CSCI. In addition, BA students must take 3 credits, and B.Sc. students must take 9 credits, chosen from: CSCI 215, 335, 345, 355, 364, 368, 455, 467, 495; MATH 254; STAT 435, 445. Typical Pattern:

Year 1 CSCI 161, 162; MATH 106 or 126(112) (B.Sc. or BA) or MATH 101/102 (BA)

Year 2 CSCI 255, 263, 223 or 275, 277; MATH 223 or 253; STAT101(201) or 231

Year 3 STAT 331; additional CSCI/MATH/STAT courses

Year 4 CSCI 491; additional CSCI/MATH/STAT courses

BA or B.Sc. Honours in Computer Science with Business Administration

Science A CSCI 161, 162, 255, 263, 275, 277, 368, 375, 485, 491; 3 credits of CSCI at 300/400 level; 6 additional CSCI credits

BSAD BSAD 101, 102, 471; 12 credits from BSAD 221, 223, 231, 241, 261, 281; 9 additional BSAD credits

Science B MATH 106/126, 107/127, 253, STAT 231

Science C 6 credit

Arts X 12 credits humanities or social science (could be ECON)

Arts Y 6 credits (could be ECON)

Approved electives CSCI 135; 9 credits from MATH/STAT, CSCI, BIOL, CHEM, ESCI, PHYS

Open electives 6 credits (must be ECON if not in arts X or arts Y)

BA or B.Sc. Honours in Computer Science (Computing Concentration)

In addition to the core requirements, students must take CSCI 263, 355, 356, 368, 375, 485, 493; MATH 253; 3 credits STAT; 6 credits chosen from CSCI 455, 467, 487, 495, and an additional 12 credits chosen from CSCI. Typical Pattern:

Year 1 CSCI 161, 162; MATH 106 or 126(111), 107 or 127(112) (B.Sc. or BA) or MATH 101/102 (BA)

Year 2 CSCI 255, 263, 275, 277; MATH 253; STAT101(201) or 231

Year 3 CSCI 355, 368, 375; additional CSCI courses

Year 4 CSCI 485, 491, 493 and 6 credits of 455, 467, 487, 495; additional CSCI courses

BA or B.Sc. Honours in Computer Science (Analytics Concentration)

In addition to the core requirements, students must take CSCI 215, 223, 263, 455, 467, 487, 495; an additional 2 credits chosen from CSCI. Typical Pattern:

Year 1 CSCI 161, 162; MATH 106 or 126(111), 107 or 127(112) (B.Sc. or BA) or MATH 101/102 (BA)

Year 2 CSCI 215, 255, 263, 223 or 275, 277; MATH 223 or 253; STAT101(201) or 231

Year 3 STAT 331; additional CSCI/MATH/STAT courses

Year 4 CSCI 491, 493; additional CSCI/MATH/STAT courses

Co-operative Education Program in Computer Science

This optional academic program allows BA or BSc in CSCI students the opportunity to gain 12 months of professional, paid work experience in a range of opportunities in industry, government and not-for-profit across Canada. Students can gain valuable technical and professional experience in areas including (but not limited to) various programming languages and systems analysis to reinforce classroom-based
instruction and to increase students' networks and employability. The Computer Science Co-op Program is accredited by the Co-operative Education & Work-Integrated Learning Canada (CEWIL Canada). COOP 405 can be used as CSCI elective or as an open elective. For further information on work term sequencing options and professional development training topics see section 9.13.

Master of Science Program
A research-based M.Sc. program is available covering the areas of systems, theory, and applications. General requirements for graduate degrees are outlined in section 8. For specific requirements, consult the department chair or visit http://sites.stfx.ca/mscs/graduate/

128 Computing Literacy and Coding for Problem Solving
This course introduces coding for everyday problem solving. Coding is introduced through multimedia computing including manipulation of images, sound and video. Intuitive programming languages, constructs and environment are used to introduce basic coding structures. The prevalence of computing in modern society is discussed. Students from all disciplines can develop their powers of coding for problem solving. B.Sc. Advanced Major and Honours students may only count this course as an approved or open elective. Three credits.

135 Computer Application Technology
This course enables students to use a variety of software tools to assist in their post-secondary studies and future careers. The course covers a broad range of information and communication tools essential for analyzing and presenting data, communicating information, organizing and writing papers, and preparing talks, slide presentations and posters. Webpage management is introduced. Topics covered support students in education, business, humanities and the health/social/physical sciences. B.Sc. Advanced Major and Honours students may only count this course as an approved or open elective; there is no such restriction for students in Arts or Business programs. Credit will be granted for only of CSCI 135 or CSCI 235. Three credits.

161 Introduction to Programming
An introduction to computers, algorithms and programming. Topics include problem analysis, algorithm development, data representation, control structures, arrays, and file manipulation. Credit will be granted for only of CSCI 161, CSCI 125, ENGR 144 or INFO 255. Cross-listed as ENGR 147. Three credits and a two-hour lab.

162 Programming and Data Structures
Continuing from the material in CSCI 161, this course covers memory management and data abstraction via classes and objects, and introduces the linear data structures lists, stacks, and queues. Structured programming is encouraged via modular development. Credit will be granted for only of CSCI 162 and INFO 256. Prerequisite: CSCI 125 or CSCI 161 or ENGR 147. Three credits and a two-hour lab.

215 Social Issues in the Information Age
This course exposes students to the various impacts of technology on modern society with the goal of further developing their critical thinking and their ability to make informed decisions in this rapidly changing information age. Topics covered include privacy and security, biotechnology, cybercrime, genetic engineering, artificial intelligence, digitization and intellectual property, ethical issues in computing. Other topics and/or their emphasis may vary by semester. Students from every background will benefit from this course. Three credits.

223 Introduction to Data Science
The course will provide students with the basic understanding of the theory and practice of data science and its applications in different real-world domains. Students will also gain practical skills in handling structured and unstructured data, analyzing and visualizing data, data mining, as well as gain hands-on experience of software tools and apply the basic techniques to their own different scientific, engineering and business applications. Prerequisite: One of CSCI 125, 128, 161 or 225. Three credits.

225 Coding for Health Analytics
Technological development has transformed modern healthcare. The large amounts of health data currently acquired and analyzed has the potential to positively affect a patient’s quality of life. This interdisciplinary course focuses on developing practical coding skills used in the healthcare domain, a rapidly growing field of computing that can have a beneficial impact on patient care and public health. Suitable for students from a variety of backgrounds planning a career involving health-related data. Open to students in all degree programs. Prerequisite: CSCI 128 or CSCI 125 or CSCI 161 or with permission of department chair. Three credits. Not offered 2018-2019; next offered 2019-2020.

255 Advanced Data Structures
Linear data structures such as lists, stacks, and queues are reviewed. Objects are introduced using C++ classes and templates. Multi-linked lists and trees together with their fundamental algorithms are covered. Searching, sorting, and hashing are described and implemented in C++. Prerequisite: CSCI 162. Three credits and a two-hour lab.

263 Computer Organization
This course covers basic computer arithmetic, architectures, and instruction sets; in-depth study of the central processing unit, memory and input/output organization; and microprogramming and interfacing. Credit will be granted for only of CSCI 263 or INFO 225. Prerequisite: CSCI 162. Three credits and a two-hour lab.

275 Database Management Systems
An introduction to the theory associated with the design and implementation of databases. Topics include database models (relational model in detail), design, normalization, SQL, and a DBMS (ORACLE). Credit will be granted for only of CSCI 275, BSAD 384 or INFO 275. Prerequisite: CSCI 162. Three credits and a two-hour lab.

277 Discrete Structures
An introduction to sets, binary relations and operations; induction and recursion; partially ordered sets; simple combinations; truth tables; Boolean algebras and elementary group theory, with applications to logic networks, trees and languages; binary coding theory and finite-state machines. Cross-listed as MATH 277. Prerequisites: MATH 101/102 or 107 or 127/112 or 122 or CSCI 162. Three credits.

335 Management Science
This course prepares students for careers as analysts and consultants in industries with a focus on enhancing business value through operations, logistics and supply chain management. A variety of successful implementations of management science/operations research tools in different application areas will be studied. Tools such as linear programming, project scheduling with uncertain activity times, various inventory models and simulation will be introduced and coupled with application in the fields of managing operations in manufacturing, long term financial planning and management of healthcare systems. Cross-listed as MATH 335. Prerequisites: MATH 111 or MATH 105 or CSCI 161. Three credits. Not offered 2018-2019; next offered 2019-2020.

345 Computer Graphics
Covers fundamental mathematical, algorithmic, and representational issues in computer graphics. Topics include graphics programming, geometrical objects and transformations, 2-D and 3-D data description, manipulation, viewing projections, clipping, shading and animation. Prerequisites: MATH 253; CSCI 255. Three credits and a two-hour lab. Offered 2018-2019 and in alternate years.

355 Data Structures and Algorithm Analysis
Analysis and design techniques are applied to non-numeric algorithms for data structures. Algorithmic analysis is used to select methods of manipulating data. Prerequisites: CSCI 255, 277. Three credits and a two-hour lab. Offered 2018-2019 and in alternate years.

356 Theory of Computing
An introduction to the theoretical foundations of computer science, examining finite automata, context-free grammars, Turing machines, undecidability, and NP-completeness. Abstract models are employed to help categorize problems as undecidable, intractable, tractable, and efficient. Prerequisites: CSCI 255, 277. Three credits. Not offered 2018-2019; next offered 2019-2020.

364 Mobile Application Development
A mobile application (mobile app) is a software application designed to run on smartphones, tablet and other mobile devices. The Android mobile platform has become one of the most popular mobile platforms used by millions around the world. This course introduces application development for the Android OS that can run on mobile devices. The course covers the Android system, the Android development tools, Activity Lifecycle, User Interfaces in Android, and Android application development that uses SMS, databases, location tracking, and/or multimedia. Credit will be granted for only of CSCI 364 or CSCI 471. Prerequisite: CSCI 162 or INFO 256. Three credits and a two-hour lab. Not offered 2018-2019; next offered 2019-2020.

368 Data Communications and Networking
This course covers communication systems; environments and components; common carrier services; network control, design and management; distributed and local networks. Credit will be granted for only of CSCI 368 or INFO 465. Prerequisite: CSCI 255. Three credits and a two-hour lab. Offered 2018-2019.

371 Selected Topics
The topic for 2018-2019 is Biomedical Computation. This course explores current topics in computer science, such as big data, distributed computing, bioinformatics and machine learning. Three credits.

375 Operating Systems
An overview of operating systems functions: file management, CPU scheduling, process management, synchronization, memory management, and deadlock
545 Parallel and Distributed Computing
Introduces parallel programming techniques as a natural extension to sequential programming. Students will learn techniques of message-passing parallel programming; study problem-specific algorithms in both non-numeric and numeric domains. Topics will include: numeric algorithms; image processing and searching; optimization. Prerequisites: CSCI 263, 375 recommended. Three credits and a two-hour lab. Not offered 2018-2019; next offered 2019-2020.

467 Cyber Security
Covers the theory and practice of computer and network security, including cryptography, authentication, network security, and computer system security. Topics include secret and public key cryptography; message digests; authentication, including password-based, address-based, and cryptographic; network security; system security, including intruders, malicious software, and firewalls. Students will use and implement algorithms. Prerequisite: CSCI 368, completed or concurrent. Three credits. Offered 2018-2019 and in alternate years.

471 Topics in Computer Science
This course explores current topics in computer science, such as big data, distributed computing, bioinformatics and machine learning. Three credits. See http://sites.stfx.ca/mscs/cs_courses for more information.

483 Interactive Programming with Java
This course introduces the object-oriented language Java and its application to interactive programming. Topics include Java syntax and object inheritance structure, exception handling, GUI and Applet programming, Java networking and multithreading. Credit will be granted for only one of CSCI 483 or INFO 355. Prerequisite: CSCI 162; 255 is recommended. Three credits and a two-hour lab. Offered 2018-2019 and in alternate years.

485 Software Design
The course covers techniques for the design and management of large software projects, including structured programming, debugging, and testing methodologies. Examples of large systems will be provided and a programming project will be completed. Prerequisite: CSCI 162; 483 is recommended. Three credits and a two-hour lab.

487 Organization of Programming Languages
Topics include structure of language definitions, control structures, data types and data flow, compilers vs interpreters, introduction to lexical analysis and parsing. Prerequisite: CSCI 263, and 375 completed or concurrent. Three credits and a two-hour lab. Offered 2018-2019 and in alternate years.

491 Senior Seminar
Cross-listed as MATH 491 and STAT 491. The purpose of this non-credit course is to assist students in carrying out research, composition, and oral presentation. Students will present a project topic in the fall term and their project in the spring. Attendance at departmental seminars is mandatory. No credit.

493 Senior Thesis
Students will prepare and present a thesis based on original research conducted under the supervision of a faculty member. Required for honors students; permitted for advanced major students. Three credits.

495 Artificial Intelligence
An introduction to the core concepts of artificial intelligence, including state space, heuristic search techniques, knowledge representation, logical inference, uncertain reasoning, and machine learning. Specific methods covered include neural networks, genetic algorithms, and reinforcement learning. Prerequisites: CSCI 255, 277, 375(completed or concurrent). Three credits and a two-hour lab. Offered 2018-2019 and in alternate years.

GRADUATE COURSES

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9.13 CO-OPERATIVE EDUCATION
J. MacDonald, MLIS, M.Ed., M.Ed., Manager

Co-operative education utilizes experiential learning partnerships between the university and employer to provide students with opportunities for relevant, paid employment while completing academic studies. A combination of professional development training and practical work experience empowers students to apply and further develop the knowledge and skills they have acquired in their degree program. Co-operative education is an option for students enrolled in biology, business, climate & environment, computer science, health, human nutrition and mathematics. Students enrolled in a BA must commit to a major in computer science or mathematics to continue in the co-op education program. Students enrolled in BSc must commit to a major in biology, computer science, or mathematics to continue in the co-op education program. Students’ degree programs and registration will be monitored and academic averages will be assessed annually to determine eligibility to continue in the program. Participation in the cooperative education program is voluntary, obtaining a co-operative education work assignment is competitive, and students are not guaranteed a cooperative education work placement.

Students are eligible to join the co-operative education program after at least one full year of academic study. Students may apply to the program at any time but must apply before the published deadline in early October. Admission to the program is based on academic requirements and also the student’s ability to be flexible regarding work term options. A minimum overall first year average of 65% is required for students joining the program in their second year. A minimum overall average of 70% is required for students who join in second or third year. To remain in the co-op education program, students must be actively engaged, must be registered in a minimum of 12 credits per term while completing co-op requirements, and maintain a 70% average. The co-op education program begins and ends on an academic term. After completing the minimum of 12 months of co-op work experience, students are required complete a minimum of 12 credits (including COOP 405) at StFX.

Students enrolled in the program complete their professional development training within the first academic semester of joining the co-op education program. The professional development training assists with students’ success within the program and their work terms. Students are notified of the professional development training schedule when they apply to the co-op program. Students must adjust their calendars in order to ensure they are available to complete the training when it has been scheduled. Students must successfully complete mandatory professional development training to be eligible for co-op work terms.

Students have the option to complete their co-op work terms as an alternating or internship model. The alternating model consists of 4-month plus 8-month or 8-month plus 4-month. The 12-16 month work term is considered a co-op internship and must be with one employer. Work terms must occur in at least two of the three “academic semesters” and must be preceded and followed by an academic term(s). “Academic semesters” are January to April, May to August, and September to December. The co-op office and academic advising will help you make a plan that is right for you. All work placements must be approved by the co-op office in advance. Failure to obtain the required approval of the work term from the co-op office may result in the work term not counting toward the program. Successful completion of work term is required to continue in the Co-op program.

Students may withdraw from the co-operative education program by completing the online withdrawal form found on the co-operative education program Moodle page. There will be no refund of fees collected for professional development seminars or work terms completed prior to the date of withdrawal. For students who withdraw during a PDS session or while completing a work term, normal refunding will apply. Students who withdraw from the program while on work term must notify the co-op office of their intention to withdraw. The co-op office will review the student’s employment contract as some roles require the student to be enrolled in a co-op program. The co-op office will notify the student if they must complete their work term and necessary assignments before the formal withdrawal from the co-op program will be processed.

Students who successfully complete all co-op requirements and all academic requirements for their degrees will receive a certificate of completion with their degree parchment. Also, a co-operative education designation will be displayed in the degree awarded section of their official transcripts.

The co-operative education programs in biology, business, computer science, human nutrition are accredited by the Co-operative Education & Work–Integrated
students should take at least one of the courses required for students graduating with an honours or joint advanced major degree. Research design and basic statistics are fundamental to the program. Students should complete at least one of the following courses during their first year: ANTH 111/112, PSCI 101/102, SOCI 101/102.

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DEVELOPMENT STUDIES CORE COURSES

101 Introduction to Development Studies
This course offers students an introduction to the field of development studies. It explores core concepts about ‘development’ and applies these at the global, national and local level. Along with an introduction to international development institutions, topics covered include colonial legacies and First Nations, gender and development, environment and climate change, human rights and diversity. Discussion of these topics will be situated in the context of country case studies. Three credits.

201 International Development: The Global South
An introduction to development theory and practice as it applies to inequality between countries, and within countries of the Global South. The course provides students with a critical framework for analyzing development policies, programs, trends, and impacts, especially since the formation of the Bretton Woods institutions. Students will explore the concepts of sustainable development and of social and economic justice as they relate to development. Credit will be granted for only one of DEVS 201 or DEVS 200. Prerequisite: 24 credits or permission of the co-ordinator. Three credits.

202 International Development: Canada
In this course, Canada’s place in the world, its path to development, and the challenges it currently faces will be explored. These include the retention of its capacity to generate sufficient wealth to provide a high standard of living to its citizens, the persistence of inequalities that raise questions about the distribution of the benefits of development, and the challenge of sustainability, given the stresses that industrialized societies such as Canada’s place on their physical and social environment. Credit will be granted for only one of DEVS 202 or DEVS 200. Prerequisite: 24 credits or permission of the co-ordinator. Three credits.

203 Climate Change and People: Issues, Interventions, Citizen-Led Actions, and Solutions
Conducted from a global perspective, this course is intended for students who wish to broaden their understanding of the present and future impacts of climate change on societies, including the social justice elements of the issues. The course also focuses on the interventions that are being made to combat the impacts of climate change – from global policies to community-level actions. Students will be equipped to articulate the world-wide impacts of climate change, how it impacts people at a community level, and how citizen led action can lead to positive change. Cross-listed as CLEN 201. Prerequisite: CLEN 101, or permission of the instructor. Three credits.

257 Canada and the “Global South”: Connections and Disconnections in the 20th Century
This course examines economic, political, military, and cultural ties between Canada and the Global South during the 20th century. The course explores how Canada’s relationships with the Global South was shaped by its own colonial history and examines different aspects of governmental, organizational, and person-to-person relations. Topics will include: policies on immigration and refugees, business investments, concerns related to human rights, and international aid. Cross-listed as HIST 257. Three credits.

302 Globalization and Development
The course provides an analysis of the forces affecting the globalization process, its evolution over time, and its impacts on development. It takes a broad view, from an interdisciplinary perspective, of the factors at work, their nature and their consequences. Topics that are considered include the fact and policy dimensions of globalization, questions that pertain to equity and fairness, issues concerning production, consumption, global markets, governance, and the role of various international institutions. It also analyzes the mechanisms that link the global to the local level. Credit will be granted for only one of DEVS 302 or DEVS 300. Prerequisites: DEVS 201, 202 or ECON 101, 102. Three credits.

303 Topics in Globalization and Development
The course considers in detail a range of topics that pertain to the globalization process that are important to development. It provides an interdisciplinary analysis of such issues as: international trade and finance and their impacts, regionalization versus globalization, the environment and sustainability, culture and ideas, justice and human rights, gender and health issues, migration, MNCs, NGOs and civil society. The course also considers alternatives to the existing reality in terms of changes in institutions, practices, policies, local and grassroots responses (including the Antagonish Movement). Credit will be granted for only one of DEVS 303 or DEVS 300. Prerequisite: DEVS 302 or permission of the instructor. Three credits.

311 Issues in Development Practice
In this seminar course, students make the link between theoretical discussion of development and actual development practice, both locally and internationally. An in-class component addresses the practicalities of development interventions and the major issues that affect them, such as: gender/ethnic/class stratification; power relations within and between localities and external agents; and indigenous versus dominant forms of knowledge. Student will then apply this in an experiential learning component in a local or international context. Credit will be granted for only one of DEVS 311 or DEVS 310. Prerequisite: DEVS 201, 202 or permission of the instructor. Three credits.

321 People and Development
This course critically examines how development policy and practice have affected target populations. Students will develop critical analytical skills and knowledge by examining the strengths and weaknesses of strategies such as those promoting popular participation, gender equality, small-scale business, local knowledge and democratic reform, as well as of different forms of development institutions. The course uses case studies based on long-term, first-hand participant observation that place development processes in larger historical, political and economic contexts. Cross-listed as ANTH 320. Prerequisites: ANTH 111, 112 (110) or DEVS 201, 202. Three credits.

391 Selected Topics
Prerequisite: DEVS 201. Three credits.

401 Theories of Development
This seminar takes an interdisciplinary approach to the study of theories that have shaped the conceptualization and practice of development around the world. The seminar focuses on current versions of general development theories such as: modernization, structuralism, Marxism, dependency theory, neoclassical and neoliberal theory, alternative development, and post-development. Examples of current theories that focus on key development issues are also covered. Prerequisites: DEVS 201, 202. Three credits.

405 Community-Based Development: Strategies and Practice
This seminar is an examination of community-based development. It explores and evaluates strategies, practices and techniques used to strengthen people’s capacity to build sustainable livelihoods, and examines the role of different agencies (e.g. local citizens, government, non-government organizations, and the private sector) in stimulating development at the community level. The course will include development strategies used in the Global South and practices used in Canada, especially Atlantic Canada. Prerequisites: DEVS 201, 202. Three credits.

412 Internship in Development Studies
This internship builds on DEVS 311. Students may extend their placement from 311 or undertake a new posting. The class will be largely experiential. Students will be required to blog regularly, to submit critical reflection papers, to produce a research product of use to their host organization, to make an oral presentation and to submit a final written report. Students will do their internship during the spring and summer before their senior year and complete this course in the fall term of their senior year. Credit will be granted for only one of DEVS 412, DEVS 300, DEVS 312. Prerequisite: DEVS 311 and permission of the instructor. Three credits.

490 Thesis
Students will work under the supervision of a faculty member who guides the selection of a thesis topic, use of resources, research methodology, and quality of analysis. Restricted to honours students. Six credits.

499 Directed Study
Students will work with a course instructor on a topic which is not available through other course offerings. Prerequisites: DEVS 201, 202 and six additional credits in core development studies courses. See section 3.5. Three credits.

DEVELOPMENT STUDIES CROSS-LISTED COURSES

211 Local and Community Development Economics
Beginning with theories of local and community economic development and welfare, this course provides an economic analysis of community needs and resources (human resources, capital and natural resources, infrastructure). Students will examine interactions within the community and between the community and the outside world, exploring approaches to local and community economic development and planning. Cross-listed as ECON 211. Three credits.

223 Anthropology of Globalization
Globalization has affected more than the world economy: people, politics and culture all travel globally, with wide-ranging consequences. This course will examine the history of global processes by focusing on how different peoples around the world
have engaged in or resisted them. Ethnographic studies will be used to explore global diversity as well as the effects of efforts to impose global uniformity. Cross-listed as ANTH 223. Prerequisite: ANTH 111, 112 (110) or DEVS 201 and 202. Three credits.

305 Economic Development I
Starting with an overview of the present state of the world, this course explores economic development strategies and prospects for the Third World. Topics include the meaning of economic development: past and present theories of growth; alternate approaches to economic development (including the grassroots approach and sustainable development); the role of agriculture and industrialization; and issues pertaining to development planning, markets and the role of governments. Cross-listed as ECON 305. Three credits.

306 Economic Development II
This course covers economic development prospects and experience in the Third World. Topics include income distribution; population and human resources (including education and health); urbanization, rural-urban migration and the informal economy; labour markets and unemployment; gender and development; savings, taxation and investment; foreign aid and MNCs; the debt problem and structural adjustment; trade and globalization; and the international economic order. Cross-listed as ECON 306. Prerequisites: ECON 101, 102. Three credits.

322 Antigonish Movement as Change & Development
Explores both social change and economic development through the history, philosophy, and practice of the Antigonish Movement as experienced at home and abroad. This movement will be used to examine political systems, labour relations, class conflict, education, co-operative strategies, religion, and ethnicity in the context of social transformation. Cross-listed as SOCI 322. Prerequisites: SOCI 101/102 or DEVS 201, 202. Three credits.

352 Social Entrepreneurship
The context, models, trends, opportunities, and challenges associated with social entrepreneurship focus on areas of public concern such as economic development, education, community welfare, and healthcare. These issues are examined using case studies, group projects, and experiential learning. Emphasis is on how entrepreneurship is combined with the tools of business to create effective responses to social needs and innovative solutions to social problems. Credit will be granted for only one of BSAD 352 or BSAD 457. Cross-listed as BSAD 352. Prerequisite: DEVS 201, 202. Three credits.

354 Global Political Economy
This course examines the politics of international economic relations. Topics include transnational corporations and the globalization of production, the multilateral trade system and regionalism, the global monetary and financial system, and economic development in the global South. Cross-listed as PSCI 354. Prerequisites: PSCI 101/102 (100) or DEVS 201, 202; PSCI 250 recommended. Three credits.

355 Global Issues
This course examines the state’s supremacy and its capacity to manage such global issues as: the continuing problem of poverty in the developing world; the challenges of establishing democracy and global governance; global environmental issues such as climate change and intergenerational justice; international concerns with human and animal rights; sexist oppression; indigenous struggles, and the rise of trans-national social activist groups. Cross-listed as PSCI 355. Prerequisites: PSCI 101/102 (100) or DEVS 201, 202; PSCI 250 recommended. Three credits.

371 Political Economy of Development
Countries in the developing world face a distinct set of political challenges, particularly as they relate to fostering economic growth and providing effective public services. This course will explore the political determinants of development as well as the effect of economic conditions on political outcomes. Key issues include the origins of state weakness, the relationship between political institutions and economic growth, the causes of corruption, and the effect of diversity on governance outcomes. Credit will be granted for only one of DEVS 371 or DEVS 370. Cross-listed as PSCI 371. Prerequisites: PSCI 100 or PSCI 101/102 or DEVS 201, 202. Three credits.

DEVELOPMENT STUDIES DESIGNATED COURSES
Departmental prerequisites will apply.

Anthropology

ANTH 218 Anthropology of Health & Illness 3
ANTH 223 Anthropology of Globalization 3
ANTH 234 Introduction to Indigenous Anthropology 3
ANTH 310 Anthropology of Tourism 3
ANTH 320 People and Development 3
ANTH 323 Feminist Anthropology 3

ANTH 332 Mi’kmag Studies 3
ANTH 415 Anthropology of HIV/AIDS 3
ANTH 425 Power and Change 3
ANTH 435 Advanced Indigenous Issues 3

Aquatic Resources
AQUA 201 Rivers, Lakes and Freshwater Governance 3
AQUA 202 The Ocean’s Commons and Society 3

Biology

BIOL 221 Issues in Resource Management 3
BIOL 345 Communities and Ecosystems 3
BIOL 407 Integrated Resource Management 3

Business Administration

BSAD 352* Social Entrepreneurship 3
BSAD 357 International Business 3
BSAD 358 Business Ethics 3

Catholic Studies

CATH 341 Catholic Social Thought 3

Earth Sciences

ESCI 271 Environmental Earth Science 3
ESCI 272 Global Change and Climate System 3
ESCI 273 Health and the Environment 3
ESCI 274 Health Impacts of Global Environmental Change 3

Economics

ECON 211* Local & Community Development Economics 3
ECON 241 Canadian Economic Prospects and Challenges 3
ECON 281 Environmental Economics 3
ECON 305* Economic Development I 3
ECON 306* Economic Development II 3
ECON 361 Human Resources and Labour Economics 3
ECON 365 International Trade 3
ECON 366 International Payments and Finance 3
ECON 381 Natural Resource Economics 3

English

ENGL 245 ST: Postcolonial Literature 3
ENGL 347 Literature of Africa and the African Diaspora 3

History

HIST 228 History of Maritime Provinces, Pre-Confederation 3
HIST 229 History of Maritime Provinces, Post-Confederation 3
HIST 233 French Imperialism 3
HIST 255 History of Colonial Latin America 3
HIST 256 History of Modern Latin America 3
HIST 257 Canada and the Global South 3
HIST 283 Making Britain Great 3
HIST 303 The Working Class in Early Canadian Society 3
HIST 304 The Working Class in Modern Canada 3
HIST 317 Canadian Women and Gender History: From Colony to Nation 3
HIST 318 Canadian Women’s and Gender History: Modernity 3
HIST 322 Canadian Immigration, Race & Ethnicity to 1896 3
HIST 326 Cuba from Independence to Revolution 3
HIST 337 History of Modern Mexico 3
HIST 347 American Social Movements, 1945-Present 3
HIST 355 The Sixties: A Social History 3
HIST 360 Gender & Sexuality in Modern European Empires 3
HIST 374 The People’s Republic of China 3
HIST 462 Seminar in Latin American History 3

Human Nutrition

HNU 405 Food Availability 3

Interdisciplinary Studies

IDS 305 Immersion Service Learning 3
IDS 306 Service Learning: Theory and Practice 3
IDS 398 ST: Contemporary Issues & Service Learning in Ghana 6

Philosophy

PHIL 333 Environmental Ethics 3
PHIL 371 Social and Political Philosophy 3

Political Science

PSCI 211 Comparative Politics I 3

StFX ACADEMIC CALENDAR 2018-2019

Development Studies 63
The Earth is a dynamic and exciting planet, which has continually evolved over its 4.6 billion-year history. During this time, oceans and mountains were created and destroyed; catastrophic events occurred, such as meteorite impacts, volcanic eruptions and earthquakes; global greenhouses and icehouses developed; life forms evolved and became extinct. Earth science is devoted to understanding the origin, significance and order of these events so that we may more fully understand our planet; this is vital if we are to locate, use, and harness the Earth’s resources and face the environmental challenges that confront us. Earth science employs physical, chemical, biological and mathematical methods to study the Earth’s materials, behaviour, history and environment. An Earth scientist studies and interprets the Earth’s evolution as revealed by its atmosphere, ocean and fresh waters, rocks, minerals and fossils; explores and develops valuable resources; and evaluates the environmental implications of these activities.

A degree in Earth sciences prepares students for graduate studies, as well as a wide range of careers in geology, climatology, oceanography, environmental science, resource exploration and development, government, industry, and financial institutions where geological knowledge is vital for investments and economic planning.

A number of options and concentrations are available for students interested in a B.Sc. in Earth sciences. We offer options in geoscience, environmental geoscience, geochemistry; joint programs with biology, business administration, chemistry, mathematics, and physics; and non-specialist courses for students interested in understanding the planet on which we all live. The most important laboratory instruction is in the field, where studies bridge the gap between textbook descriptions and actual occurrences.

### Department Requirements

Recommended course selections for major, advanced major and honours Earth sciences programs are shown below; variations in content require the permission of the department chair and/or the Dean of Science. See chapter 7 for information on the degree patterns, declarations of major, advanced major and honours, advancement and graduation requirements. Approved electives may be in any discipline normally accepted for credit for science students.

Students wishing to pursue a career in Earth sciences or a related field, who wish to register as a Professional Geoscientist (P. Geo) should follow the Professional Geoscience program streams listed below. Students seeking educational requirements for Registration as Professional Geoscientists or Environmental Geoscientists should ensure they have consulted the appropriate professional body to identify the knowledge requirements. Students intending to pursue these streams are required to meet with an academic advisor in the first term of year one and once a year in subsequent years.

#### Geoscience Concentration

Candidates must follow the degree regulations and program patterns outlined in chapter 7 and complete:

- **Foundations:** ESCI 171,172; MATH 106 or 126, 107 or 127; CHEM 100 or 120; 6 credits of first year PHYS and/or BIOL
- **Fundamentals:** ESCI 201, 202, 215, 216, 245, 285, 301, 305, 375
- Additional ESCI courses to meet degree requirements.

#### Professional Geoscience Stream

Candidates must follow the degree regulations and program patterns outlined in chapter 7 and complete:

- **Foundations:** ESCI 171, 172; MATH 106 or 126, 107 or 127; CHEM 100 or 120; PHYS 101/102 or PHYS 121/122; 9 additional credits in BIOL, CHEM, PHYS, MATH, STATS, computer programming (must spread these credits over 3 subject areas to meet PGeo requirements)
- **Fundamentals:** ESCI 201, 202, 215, 245, 301, 302, 305, 365, 372, 373, 375, 446

#### Environmental Earth Science Concentration

Candidates must follow the following degree regulations and program patterns outlined in chapter 7 and complete:

- **Foundations:** ESCI 171, 172; MATH 106 or 126, 107 or 127; CHEM 100 or 120; 6 credits of first year PHYS and/or BIOL
- **Fundamentals:** ESCI 201, 202, 215, 265, 266, 376, 406, 472; CLEN 202/ESCI 272
- Additional ESCI or designated courses (CLEN 303, 304) to meet degree requirements

#### Professional Environmental Geoscience Stream

Candidates must follow the following degree regulations and program patterns outlined in chapter 7 and complete:

- **Foundations:** ESCI 171, 172; MATH 106 or 126, 107 or 127; CHEM 100 or 120; 6 credits of first year PHYS and/or BIOL; 9 additional credits in BIOL, CHEM, PHYS, MATH, STAT, computer

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**9.15 EARTH SCIENCES**

A.J. Anderson, Ph.D.
H. Beltrami, Ph.D.
J. Braid, Ph.D.
L. Kellman, Ph.D.
M.J. Melchin, Ph.D.
J.B. Murphy, Ph.D.
D. Risk, Ph.D.

The Earth is a dynamic and exciting planet, which has continually evolved over its 4.6 billion-year history. During this time, oceans and mountains were created...
programming course (must spread these credits over 3 subject areas to meet PGeo requirements)

Fundamentals: ESCI 201, 202, 215, 245, 266, 305, 365, 372, 373, 375 or 376

Geochemistry Concentration
Recommended courses for students in the honours and advanced major programs of the geochemistry concentration are: ESCI 171, 172, 201, 202, 215, 216, 245, 301, 302 or 435, 305, 375, 406, 491 (non-credit), 493 or 499; CHEM 100 or 120, 220, 231, 232, 245, 265; MATH 106 or 126, 107 or 127; PHYS 101/102 or 121/122; additional ESCI, arts and elective courses as outlined in section 7.1.

Joint Honours and Joint Advanced Major Programs
Joint honours and joint advanced major programs are offered in conjunction with aquatic resources and with the departments of biology, chemistry, mathematics, statistics, and computer science. Joint advanced major programs are offered with the departments of business administration and physics. For general information on course patterns see section 7.1. Students should consult the appropriate department chair or program co-ordinator. Typical programs are shown below; variations are available at the discretion of the department.

Earth Sciences with Aquatic Resources
ESCI 171, 201, 215, 216, 266, CLEN 202/ESCI 272, 375 or 376, 305, 406, 465. For additional ESCI credits, students should follow either the geoscience or environmental geoscience concentration listed above, and consult the chair of the Earth sciences department, as well as the co-ordinator of aquatic resources.

Earth Sciences and Biology
ESCI 171, 172, 201, 215, 216, 375 or 376, CLEN 202 or ESCI 272, 285, 386; 27 credits BIOL; CHEM 100 or 120, 225, 255, MATH 106 or 126, 107 or 127, CSCI 135; STAT 231; additional ESCI, arts and elective courses as outlined in section 7.1; interdisciplinary thesis and seminar.

Earth Sciences with Business Administration
Science A
ESCI 171, 172, 201, 215, 216, 266, 305, 365; 12 additional ESCI credits

Science B
12 credits: MATH 106 or 126, 107 or 127; any 6 additional credits MATH or STAT

Science C
CHEM 100 or 120
BSAD
BSAD 101, 102; 12 credits from 221, 223, 241, 261, 281, 471; 9 credits BSAD electives

CSCI
CSCI 135

ECON
ECON 101, 102

Arts X
12 credits humanities or social science

Arts Y
6 credits

Approved electives
9 credits BIOL, CHEM, CSCI, ESCI, MATH or PHYS

Earth Sciences and Chemistry
ESCI 171, 172, 201, 202, 215, 245, 266, 375 or 376, 301, 302 or 435, 305, 406; CHEM 100 or 120, 220, 231, 232, 245, 265, 341, 342, 361, 362; MATH 106 or 126, 107 or 127, 253 or 267; 3 additional credits MATH; PHYS 101/102 or 121/122; additional ESCI, arts and elective courses as outlined in section 7.1; interdisciplinary thesis and seminar.

Earth Sciences and Mathematics/Statistics/Computer Science
ESCI 171, 172, 201, 215, 245, 265, 375 or 376, CLEN 202/ESCI 272, 475 (for additional credits, consult the Earth sciences department chair); 36 credits MATH; CHEM 100 or 120; PHYS 101/102 or 121/122; additional ESCI, arts and elective courses as outlined in section 7.1; interdisciplinary thesis and seminar.

Earth Sciences and Physics
ESCI 171, 172, 201, 215, 245, 265, CLEN 202/ESCI 272, 375 or 376, 302 or 435, 446, 472, 475 (for other credits, consult the Earth sciences department chair); 30 credits PHYS (consult the physics department chair); CHEM 100 or 120, 231 and 232 or 245 and 265; MATH 106 or 126, 107 or 127, 253, 267, 367; additional ESCI, arts and elective courses as outlined in section 7.1; interdisciplinary thesis and seminar.

Minor in Earth Sciences
ESCI 171, 172 and 18 additional ESCI credits.

Master of Science Program
See chapter 8 for admission regulations.

171 Understanding the Earth
An introduction to the study of rocks and minerals and the materials that make up planet Earth; the Earth’s origin and internal structure and composition; the plate tectonic and continental drift theory; crustal processes (the early history of the Earth and its atmosphere, evolution and extinction of life forms; composition and structure of the Earth, origin of continents, oceans, volcanoes, earthquakes, mountains), crustal deformation and mountain building; resources from Earth. Three credits and tutorial.

172 Environment, Climate, and Resources
An introductory treatment of the processes driving Earth’s ocean, atmosphere, hydrosphere and cryosphere. Course includes study of the environment and problems such as soil erosion, ozone layer, waste disposal, Earth’s energy resources (solar, geothermal, etc.), surface and ground waters, water quality in humanity’s future, an introduction to biogeochemical cycles, and a current examination of climate change, future scenarios and issues of impact, migration and adaptation to climate change. Three credits and tutorial.

201 Crystal Chemistry and Mineralogy
Examines the foundations of crystal chemistry and mineralogy. Explores the characterization of and relationship among chemical, physical and optical properties of minerals and other transparent solids. Prerequisites: ESCI 171; ESCI 172 or AQUA 100; or with permission; CHEM 100 or 120, concurrent with permission. Three credits and lab.

202 Introduction to Igneous and Metamorphic Systems
Uses physicochemical and thermodynamic principles to explain the origin and composition of Earth materials, with particular reference to the genesis of igneous and metamorphic rocks. Applies the phase rule and phase equilibria to natural systems using thermo-chemical and experimental data, binary and ternary phase diagrams. Prerequisite: ESCI 201. Three credits and lab.

215 Sedimentology and Stratigraphy
A study of the major processes involved in the origin, transport and deposition of marine and non-marine clastic, carbonate and evaporite sediments. Covers the principles of sedimentation, environmental analysis, marine and non-marine depositional systems and facies models. Basic stratigraphic principles are introduced. Prerequisite: ESCI 171. Three credits and lab.

245 Structural Geology
An introduction to rock mechanics, three-dimensional analysis of stress and strain, mechanisms and concepts of deformation; classification and interpretation of folds, faults, fractures; introduction to Earth graphic and stereographic analysis of three-dimensional structures. Prerequisite: ESCI 171. Three credits and lab.

265 Data Analysis in Earth and Environmental Sciences
An assortment of data analysis methods used by the Earth and environmental scientists, in both industry and research. This course will introduce students to mathematical tools that form the foundation of data analysis and to techniques for data analysis using modern scripting languages. The course provides an introduction to matrices and arrays, data conditioning, analysis and statistics, visualization, and elementary numerical methods. Credit will be granted for only one of ESCI 265 or ESCI 246. Prerequisites: ESCI 172 or CLEN 101; or permission. Three credits and lab.

266 Hydrology
A study of the water cycle on land, this course covers the processes controlling: stream flow, soil water, groundwater flow, glaciers and ice sheets, and the exchange of water between natural reservoirs and the atmosphere; applications of chemical tracers to hydrology; aspects of human interaction with these systems, including flood hazards, water resource usage, and contamination. Credit will be granted for only one of ESCI 266 or ESCI 366. Prerequisites: ESCI 171, 172 or AQUA 100, or CLEN 101, 102. Three credits and lab.

272 Understanding Climate Change
An understanding of the impacts of climate change has become crucial for areas of governance, business, engineering and diverse fields of science. This course will provide students with a qualitative understanding of climate processes and climate models, as well as an understanding of uncertainty in future climate change and limitations to model simulations. In addition, the impacts of climate change to many aspects of human societies will be explored. Cross-listed as CLEN 202. Prerequisite: ESCI 172 or CLEN 101 or 102. Three credits and lab.
273 Health and the Environment
Understanding the relationship between environment and health is a significant challenge for current and future generations. Environmental agents play key roles in the development of many common illnesses and conditions. Most of these environmental agents are the result of human interference in the natural processes and fluxes of elements in the planetary system. This course will explore many scientific aspects of the connections between human and planetary health. Cannot be used as a science credit by students majoring in Earth sciences or environmental sciences. Three credits.

274 Health Impacts of Global Climate Change
Many planetary-scale environmental changes are altering Earth system processes in ways that have direct and indirect consequences for human health. This course will explore some of these issues, with an emphasis upon the scientific causes, projections, and health implications of global climate change. Additional topics include the study of global pollutants, atmospheric composition, climate sensitive diseases, global land use change, and global water resources. Cannot be used as a science credit by students majoring in Earth sciences or environmental sciences. Three credits.

278 Introduction to Atmospheric Physics
This course aims at developing an understanding of the physical processes that influence our climate. It is suitable for science students interested by atmospheric sciences, climate and air quality issues. Topics include introduction to radiation, atmospheric composition, planetary atmospheres, introduction to molecular spectroscopy and photochemistry, radiation balance - natural variability and anthropogenic effects, greenhouse effect, ozone depletion, clouds, methods of sounding atmospheric constituents, instrumentation, introduction to climate modeling. Cross-listed as PHYS 278. Prerequisites: MATH 107 or 127 or 122, CHEM 100 or 120, and one of PHYS 100, 101/102, 120, 121/122. Three credits. Offered in alternate years.

285 Paleontology: The History of Life
Covers the principles of paleontology including methods of analysis of fossil individuals, populations and species; biostatigraphy; paleoecology; biogeography; evolution and extinction; the origin and major events in the history of life from an evolutionary and ecological perspective. Laboratory study of selected fossil groups, field and laboratory techniques. Cross-listed as Biol 285. Prerequisite: ESCI 171, 172 or Biol 111, 112 or permission of the instructor. Three credits and lab. Offered in alternate years.

301 Genesis of Igneous Rocks
An advanced treatment of the rheological properties of magma, fluid dynamics, crystal growth, crystal-melt-fluid equilibria, igneous rock suites and their genesis, petrogenetic modeling. Applications of thermodynamic principles and phase equilibria to the genesis of igneous rocks and application of microscopic techniques. Prerequisites: ESCI 201, 202. Three credits and lab. Offered in alternate years.

302 Genesis of Metamorphic Rocks
Topics include determination of pressure; temperature and fluid conditions of metamorphism; applications of chemical equilibria and thermodynamic principles; Schreinemaker’s methods of phase diagram construction; equilibrium and disequilibrium metamorphic textures; kinetics of crystal growth; determination and rates of metamorphic reactions; variations of metamorphism through geological time; pressure-temperature-time relationships. Prerequisites: ESCI 201, 202. Three credits and lab. Offered in alternate years.

305 Geochemistry
Covers the processes of geochemistry, including equilibrium, saturation, precipitation, crystallization, partitioning, fractionation, dissolution, buffering, pH, and redox processes as these relate to the geochemistry of water, the atmosphere, and the solid Earth. Application of thermodynamic principles to geochemistry. Prerequisites: CHEM 100 or 120; ESCI 171; ESCI 172 or AQUA 100. Three credits and lab. Offered in alternate years.

365 Geomorphology and Quaternary Geology
Covers landform processes and development: glacialiation and glacial deposits; slopes and mass movements; drainage basin form and process; Quaternary stratigraphy, paleoclimatology, and paleoecology. Prerequisites: ESCI 171; ESCI 172 or AQUA 100. Three credits and lab. Offered in alternate years.

372 Geophysics
This course introduces the use of physical measurements to determine the internal and external structure and composition of the Earth system. Topics include (but are not limited to) an introduction to earthquake seismology, gravity and magnetic fields, isostasy, seismic reflection, heat flow applications, and elementary concepts in geodynamics. This course summarizes current knowledge of Earth system science as determined by modern geophysical techniques. Some computing techniques are presented in lab. Credit will be granted for only one of ESCI 372 and ESCI 475. Prerequisites: ESCI 171, MATH 106/07 or 126/127; PHYS 101/102 or 121/122 or permission. Three credits and lab. Offered in alternate years.

373 Remote Sensing
This course introduces students to the principles of remote sensing, to measure Earth properties using airborne or satellite sensors. Remote sensing applications are diverse, and include weather forecasting, vegetation mapping, and mineral exploration. Topics include: physical properties of gases, aerosols, and Earth surfaces; imagery types; passive multi- and hyper-spectral techniques; and active techniques including LIDAR. Prerequisites: ESCI 171,172 or CLEN 101,102 or ESCI 171, AQUA 101, and ESCI 246 or 265. First-year physics is recommended. Three credits and lab. Offered in alternate years.

374 Geographic Information Systems
Students will learn how GIS tools can be used to analyze, represent and model geographic data derived from censuses, surveys, maps, aerial photographs, and satellite imagery. Topics include cartography and map projections; spatial and attribute data; data capture techniques; vector and raster structure; GIS analysis; data visualization; GIS modelling. Credit will be granted for only one of ESCI 374 or ESCI 471. Cross-listed as BSAD 374. Three credits and lab.

375 Geological Field Methods
An introduction to field techniques; geological mapping on small and large scales; stratigraphic and structural interpretations. Topics include aerial photographs, topographic, and geophysical maps; elementary surveying techniques; systematics of rock and mineral identification. Includes a 10-day introductory field camp, normally held at the beginning of third year. Prerequisites: ESCI 202, 215, 216 or permission of the chair. Three credits.

376 Environmental Earth Science Field Course
A field and lab course which introduces field techniques in environmental Earth sciences, including sampling, collection, analysis, and interpretation of climatological, geo-chemical, biogeochemical, hydrological, geo-physical, and surficial geological data. Topics include spatial variability in natural physical and chemical processes, field sampling techniques and tools; lab and computer-aided analysis of data. A 10-day course held in May. Prerequisites: ESCI 172 or CLEN 102; ESCI 272/CLEN 202. Three credits.

386 Oceanography
An introduction to the physical and biogeochemical characteristics of the world ocean and the ocean’s role in governing planetary climate. Topics include: properties of ocean water, oceanic currents and circulation, waves and tides, ocean nutrient and carbon cycling, and human impacts on the ocean system. Prerequisites: ESCI 172 or AQUA 100 or permission. Three credits and lab. Offered in alternate years.

406 Environmental Biogeochemistry
An advanced examination of selected topics in environmental geochemistry and biogeochemistry, including chemical cycling and transformation in atmospheric, soil and aquatic environments. Topics may include stable isotopes, redox processes, heavy metals, sulfur, carbon and reactive nitrogen. Prerequisites: CLEN 102 or ESCI 172, ESCI 266 or permission. Three credits and lab. Offered in alternate years.

415 Special Topics in Earth Sciences
This course will cover selected current topics in Earth sciences. Three credits.

426 Ore Deposits
Covers classification, petrology, ore mineralogy, and mode of occurrence of mineral deposits. Laboratory stresses familiarity with the large and small-scale characteristics of mineral deposits and the interpretation of the controls of ore formation. Prerequisites: ESCI 215, 301, 245; ESCI 302, concurrent if necessary. Three credits and lab. Offered in alternate years.

435 Advanced Structure and Tectonics
Topics include regional structures; mechanics of deformation; geometric analysis; tectonics and metamorphism; interpretation of single and polyphase deformation; structural interpretations of ore zones; overview of tectonic processes; tectonic principles and dynamics; tectonic elements, zones, and terranes; the origin and development of orogenic belts; Phanerozoic, Proterozoic, and Archean tectonics. Prerequisite: ESCI 245. Three credits and lab. Offered in alternate years.

446 Advanced Sedimentology and Basin Analysis
Covers the origin, geochemistry, and diagenesis of sedimentary rocks, including siliciclastics, carbonates, and organic matter in sediments. Applies stratigraphic correlation, facies analysis methods, and geophysical techniques to basin mapping; depositional systems and sequence stratigraphy; basin subsidence and fill; regional and global stratigraphic cycles; and basin models in plate tectonics. Prerequisites: ESCI 202, 215, 245. Three credits and lab. Offered in alternate years.
Honours degrees in economics with a subsidiary subject; or an honours degree in mathematics. Students can earn a BA, a B.Sc. or a BBA with a concentration in economics; an honours degree in economics with a subsidiary subject, or an honours degree in economics.

472 Ocean-Atmosphere Interactions

This course introduces students to a unified treatment of ocean and atmospheric processes. The mathematical treatment of the phenomena will be central to this course and students will gain an in-depth understanding of the fundamental physical behaviour of large-scale ocean-atmosphere interactions. Prerequisites: ESCI 246, 272 or CLEN 202; one of PHYS 100, 101/102, 120, 121/122; MATH 106/126, 107/127. Three credits and lab. Offered in alternate years.

476 Advanced Geological Field Methods

A seven-day field camp in an important geological area, followed by structural and petrographic analysis, seminars and report writing during the term. Prerequisites: ESCI 245, 375. Three credits and lab. Offered in alternate years.

491 Senior Seminar

This course will foster discussion and analysis of current topics in Earth sciences with emphasis on student initiative. Each student will select a major problem to work on during the year. No credit.

493 Senior Dissertation

Restricted to honours students. Three credits.

499 Directed Study

Designed for advanced students interested in fields of study not normally covered in courses or thesis presentations. The research may be field-, laboratory- or library-based. Under the supervision of a faculty member, students will plan and conduct research, present the results of their research at a department seminar, and produce a research paper. Prerequisite: permission of the department chair. Three credits. See section 3.5.

GRADUATE COURSES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>501</td>
<td>Special Topics in Petrogenesis of Igneous Rocks</td>
<td>3</td>
</tr>
<tr>
<td>502</td>
<td>Special Topics in Petrogenesis of Metamorphic Rocks</td>
<td>3</td>
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<tr>
<td>506</td>
<td>Special Topics in Geochemistry</td>
<td>3</td>
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<tr>
<td>526</td>
<td>Special Topics in Ore Deposits</td>
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<td>535</td>
<td>Special Topics in Tectonics</td>
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<td>545</td>
<td>Special Topics in Structural Geology</td>
<td>3</td>
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<tr>
<td>546</td>
<td>Special Topics in Sedimentology and Basin Analysis</td>
<td>3</td>
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<tr>
<td>565</td>
<td>Special Topics in Hydrogeology</td>
<td>3</td>
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<tr>
<td>569</td>
<td>Advanced Quantitative Methods in Earth Sciences</td>
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<td>571</td>
<td>Special Topics in Earth Systems Science I</td>
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<td>572</td>
<td>Special Topics in Earth Systems Science II</td>
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<td>575</td>
<td>Special Topics in Geophysics</td>
<td>3</td>
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<tr>
<td>576</td>
<td>Field Research Methods in the Earth Sciences</td>
<td>3</td>
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<tr>
<td>585</td>
<td>Special Topics in Paleontology</td>
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<tr>
<td>586</td>
<td>Special Topics in Climatology</td>
<td>3</td>
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<tr>
<td>591</td>
<td>Research Methods in the Earth Sciences</td>
<td>3 or 6</td>
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<tr>
<td>598</td>
<td>Research</td>
<td>6</td>
</tr>
<tr>
<td>599</td>
<td>Thesis</td>
<td>18</td>
</tr>
</tbody>
</table>

Additional courses are available depending on the requirements and interests of the student and the availability of faculty.

9.16 ECONOMICS

D. Alessandrinii, Ph.D.
S. Dodaro, Ph.D.
T. W. Leo, Ph.D.
B. Malloy, Ph.D.
Z. Ozbok, Ph.D.
J. Rosborough, Ph.D.
F. Summerfield, Ph.D.
G. Tkacz, Ph.D.
P. Withey, Ph.D.
Senior Research Professor
S. El-Sheikh, Ph.D.

Department Requirements

Students can earn a BA, a B.Sc. or a BBA with a concentration in economics; an honours degree in economics with a subsidiary subject; or an honours degree in another program with economics as a subsidiary subject. Students in economics can complete a minor in business administration. Programs of study must be approved by the department chair.

Minor Program

a) ECON 101, 102, 201, 202;
b) 12 credits ECON

Students who take a minor in economics typically combine the minor with major in English, history, philosophy, political science, or sociology, or with the BBA degree.

BA Major Program

See chapter 4 for information on the degree pattern, declarations of major, advanced major and honours, advancement and graduation requirements.

a) ECON 101, 102, 201, 202;
b) 24 credits ECON with 12 at the 300 or 400 level;
c) 3 credits MATH or STAT.

Other subjects and electives should be chosen in consultation with the department chair.

BA Advanced Major Program

a) ECON 101, 102, 201, 202, 301, 302, 493;
b) 6 credits of MATH or STAT; 3 credits must be calculus;
c) 15 credits ECON with 6 at the 300 or 400 level.

d) Registration in at least one 300- or 400-level ECON course in the winter term of the final year. A senior paper must be written in this course. At least 25% of the grade calculated for the winter term of the course must derive from this paper.

Other subjects and electives should be chosen in consultation with the department chair. Students interested in graduate work in economics are advised to apply for the honours program or take equivalent courses in the mathematical or quantitative area.

BA Major or Advanced Major in Economics with Minor in Business Administration

Candidates for a major or advanced major in economics may take a minor in business administration by fulfilling the normal requirements for the major or the advanced major degree and completing 24 credits in BSAD. The student will normally complete BSAD 101, 102; 12 credits from 221, 223, 231, 241, 261, 281 and six credits of BSAD electives.

BA Honours Program

a) ECON 101, 102, 201, 202, 301, 302, 371, 372, 493, 494; 30 credits ECON electives with at least 18 credits at the 300 or 400 level;
b) a thesis supervised by a department member;
c) 6 credits of calculus.

Students planning to pursue graduate work in economics are encouraged to take additional MATH courses.

BA Honours with a Subsidiary Subject

An honours degree in economics may be completed with a subsidiary subject. Candidates must follow the degree regulations established by the university and the requirements established by both departments; see section 4.1 and the relevant department chairs. Honours degrees with a subsidiary subject are offered in a wide range of disciplines.

The Department of Economics offers the following programs:

BA Honours in Economics and Aquatic Resources
BA Honours in Economics and Political Science
BA Honours in Economics and History
BA Honours in Economics and Mathematics, Statistics & Computer Science

When economics is the primary subject, not the subsidiary subject, students are required to complete:

a) ECON 101, 102, 201, 202, 301, 302, 371, 372, 493, 494;
b) 18 credits of ECON electives with at least 12 credits at the 300 or 400 level;
c) a thesis supervised by a department member;
d) 6 credits of calculus.

When economics is the subsidiary subject, students are required to complete:

a) ECON 101, 102, 201, 202, 301, 302;
b) normally 18 credits ECON electives with at least 6 credits at the 300 or 400 level;
c) ECON electives may include ECON 493 with approval of the department chair;
d) A course in quantitative methods (ECON 371; 372; STAT 101, 224, 231) is strongly recommended.

Honours in Economics with a subsidiary in Mathematics and Computer Science

Students must include ECON 401, 402, 471 as ECON electives.
Honours in Mathematics and Computer Science with a subsidiary in Economics
ECON 401, 402, 471 are recommended as ECON electives. Depending on the nature of the individual thesis, joint supervision by an economist and a mathematician may be appropriate.

BBA Joint Honours
In conjunction with the Department of Business Administration, the Department of Economics offers a joint honours program in business and economics. See section 5.1 for degree regulations.

B.Sc. Advanced Major in Economics
See degree regulations in chapter 7. Degree requirements are:
a) ECON 101, 102, 201, 202, 301, 302, 371, 372, 493;
b) 15 credits ECON electives, including 6 at the 300 or 400 level;
c) a minimum of 12 credits in MATH including STAT 231 and 6 credits of calculus;
d) the 18 credits of approved electives are normally taken in math or science subjects;
e) PHIL 213 is recommended.

B.Sc. Honours in Economics
See degree regulations in chapter 7. Degree requirements are:
a) ECON 101, 102, 201, 202, 301, 302, 371, 372, 401, 402, 471, 493, 494 and 21 credits ECON electives with at least 9 credits at the 300 or 400 level;
b) a thesis supervised by a department member;
c) a minimum of 12 credits in MATH, including 6 credits of calculus;
d) the 18 credits of approved electives are normally taken in math or science subjects;
e) PHIL 213 is recommended.

Note: ECON 101 and 102 are prerequisites for all other courses unless otherwise stated. Students lacking other prerequisites may request department approval to enrol in a course.

101 Introductory Microeconomics
This course provides an introduction to microeconomic concepts and methodology. Students will learn about basic concepts such as scarcity and opportunity cost, and economic efficiency. The other central themes of the course include theories of supply and demand; the theory of production and costs, the functioning and the performance of competitive markets versus monopolies and oligopolies; labour markets and the markets for public goods. Three credits.

102 Introductory Macroeconomics
The second half of introductory economics provides an introduction to macroeconomic concepts. The course examines pressing problems and issues in the Canadian economy and the world. Students will learn about alternate economic systems, national income accounting and the components of the national economy; the role of money in the economy; inflation; unemployment; international trade and trade policy; and the role of government in managing the economy. Three credits.

201 Intermediate Microeconomic Theory I
An introduction to the basic concepts of microeconomic theory; this course examines the demand-supply model, consumer theory, production theory, and the purely competitive model, using numerical examples and graphs as aids. Three credits.

202 Intermediate Macroeconomics
This is the first of two half-courses on intermediate macroeconomics. Students will examine the structure of, and behaviour underlying, contemporary national economies with emphasis on the policies developed to gear them towards the observable. This course focuses on the Keynesian and classical models of the closed economy for explaining what determines national income, employment, unemployment, prices, inflation, and the interest rate. Three credits.

211 Local and Community Development Economics
Beginning with theories of local and community economic development and welfare, this course provides an economic analysis of community needs and resources (human resources, capital and natural resources, infrastructure). Students will examine interactions within the community and between the community and the outside world, exploring approaches to local and community economic development and planning. Cross-listed as DEVS 211. Three credits.

241 Canadian Economic Prospects and Challenges
Covers policy issues and problems in the Canadian economy. Topics include employment and unemployment; poverty and income distribution; productivity, education and the "brain drain"; health care and the social welfare safety net; trade and globalization; the environment and sustainable development; the primary sectors, regional disparity; and the new economy. Topics that reflect strong student interest and/or new issues may be added. Three credits.

271 Quantitative Methods in Economics
This course introduces students to quantitative and mathematical tools commonly used in the study of economics and finance. Topics include functions of one or more variables, financial mathematics, differential calculus and linear algebra. Applications include computing elasticities, macroeconomic equilibrium, profit-maximization, constrained optimization, interest rates, present value and bond pricing. Prerequisite: ECON 101; completed or concurrent. Three credits.

281 Environmental Economics
As an introduction to the relationship between human economic activity and the environment, this course explores the economic concepts used to analyze the causes, consequences, and possible solutions to local and global environmental issues. Topics include market failure; property rights; externalities; public goods; environmental valuation; environmental policies dealing with pollution and global issues such as global warming, ozone depletion, biodiversity, and sustainability. Prerequisite: ECON 101. Three credits.

291 Economics of Leisure, Recreation & Sports
This course introduces topics related to choices about the time individuals do not spend working. It deals with aspects of the economics of leisure and labour supply; the valuation of time; outdoor recreation; the economics of sports; the economics of dating and marriage; the economics of crime and the consumption of addictive goods; the economics of gambling and other addictive behaviour associated with the consumption of leisure, and the economics of the entertainment industry. Prerequisite: ECON 101. Three credits.

301 Intermediate Microeconomic Theory II
An extension of ECON 201, this course covers price determination in monopoly, monopolistic competition, and oligopoly models. Uncertainty and risk, factor pricing, capital investment over time, externalities, and public goods are discussed. The use of micro-economics as a tool in decision-making is illustrated. Prerequisite: ECON 201. Three credits.

302 Intermediate Macroeconomics II
This sequel to ECON 202 explores the new Keynesian and new classical perspectives on the macro economy. Attention is directed to the determinants of investment, consumption, money demand and supply as well as the role of expectations in macro behaviour. Questions of unemployment, inflation, interest rates, the government budget, economic growth and macroeconomic policies are examined in their international setting. Prerequisite: ECON 202. Three credits.

305 Economic Development I
Starting with an overview of the present state of the world, this course explores economic development strategies and prospects for the Third World. Topics include the meaning of economic development: past and present theories of growth; alternate approaches to economic development (including the grassroots approach and sustainable development); the role of agriculture and industrialization; and issues pertaining to development planning, markets and the role of governments. Cross-listed as DEVS 305. Three credits.

306 Economic Development II
This course covers economic development prospects and experience in the Third World. Topics include income distribution; population and human resources (including education and health); urbanization, rural-urban migration and the informal economy; labour markets and unemployment; gender and development; savings, taxation and investment; foreign aid and MNCs; the debt problem and structural adjustment; trade and globalization; and the international economic order. Cross-listed as DEVS 306. Prerequisite: ECON 101, 102. Three credits.

312 Industrial Organization
This course deals with the behaviour of firms in imperfectly competitive markets and with the role of competition policies. Business practices such as price discrimination, product differentiation, advertising, and investment in research and development will be explained using both traditional models of industrial organization and more recent ones, which emphasize issues of strategic interaction. Prerequisite: ECON 201. Three credits.

335 Money Banking & Financial Markets I
The course uses basic economic principles to organize students' understanding of and thinking about money, the functions and structure of financial markets and financial institutions. Topics covered include: the necessity, the nature, and the future of money; the determinants of interest rates; the term structure of interest rates; the pricing of government securities; what banks do and how their operations affect the economy. Credit will be granted for only one of ECON 335 or ECON 330. Three credits.

336 Money Banking & Financial Markets II
The course introduces students to the role of imperfect information in financial markets. Topics covered include: asymmetric information and its consequences; the
necessity of regulations of financial institutions and the role of domestic regulators and policy makers; comparative analysis of financial system regulations; financial market instabilities and the elements for the conduct of monetary policy. The course helps students understand the causes of financial instability and crises, and what policy makers can do to alleviate or avoid them. Credit will be granted for only one of ECON 336 or ECON 330. Prerequisite: ECON 335, ECON 202 is recommended. Three credits.

361 Human Resources and Labor Economics
The course analyzes the essential elements of the labour market: labour demand and labour supply, and their interaction to determine wages, employment and unemployment. Topics include fertility, education, regional wage disparities, immigration maintenance schemes, wage discrimination, the unemployment insurance program, unions and collective bargaining, and the distribution of wealth. Prerequisite: ECON 201. Three credits.

364 Health Economics
The course introduces students to the role of economics in health, health care, and health policy. The course focuses on individual’s choice pertaining to health, and economic evaluation of various methods of health care delivery. Students will learn how the market for health care differs from other markets, especially with regards to uncertainty and asymmetric information, and understand health insurance markets and their interaction with the market for health care services, as well as the role of the government. Prerequisite: ECON 201. Three credits.

365 International Trade
Covers the theory of international trade and its policy implications, including: comparative advantage; gains from trade; terms of trade; trade and growth; trade and economic development; commercial policy (tariff and non-tariff barriers, effective protectionism); economic liberalism, economic integration (with emphasis on NAFTA and the EC); migration and trade in service; and intellectual property rights. Prerequisite: ECON 201. Three credits.

366 International Payments and Finance
 Covers the theory and policy implications of international payments and finance. Topics include the exchange rate and the foreign exchange market; balance of payments problems and policies; fixed versus flexible exchange rate regimes and common currency areas; the Eurocurrency market; open economy macro-economics; international finance, financial liberalization and globalization; capital flows and multinational corporations; and the international monetary system. Prerequisites: ECON 201, 202. Three credits.

371 Econometrics I
This course develops the simple and multiple classical regression models, interval estimation and hypothesis testing. The problems of estimation, inference, mis-specified structures, multicollinearity, heteroskedascity, and serial correlation are presented. Students will be exposed to STATA or other relevant econometric software. The course requires some proficiency in calculus and basis statistics. Prerequisites: MATH 107 or 127 or ECON 271; STAT 101 or 231 or permission of the instructor. Three credits.

372 Econometrics II
This course is a continuation of ECON 371 and deals with various estimation methods, including least squares and maximum likelihood, specification tests, dynamic models and simultaneous equation models as well as limited and qualitative dependent variables. Students will be exposed to MATLAB or other matrix-based analytical software. Prerequisite: ECON 371. Three credits.

381 Natural Resource Economics
Examines the role of natural resource industries in the Canadian and world economies, including minerals, oil and gas, forest resources, fisheries and endangered species, and water resources. The course introduces students to the use of economic tools in analyzing problems of renewable and non-renewable resource management. Topics include welfare and inter-temporal analysis of resource exploitation; ownership and property rights issues in resource use and management; the nature of resource markets; resource taxation; biodiversity conservation; and sustainability. Prerequisites: ECON 201; MATH 106 or 126 recommended. Three credits.

391 Public Finance I: Expenditures
An analysis of the role of government in the economy, focusing on expenditure and with emphasis on the Canadian situation. Starting with an introduction to the public sector, the course covers: the rationale for government participation in the economy; the growth of the public sector over time; the theory of collective decision-making; cost-benefit analysis; fiscal federalism; specific spending programs. Prerequisite: ECON 201. Three credits.

392 Public Finance II: Taxation
An analysis of the role of government in the economy, focusing on revenue and with emphasis on the Canadian situation. Starting with an introduction to taxation and tax policy, the course covers: individual income taxes; corporation taxes; consumption; value-added and sales taxes; property and other taxes; tax reform; the revenue side of fiscal federalism; and the international dimensions of taxation and taxation policies. Prerequisite: ECON 201. Three credits.

397 Selected Topics
The topic for 2018-2019 is Law and Economics. This course uses economic theory to understand the general structure of law. It is not a law course. Specifically, it analyzes the economic logic of law, how alterations in laws influence the allocation of resources, and how general economic activity feedback and influence the law. In doing so it provides a theory of the legal regime. The course begins with a general discussion of economic reasoning and the concept of efficiency. It then examines the Coase Theorem in considerable detail, and in doing so builds a basic theory of law based on transaction costs. After these introductory foundations, we move on to cover the legal topics of property, torts & liability, contracts, and crime. Prerequisite: ECON 201. Three credits.

401 Advanced Microeconomics
An advanced treatment of micro-economic concepts and topics, such as consumer choice and demand analysis, production technology and cost, market structure and pricing, factor markets and shares, general equilibrium and economic welfare. Credit will be granted for only one of ECON 401 or ECON 412. Prerequisites: ECON 301; MATH 107 or 127 or ECON 271. Three credits.

402 Advanced Macroeconomics
An advanced treatment of macroeconomic theory and how macroeconomic policy is conducted. The course offers deeper insights into economic growth processes, business cycles, international macroeconomic stabilization policies, and alternative approaches to building macroeconomic models. Students are introduced to the use of two-period models. Credit will be granted for only one of ECON 402 or ECON 411. Prerequisites: ECON 302; MATH 107 or 127 or ECON 271. Three credits.

471 Mathematical Economics
An introduction to mathematical reasoning in economics and business, this course covers: the methodology of operations research; profit and cost analysis; resource use and production decisions; input-output and macro-analysis; pricing and inventory decisions; capitalization of cash flows and growth; portfolio selection and investment. Prerequisites: MATH 107 or 127 or ECON 271. Three credits.

491 Selected Topics I
The topic for 2018-2019 is International Economic Prospects and Challenges. Covers policy issues and problems in the international economy. Topics include: standard international trade theory; barriers to trade (tariffs, quotas, and subsidies); exchange rate policy; immigration and emigration; trade wars; international monetary, economic and political unions; inequality and standards of living; income and purchasing power. Topics that reflect strong student interest and/or new issues may be added. Prerequisites: ECON 101, 102. Three credits.

492 Selected Topics II
The topic for 2018-2019 is Time Series Econometrics. This course introduces students to the econometric analysis of time series, that is, data that evolve over time. The course will demonstrate how time-series econometrics can be applied to numerous problems in economics and finance, drawing heavily upon recently-published studies. Topics include: data retrieval, preparation and manipulation; properties of time-series data; diagnostic tests; forecasting; stochastic volatility; nonlinear models; simulation methods. A special emphasis will be placed on practical hands-on exercises that will allow students to better understand the underlying econometric theory. Prerequisite: ECON 371. Three credits.

493 Seminar
This is a capstone course designed to introduce students to current research issues in various fields of economics. Students will read and critically analyze significant historical or recent research papers, and to complete assignments related to these readings. They will also be exposed to the art of presenting research findings, as department faculty and visiting speakers will present some of their latest research. In the past, topics have included topics such as: macroeconomic data revisions; economic impact of climate change; European financial integration; matching models; and the economics of the non-profit sector. Three credits.

494 Thesis
Each student works under the supervision of a professor who guides the selection of a thesis topic, the use of resources, the methodological component, and the quality of analysis. Restricted to honours students. Three credits over full year.

499 Directed Study
A directed study course in advanced topics in economics. See section 3.5. Students wishing to take this course must consult the department chair. Three credits.


9.17  EDUCATION

A. Foran, Ph.D.
C. Gilham, Ph.D.
D. Graham, Ph.D.
G. Hadley, M.Ed.
L. Kearns, Ph.D.
L. Lunney Borden, Ph.D.
L. MacDonald, Ph.D.
K. MacLeod, Ph.D.
J. Mitton-Kukner, Ph.D.
A. Murray Orr, Ph.D.
B. Mwebi, Ph.D.
J. Orr, Ph.D.
D. Robinson, Ph.D.
I. Robinson, Ph.D.
R. Ryan, M.Ed.
E. Throop-Robinson, Ph.D.
J. Tompkins, Ed.D.
W. Walters, M.Ed.
R. White, Ph.D.
D. Young, Ph.D.

See chapter 6 for B.Ed. regulations and chapter 8 for M.Ed. regulations. Candidates are required to complete all of the courses shown below for the elementary or secondary division.

9.17.1 Bachelor of Education

Program Dates 2018-2019

| Wednesday, September 5 | B.Ed. registration |
| Thursday, September 6  | Year 1 orientation  |
| Monday, September 10   | First day of classes, B.Ed. program |
| Thursday, September 13 | Last date to change first-term courses |
| Thursday, October 25   | Fall pause |
| Tuesday, November 6    | Last day of classes for B.Ed., first term |
| Wednesday, November 7  | Building bridges to practicum |
| Wednesday, November 14 | First day of B.Ed. practicum |
| Friday, December 21    | Last day of B.Ed. practicum |
| Wednesday, January 9   | First day of classes, second term |
| Tuesday, January 15    | Last date to change second term courses |
| Thursday, February 28  | Winter pause |
| Tuesday, March 12      | Last day of classes for B.Ed. |
| March 19-22            | B.Ed. mid-term recess |
| Monday, March 25       | First day of B.Ed. practicum |
| Tuesday, April 30      | Last day of B.Ed. practicum |

Elementary Program

Year 1 (E1)  EDUC 411, 412, 413, 416, 433, 435, 439, 471, 472;
Year 2 (E2)  EDUC 444.

Secondary Program

Year 1 (S1)  EDUC 432, 433, 435, 471, 472; a first curriculum and instruction course taken from EDUC 421 to 429; 6 credits EDUC electives with at least 3 from EDUC 442, 456, 457 and 458.
Year 2 (S2)  EDUC 444.

Mi’kmaq Language Focus
A student in either the elementary or secondary program may achieve a focus on Mi’kmaq language by earning credit for EDUC 454 and 455.

French Language Specialization
A student in either the elementary or secondary program may specialize in teaching French. Students who complete EDUC 459 and 460 may achieve a core French specialization. Students with demonstrated French fluency can, after successfully completing 459 and 460, take EDUC 428A and B in their second year to qualify to teach in French immersion.

Physical Education Specialization
A student in either the elementary or the secondary program may specialize in teaching physical education by earning credits for EDUC 457, 425A and B, and 444. These courses prepare the teacher for a K-12 physical education where the emphasis is on the development of a physically active lifestyle, and includes such topics as movement education, fitness and dance, outdoor education, health education, personal development. Students pursuing this specialization would take EDUC 425A in the fall of year one, EDUC 425B in winter year one; EDUC 444 in the fall of year two, and EDUC 457 in the fall of year two.

Core Courses for Elementary and Secondary Programs

Year One

433 Sociology of Education
This course will examine the social-political context of education in Canada, particularly contemporary structures. Students will explore the relationship between educational opportunity and conditions of inequality. Three credits.

435 Inclusive Practices I
This course discusses educational, practices and procedures, past and present, affecting pupils who have been marginalized socially and/or physically. These policies have evolved from an ideology of exclusion to inclusion. Preservice teachers will learn curriculum and instructional approaches to assist in meeting the academic and socio-emotional needs of students with diverse learning needs. Three credits.

471 Internship I
Students are placed in schools for five weeks of supervised practicum. Three credits.

472 Internship II
Students are placed in schools for five weeks of supervised practicum. Three credits.

Year Two

434 Contemporary Issues in Public Education
This course examines the historical, legal, and philosophical underpinnings of contemporary issues facing public schooling. Goals, purposes, and dilemmas that have affected such facets of education as the structure of Canadian schooling, political and policy making processes, educational law, the work of teachers' organizations, and educational standards are explored. Three credits.

436 Inclusive Practices II (E2 & S2)
This course provides preservice teachers with an understanding of the learning strengths and challenges of students with exceptionalities. Emphasis will be placed on collaborative team planning, professional supports provided for students with diverse learning needs, the assessment and education referral process, and the development of individualized educational plans. Three credits.

481 Internship III
Students are placed in schools for five weeks of supervised practicum. Three credits.

482 Internship IV
Students are placed in schools for five weeks of supervised practicum. Three credits.

Required Elementary Courses

411 Curriculum and Instruction in Language and Literacy I (E1)
This course is designed to prepare prospective elementary teachers to teach the language arts: reading, writing, speaking, listening, and viewing. Also included is comprehensive literacy programming, children’s literature, authentic assessment, and organizing the classroom for language instruction across the curriculum. Throughout this course, the practical influence of various language arts theories is emphasized with a particular focus upon early literacy in the lower elementary grades. Three credits.

412 Curriculum and Instruction in Mathematics (E1)
This course includes an examination of the elementary school mathematics program, and of various approaches to teaching mathematics to children, with emphasis on exploring strategies for the development of conceptual understanding through multiple representations. Three credits.

413 Curriculum and Instruction in Science (E1)
The focus of this course is an emphasis on the process approach to teaching science, on the inquiry method, and on special techniques in the teaching of scientific concepts. The elementary science curriculum is examined. Three credits.

414 Curriculum and Instruction in Language and Literacy II (E2)
This course is a continuation of Language Arts I with emphasis on the upper elementary years. Three credits.
416  **Curriculum and Instruction in Social Studies (E1)**
A review of the social studies programs used in elementary school, with emphasis on the development of skills, methods and approaches involved in teaching these programs. Three credits.

439  **Principles and Practices of Elementary Education (E1)**
This course emphasizes the foundations of becoming an elementary school teacher. Topics include the professional and ethical role of the teacher, educational planning, the professional development process, reflective practice, teaching strategies, learning processes, classroom environment and management. Six credits.

463  **Elementary Assessment for and of Learning**
This course examines current research and practices in classroom assessment, evaluation, record keeping and communication of student achievement. Three credits.

468  **Teaching Mathematics in Middle Schools**
Students will learn the process, content, and assessment of middle school mathematics. They will make connections, communicate, reason mathematically, and complete problems. Students will explore strategies for the development of conceptual understanding through multiple representations. Three credits.

### Required Secondary Courses

420 to 429  **Curriculum and Instruction in Secondary Education (S1 and S2)**
Curricular and instructional concepts will be described, demonstrated, evaluated, and applied in relation to the following subject fields of the school curriculum:

420  A & B Gaelic
421  A & B English
422  A & B Social Studies
423  A & B Mathematics
424  A & B Diverse Cultures (First Nations and African-Canadian Studies)
425  A & B Physical Education
426  A & B Music
427  A & B Science
428  A & B French
429  A & B Fine Arts

469  **Selected Topics: C & I Spanish**
Students normally register for one of these eight courses in year one, and a second in year two. The choice is determined by each student's two subject fields of study. For students pursuing a French or physical education specialization, please consult that section of the Calendar for more details of course sequence. Students with more than two teachable subjects may take additional courses from this list as electives. Six credits per pair.

432A & B  **Principles and Practices of Secondary Education (S1)**
This course emphasizes the foundations of becoming a secondary school teacher. Topics include the professional and ethical role of the teacher, educational planning, the professional development process, reflective practice, teaching strategies, learning processes, classroom environment and management and pedagogy. Three credits each.

438  **Assessment for and of Learning (S2)**
This course explores issues surrounding the assessment for and of learning from a variety of perspectives. Basic principles of learning theory will be emphasized in the context of curricular examples from different teachable subject areas. Students will gain the skills necessary to critically evaluate and develop effective assessment approaches. Three credits.

440  **Literacy in the Content Areas (S2)**
This course explores and models teaching strategies that are consistent with the philosophy and background theory of content literacy. Students use the associated theories of literacy and the five recognized tools (reading, writing, speaking, listening, viewing) to develop their knowledge of, and skill in applying, these concepts. Three credits.

### Electives

405  **French/Education (Thematic Oral Communication)**
Available exclusively to education students, this course enhances French communication skills, leading to the necessary proficiency to teach core French at the elementary level. The course is designed for students who have studied French as a second language at the secondary level, or who have had some exposure to French at the university level. Three credits.

417  **Curriculum and Instruction for Diversity**
This course provides preservice teachers with an overview of curricular approaches and content for representing the cultural diversity of Canadian society in the elementary curriculum. Multicultural, anti-racist, feminist and Aboriginal approaches to curriculum content, teaching, assessment, classroom management and learning are emphasized. Three credits.

419  **Curriculum and Instruction in Middle School Science**
This course examines curriculum and instructional strategies appropriate in middle years' science classrooms, including an emphasis on the process approach to teaching science, the inquiry method, and specific techniques in the teaching of scientific concepts. The grade six to grade nine science curriculum is examined. Three credits.

437  **Guidance (S2)**
This course focuses on the development and knowledge of interpersonal relationships and interpersonal skills required by the classroom teacher in providing guidance for his/her students. It addresses specific strategies and frameworks for meeting the needs of at-risk students and those with other special needs in a variety of contexts. The basic principles and practices of guidance will be emphasized. Three credits.

442  **Learning through Drama**
This course provides pre-service, K-12 teachers with concepts and ideas for drama lesson plans; approaches to drama; basic drama and drama education theory; a working knowledge of theatre production; an introduction to the Nova Scotia curricular guidelines; and play selection guidelines for elementary and secondary student productions. Three credits.

444  **Outdoor Experiential Education**
Students will explore strategies to encourage their pupils to achieve, appreciate, and maintain a physically active lifestyle in the outdoors. They will learn to develop strategies that foster a lifelong commitment to outdoor education, as part of a physical education program in public school. They will experience a range of outdoor pursuits: paddling (canoe/kayak), navigation, Geocaching, hiking and backpacking, mountain biking, Nordic skiing, snowshoeing, archery, and camping (including winter camping). Each pursuit will include an overview of risk management and emergency procedures to support a skills progression that is challenging, fun, safe, and inclusive. Three credits.

445  **Curriculum & Instruction in Comprehensive School Health**
This course provides students with an interest in health and wellness an opportunity to acquire the knowledge, skills and attitudes needed for teaching a comprehensive school health education curriculum in the public school system. An overview of the main components of a comprehensive school health curriculum and associated pedagogical approaches will be explored. Three credits.

447  **Mental Health Education**
This course will develop an understanding of mental health education as both wellbeing and the experiences of children and youth who are living with poor mental health in schools. Pre-service teachers will develop their awareness of how such issues as anxiety, depression, addictions and bullying can be addressed to create greater well-being for all students and staff. The course will also analyze school policies and various support services related to mental health education. Three credits.

453  **Teaching English Language Learners**
Provides student teachers with a thorough understanding of the theoretical and methodological aspects of learning and teaching a second language, focusing on the learning/teaching of English (ESL). Students will become familiar with relevant research and will examine the prevalent theories in different ESL areas. Three credits.

454  **Mi’kmaw Language Arts I**
This course will focus on language acquisition theories and the methodologies that support these theories. Students will examine current approaches to bilingual language learning, especially reclaiming and revitalizing aboriginal languages. Topics include early literacy strategies linked to oral tradition; immersion strategies; promoting oral and written language; different writing systems used by Mi’kmaw over time, including the Smith-Francis orthography. Three credits.

455  **Mi’kmaw Language Arts II**
This course combines theories of language acquisition with their practical application in first- and second-language classrooms. Topics include materials and lesson development; using community resources; bringing elders into the classroom; making links with parents and other community members for language revitalization; connecting language communities using technology. Students will continue to perfect their ability to use the Smith-Francis orthography. Three credits.
456  **Curriculum and Instruction in Music**
This course provides an examination of music methods, materials, and curricula, using the Kodaly and other systems currently in use in the elementary school system. Three credits.

457  **Curriculum and Instruction in Elementary Physical Education**
This course is designed to introduce beginning pre-service teachers to the theoretical knowledge, practical experiences, and professional responsibilities of a successful elementary school physical education teacher. This course focuses on developing strategies for effective physical education, writing unit plans, applying a teaching model based on skill themes and movement concepts, understanding developmentally appropriate instructional approaches, and implementing interdisciplinary practices. Three credits.

458  **Curriculum and Instruction in Visual Arts**
The aim of this course is to introduce the student to the visual and creative arts, and to discover ways to integrate these with the other subjects of the elementary school curriculum. Three credits.

459  **French Education I**
This course surveys several theories of language learning and the methodologies that reflect these theories. Students will learn how the National Core French Study (NCFS) brought about a change in French curriculum throughout Canada, and how the four syllabi of the NCFS are incorporated into all aspects of French second-language teaching and learning. Three credits.

460  **French Education II**
This course combines theories of language acquisition with their practical application in the second-language classroom. Topics will include: unit planning and implementation; materials and lesson plan development in the four skill areas; co-operative grouping strategies; graphic organizers as learning strategies; learning centres and authentic evaluation techniques. Three credits.

461  **Entrepreneurship Education**
Entrepreneurship is defined as a dynamic process throughout which a person, alone or with others, actualizes her or his potential (i.e., values, attitudes, knowledge and skills) to initiate a venture. This course will explore curriculum through economic, entrepreneurial and problem-solving processes. Three credits.

462  **Teaching Religious Education in a Catholic School**
Students will learn about the Canadian Catholic catechism and its setting within the doctrinal foundations of the Catholic faith. Related topics of religious philosophy and spirituality and their roles in people’s lives will be explored. Three credits.

464  **Environmental Education**
Beginning with the assumption that solutions to environmental problems require well-designed environmental education programs, students will develop a conceptual framework and practical strategies for creating an environmental education curriculum for grades K-12. Three credits.

467  **21st-Century Teaching and Learning**
This course examines the effective implementation of technological options for teaching and learning in the 21st century for P-12 teachers. Students will explore legal, social, and ethical issues; selection and design of learning experiences that incorporate technology, and analyses of the use of emerging technologies to improve teaching and learning. Three credits.

469  **Selected Topics in Education**
Three credits.

491  **Advanced French Grammar**
Available exclusively to education students and educators, this course will lead participants to a critical and analytical review of functional grammar as applied to the field of education. Special focus will be placed on French linguistic structures related to material development, correspondence with parents, teachers and other professionals in the field and the development of additional curriculum resources. A major objective of the course will be to encourage and enable participants to learn to self-correct written and oral communication. Restricted to Year 2 French students only. Three credits.

493  **Directed Study**
In consultation with the department and with permission of the chair, students may undertake a directed study in an approved area of interest not available through other course offerings. See section 3.5. Three credits.

Certificate in Elementary Mathematics Education
This program has been developed in response to a need identified by the Nova Scotia Department of Education and school board partners. The Certificate in Elementary Mathematics Education is recognized for a licensing upgrade in Nova Scotia. The certificate consists of a sequence of ten courses focusing on content and pedagogy suitable for the elementary and middle years and is offered to cohorts of in-service teachers on a part-time basis.

In addition, to EDUC 401, 402, 403, 404A and 404B, students will also complete EDUC 468, 513, 518, 520C and 544.

401  **Pedagogical Foundations for Elementary Mathematics Education I: Numeracy**
This course is a survey of curriculum topics, which supports teachers’ delivery of the elementary mathematics curriculum. Selected topics in the pedagogy of numeracy are designed to help pupils develop their mathematical thinking in relation to numerical reasoning. In-service teachers will investigate and explore topics of relevance for the effective teaching of elementary school mathematics including number systems, operation sense, rational and irrational numbers, counting principles, and statistics. Three credits.

402  **Pedagogical Foundations for Elementary Mathematics Education II: Mathematical Modelling**
This course is a survey of curriculum topics, which support teachers’ delivery of the mathematical modelling components of the elementary mathematics curriculum. Selected topics in the pedagogy of mathematical modelling are designed to help develop their mathematical thinking in relation to modelling real-world contexts and solve mathematical problems. In-service teachers will investigate and explore selected topics for the effective teaching of elementary school mathematics including functions, algebraic modelling, statistical modelling, and graph theory. Three credits.

403  **Pedagogical Foundations for Elementary Mathematics Education III: Geometric Reasoning**
This course is a survey of curriculum topics, which supports teachers’ delivery of the elementary mathematics curriculum. Selected topics in the pedagogy of modern geometries are designed to help pupils understand the application of geometric reasoning. In-service teachers will investigate and explore topics of relevance for the effective teaching of elementary school mathematics including Euclidean and non-Euclidean geometry, topology, transformational geometry, and geometric constructions. Three credits.

404A  **Curriculum and Instruction in Early Childhood Mathematics I**
This course includes an examination of the elementary school mathematics program focusing on appropriate content and pedagogy from pre-kindergarten to grade two. Students in this course will focus on various approaches to teaching mathematics to young children, with emphasis on exploring strategies for the development of conceptual understanding through multiple representations including concrete models, pictures, symbols, words and contextual situations. Three credits.

404B  **Curriculum and Instruction in Upper Elementary Mathematics II**
This course includes an examination of the elementary school mathematics program focusing on appropriate content and pedagogy for grades three to six. Students in this course will focus on various approaches to teaching mathematics to children in upper elementary, with emphasis on exploring strategies for the development of conceptual understanding through multiple representations. Three credits.

Certificate in Outdoor Education
This program is designed to fulfill a need identified by practitioners across the province in response to curriculum changes in the physical education curriculum in Nova Scotia. The Certificate in Outdoor Education is recognized for a licensing upgrade in Nova Scotia and consists of a sequence of eleven courses which focus on the skills and pedagogy required to offer outdoor pursuits to students of all ages in Nova Scotia schools. This certificate is offered to cohorts of in-service teachers on a part-time basis.

405A  **Teaching Co-operative Games & Leadership in Public Schools**
This course is designed to provide teachers with the skills and teaching strategies for enacting student leadership development through experiential strategies that focus upon co-operative games and team building initiatives primarily for outdoor settings. Teachers will learn to create an experiential-based program to meet the needs of various groups of students by developing strategies for delivering activity-based initiatives for individual and group learning. Teachers will learn to facilitate initiatives ensuring student connections to curricular outcomes. Three credits.

405B  **Teaching Cycling in Public Schools**
This course provides teachers with the knowledge and skills for teaching the fundamental skills and safety practices for urban cycling and mountain biking. It also
helps teachers to understand how to teach their students knowledge about active transportation. Active transportation in this course is specific to cycling and based on teaching children road awareness, rules of the road, cycling skills, and cycling safety to help them consider cycling as a potential life-long activity. Three credits.

**405C Teaching Archery in Public Schools**
This course is designed to provide teachers with the teaching strategies following the skill progression of the National Archery in the Schools Program. The course will guide the development of safe-range practices, tournament play, inclusion adaptations, and how to develop a comprehensive unit plan, supported by outcome specific lesson plans, with current assessment practices. Furthermore, this course will also address yearlong planning that targets cross-curricular applications and inclusion strategies that are essential for teaching in schools. Three credits.

**405D Teaching Canoe Tripping in Public Schools**
This course is designed to provide teachers with the skills and teaching strategies for planning a skill-ability appropriate canoe trip for public schools. It prepares teachers to lead canoe excursions as day trips, as well as extended canoeing expeditions (multiple day and night trips). The focus will be on-water safety, environmental hazards, adaptive equipment, portage management, and in-camp preparations. Embedded into all the units taught in this course are practices attuned to wilderness travel and cross-curricular connections and Indigenous knowledge. Three credits.

**405E Teaching Canoeing in Public Schools**
This course is designed to prepare teachers to be able to engage in flat water canoeing instruction and to help them learn the pedagogical approaches that will assist them in promoting paddling as a life-long activity. The course includes on-water and dockside safety, environmental hazards, adaptive equipment, skill-based games, and helps attune teachers to on-water risks. Teachers will also develop skills and strategies for planning a progression of paddling skills for students in elementary and secondary schools. Three credits.

**405F Teaching Core Camping in Public Schools**
This course is designed to provide teachers with the skills and strategies for planning and teaching a progression of core camping skills from primary to grade 12. The focus of the course is to prepare teachers in the areas of trip planning, on-the-land skills and managing outdoor risks associated with leading students. Leave-no-trace approaches are embedded throughout all dimensions of the course to assist teachers to provide a curriculum with an ethic of sustainability and environmental preservation. Three credits.

**405G Teaching Kayaking in Public Schools**
This course is designed to prepare teachers to be able to engage in flat water kayaking instruction and to help them learn the pedagogical approaches that will assist them in promoting paddling as a life-long activity. The course includes on-water and dockside safety, environmental hazards, adaptive equipment, skill-based games, and helps attune teachers to on-water risks. Teachers will also develop skills and teaching strategies for planning a progression of paddling skills for students in secondary schools. Three credits.

**405H Risk Management in Outdoor Education**
This course provides teachers with the skills and strategies for emergency planning, conducting risk assessments for their outdoor program. Supporting the preplanning is learning about injury movement in wilderness/remote contexts and training to respond to environmental hazards. The course is structured to include outdoor lesson preparation, safety plans, and emergency response plans. Teachers will review provincial safety guidelines that govern outdoor teaching, as part of the outdoor pursuits listed in the Public Schools Program. Three credits.

**405I Teaching Navigation & Orienteering in Public Schools**
This course is designed to provide teachers with the skills and strategies for teaching basic and advanced elements of navigation, GPS, and orienteering, as part of their curriculum for public school teaching. In addition to the course hours devoted to development of lessons and assessment skills, additional study will also be completed in general and specific inquiry-based methodologies related to the teaching of the curricular topics to meet P-12 learning expectations. Three credits.

**405J Teaching Winter Trekking in Public Schools**
This course is designed to develop the skills and knowledge associated with the winter trekking activities of the physical education curriculum which are Nordic skiing, snowshoeing, and winter trekking camp skills. Teachers will also develop their abilities for teaching these trekking activities as part of their physical education curriculum while taking into account seasonal realities. Teachers will develop their ability to engage in comprehensive yearlong unit, and lesson planning including assessment practices that target progressive fundamental movement skills. Three credits.

### 9.17.2 Master of Education
Graduate courses in education are offered in the fall, winter, spring and summer terms primarily online. Students are required to complete a residential component during the month of July immediately following acceptance into the program. Because the majority of M.Ed. candidates study part time, the fall, winter, and spring courses are offered in evenings and occasionally on weekends.

Candidates for the M.Ed. program are normally required to take EDUC 505 and EDUC 534 as their first two courses in Antigonish during the summer session after acceptance into the program. EDUC 505 is a prerequisite for EDUC 506, 507, 508. Normally EDUC 506, 507, 508 are taken after the core courses are completed. EDUC 506 or 507 is required in the thesis and project routes.

<table>
<thead>
<tr>
<th>Educational Administration and Policy Stream</th>
<th>Credits</th>
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<tbody>
<tr>
<td>505 Introduction to Educational Research</td>
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<td>506 Quantitative Research Methods in Education</td>
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<tr>
<td>507 Qualitative Research Methods in Education</td>
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<td>508 Critical Research Literacy in Education</td>
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<td>533 Dynamics of Change</td>
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<td>534 Introduction to the Foundations of Education</td>
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<tr>
<td>561 Leadership and Administrative Theories</td>
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<tr>
<td>573 Professional Development and Supervision</td>
<td>3</td>
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<tr>
<td>599 Thesis</td>
<td>12</td>
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**Electives:**
- in the thesis option
- in the course-based option

Electives are to be selected from the graduate courses offered in education and should reflect the focus of study chosen by the student.

<table>
<thead>
<tr>
<th>Curriculum and Instruction Stream</th>
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<td>505 Introduction to Educational Research</td>
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<td>508 Critical Research Literacy in Education</td>
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<td>527 Principles of Learning</td>
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<td>532 Curriculum Theory</td>
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<td>534 Introduction to the Foundations of Education</td>
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<td>536 Program Development</td>
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<tr>
<td>599 Thesis</td>
<td>12</td>
</tr>
</tbody>
</table>

**Electives:**
- in the thesis option
- in the course-based option

Electives are to be selected from the graduate courses offered in education and should reflect the focus of study chosen by the student. No substitution or transfer of credit will normally be allowed in the core courses.

**501 Program Evaluation and School Data Management**
This course will explore the purposes, procedures, and strategies inherent in the design and implementation of effective program evaluations. Three credits.

**505 Introduction to Educational Research**
This introductory course covers reading and understanding educational research. Students will explore research issues and critically interpret the main types of research, including descriptive research, qualitative research, case studies, and empirical studies. Three credits.

**506 Quantitative Research Methods in Education**
An introduction to fundamental statistical concepts and methods, together with practical advice on their effective application to real-world problems. Students will explore the basic components of a research proposal. Prerequisite: EDUC 505. Three credits.

**507 Qualitative Research Methods in Education**
This course explores current qualitative methodologies used in educational contexts. Students will explore the components of a research proposal, and develop an understanding of methodologies such as phenomenology, ethnography, critical theory, narrative, and action research. Prerequisite: EDUC 505. Three credits.

**508 Critical Research Literacy in Education**
This course examines educational research issues and trends from the perspective of professional practice. Students will explore a variety of educational research publications in relation to their own educational context. Prerequisite: EDUC 505. Three credits.

**509 Trauma Informed Practice**
This course will promote teacher understanding and effective teaching to support students who have or are experiencing simple trauma, complex trauma and/or intergenerational trauma. Educators will examine the impact of trauma on students...
and families and explore ways to respond to student needs. The impact of trauma on the concepts of locus of control, self-image and resilience will be studied from the perspective of how teachers can make a difference through building trust and relationships, and utilizing classroom adaptations. Credit will be granted for only one of EDUC 509 and EDUC 569 offered with a similar focus. Three credits.

510 Restorative Approaches in Educational Settings
This course helps educators understand the principles of restorative approaches and the wider peace building movement in education. Educators will critically consider restorative approaches as a way to create safe, engaging and inclusive educational settings. Educators will learn how to create a school climate that is relational and restorative and takes into account the contexts and causes of situations surrounding interpersonal interactions. Credit will be granted for only one of EDUC 510 and EDUC 569 offered with a similar focus. Three credits.

511 Mindfulness and Social Learning
Mindfulness is the ongoing practice of being awake and aware to what is inside and around us in the present moment, nonjudgmentally. In this course students will explore and engage with practices and research related to mindfulness in education. This course will also explore the concept of social emotional learning with a particular emphasis on how to implement social emotional learning through mindfulness in education. Credit will be granted for only one of EDUC 511 and EDUC 569 offered with a similar focus. Three credits.

512 Play-Based Curriculum for Lifelong Learning
This course provides graduate students with a deep understanding of the research and practice of incorporating play in early elementary grades in public schools. Planning, assessing and enacting a play-based curriculum are key course outcomes. Credit will be granted for only one of EDUC 512 and EDUC 569 offered with a similar focus. Three credits.

513 Problems and Issues in Special Education
Covers current theories of, and practices in, the education of children with special needs from pre-school through adolescence. Research relevant to assessment, instruction, counselling, and vocational programming practices will be examined. Proposals to modify program models will be included. Three credits.

514 Teaching Children with Learning Difficulties I
This course presents an overview of the historical and philosophical approaches to teaching children with learning difficulties. Students will examine the learning difficulties children can bring to the classroom. Three credits.

515 Culturally Responsive and Relevant Pedagogy
This course will provide graduate students with an understanding of the vital role culturally responsive and relevant pedagogy plays in creating equitable learning experiences for primary and secondary students. Within this course the students will critically analyze the root of academic failure among marginalized groups across North America, examine the impact of educator belief systems on student achievement. Students will gain an understanding of systemic racism, recognize the central role culture plays in classroom instruction, and identify culturally responsive and relevant instructional strategies appropriate for their own school contexts. Credit will be granted for only one of EDUC 515 and EDUC 569 offered with a similar focus. Three credits.

517 Teaching Children with Learning Difficulties II
This course focuses on the development of individualized instruction for children with learning difficulties who are in the regular classroom. Students will analyze the effectiveness of various approaches. Three credits.

518 Assessment for All Learning
The course explores research that informs how appropriate assessment impacts student motivation, engagement and achievement. Formative assessment will be presented as a process that directly involves both students and teacher in generating quality information that informs the decisions teachers and students make before, during, and after instruction. Practical classroom examples and/or case studies will be explored. The course will also explore summative assessment and critically analyze a variety of tools used to evaluate learning with the aim of finding those that align with current research in assessment. Credit will be granted for only one of EDUC 518 and EDUC 569 offered with a similar focus. Three credits.

520 Current Research in Curriculum
A critical exploration of recent theories and research related to current issues in curriculum with a concentration in one of:

<table>
<thead>
<tr>
<th>Code</th>
<th>Subject</th>
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<tbody>
<tr>
<td>520A</td>
<td>English Language Arts</td>
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<tr>
<td>520B</td>
<td>French</td>
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<tr>
<td>520C</td>
<td>Mathematics</td>
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<td>520D</td>
<td>Diverse Cultures</td>
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<td>520E</td>
<td>Science</td>
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<tr>
<td>520F</td>
<td>Social Studies</td>
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</tbody>
</table>

521 Current Research in Instruction
A critical exploration of recent theories and research related to current issues in instruction with a concentration in one of:

<table>
<thead>
<tr>
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<tbody>
<tr>
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<td>521G</td>
<td>Physical Education</td>
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<td>521H</td>
<td>Arts</td>
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<td>521J</td>
<td>Outdoor/Experiential</td>
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<td>521K</td>
<td>Second Language</td>
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<td>521L</td>
<td>Drama</td>
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<td>521M</td>
<td>Music</td>
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<td>521N</td>
<td>Visual Arts</td>
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Three credits each.

522 Principles of Learning
This course examines theories of learning and development and their implications for instruction. In addition to the general cognitive and behavioural theories, the course will focus on the aspects of cognitive learning that are relevant to understanding the diversity of learners. Three credits.

523 Curriculum Theory
An examination of research on school and teaching effectiveness and the implications of this research for school improvement. Three credits.

527 Philosophy of Education
This course will present an introduction to the historical and philosophical approaches to education. Students will examine the historical and philosophical perspectives that have influenced the development of education. Three credits.

529 School and Teaching Effectiveness
This course will examine the impact of each position for program development for schooling will be explored. Three credits.

532 Program Development
Program development is investigated from the practitioner’s perspective using narrative inquiry to explore relationships among the four curriculum commons: students, teacher, curriculum, and milieu. Three credits.

533 Dynamics of Change
This course examines major concepts in the successful implementation of change. Students will learn to recognize and understand the ways in which change can have an impact on education. Three credits.

534 Introduction to the Foundations of Education
Students are asked to critically examine their own practice and its context. Issues of power and privilege as they operate in the field of education are central unifying themes of the course. The investigative approach includes ethical reasoning, autobiographical reflection, arts and esthetics, deconstruction and sociological analysis. Three credits.

535 Educational Finance
While providing students with the opportunity to explore public and private funding of education, this course will also examine the moral, political, and economic bases for decisions in educational finance in the context of current educational and societal trends. Three credits.

541 Administration of First Nations Education
An introduction to the historical, legal, and philosophical bases of First Nations education. The course will explore issues related to the roles, responsibilities, and duties of administrators in band-controlled schools. Three credits.
543 Internship
Under faculty supervision, student interns will develop their practical and theoretical knowledge and competence in a particular area of education. Three credits.

544 Cross-Cultural Issues in Education
Students will examine various issues and theories related to cultural and race relations policies and practices in the education system. Three credits.

545 English as a Second Language
The course will cover theoretical and methodological aspects of learning and teaching a second language, focusing on the learning and teaching of English. Students will become familiar with the relevant research and examine the prevalent theories in different ESL areas. Three credits.

553 Assessment for Teaching Students with Learning Challenges I
This course will review trends and practices in assessment. Students will appraise various types of assessment, both standardized and informal, paying attention to characteristics, areas of usefulness, and limitations. Three credits.

554 Assessment for Teaching Students with Learning Challenges II
Students will develop the ability to choose formal and informal measures for assessing individual student achievement. They will learn how to administer, interpret, and communicate the results of these assessments. Relating the results of the assessment to the provincial outcomes suitable for the students will be a critical component of the course. Prerequisite: EDUC 553. Three credits.

561 Leadership and Administrative Theories
This course is an introduction to theory, research and practice in educational administration. Emphasis is placed on the evolutionary nature of administrative theory and its role in the operation of public education systems. Three credits.

562 Contemporary Issues in Educational Administration Theory
This course further explores contemporary issues in the theory, research, and practice of educational administration. Building upon EDUC 561, students will discuss topics such as post-modernism, feminist theory, chaos theory, and critical theory. Prerequisite: EDUC 561. Three credits.

564 Administration of Inclusive Schools
Many Canadian educational systems have inclusive schooling as a priority. This course will provide an overview of the movement towards inclusive schools and will explore proven practices in the administration of these schools. Three credits.

567 School Law
An examination of legal principles and procedures pertaining to school boards, administrators, and teachers. Consideration will be given to legislation and court decisions relative to the organization, policy, and administration of school districts in Nova Scotia. Three credits.

569 Selected Topics in Education
Students will explore in detail the theoretical underpinnings and practical implications of various topics and issues in education. Course content will vary from year to year. Three credits.

571 Specific Issues in School Administration
This course examines recurring and emerging issues in educational administration from the perspective of their theoretical roots. Students will address problems identified in the literature and in their own practice, develop an understanding of the issues involved, examine the theoretical assumptions influencing these problems, and create alternative solution strategies. Three credits.

573 Professional Development and Supervision
This course addresses the role of supervision in an instructional program, focusing on human resources and the professional development process for instructional and support staff. Three credits.

576 Specific Issues in Curriculum Development
This course will examine selected contemporary educational controversies and explore their implications for curriculum decision-making. Students will examine current issues and problems. Three credits.

577 Computers in Humanities Education
This online course provides an overview of the role of computers in elementary and secondary education. By reading articles and books on selected topics, students will have a starting point for online discussions about the issues associated with computer technology in the classroom. Students also study a variety of software packages and Internet websites and create web lessons. Some prior knowledge of computers and basic keyboarding skills is required. This course will be of interest to K-12 teachers who are interested in using computers in language arts, social studies and the arts. Three credits.

578 Computers in Science Education
This online course provides an overview of the role of computers in elementary and secondary education. By reading articles and books on selected topics, students will have a starting point for online discussions about the issues associated with computer technology in the classroom. Students also study a variety of software packages and Internet websites and create web lessons. Some prior knowledge of computers and basic keyboarding skills is required. This course will be of interest to K-12 teachers who are interested in using computers in the sciences. Three credits.

581 The Role of the Principal
An examination of perspectives on educational leadership, delegation of functionally categorized responsibilities, administration of instructional programs, effective enhancement of staff, and the development of productive and satisfying learning environments for students. Three credits.

583 Education Planning and Policy
An examination of political theory as a basis for constructing policy and planning for the implementation of policy. Three credits.

590 Research Project
This course involves individual research, under the supervision of a faculty member, which develops both practical and theoretical understanding and competence in a particular area of education. Six credits.

593 Directed Study
In consultation with the department chair, students may undertake a directed study program in an approved area of interest that is not available through other course offerings. See section 3.5. Three credits.

595 Seminar
Students work under the supervision of a professor who will guide them in the selection of thesis topics and the preparation of thesis proposals. Students will have the opportunity to discuss their work with others as the research proposal is prepared. No credit.

599 Thesis
Twelve credits.

9.17.3 Ph.D. in Educational Studies
The Ph.D. in Educational Studies is offered in partnership by St. Francis Xavier University, Mount Saint Vincent University, and Acadia University. This research-oriented doctoral program is jointly administered by the Inter-University Doctoral Administrative Committee (IDAC). Applicants are admitted to one university and graduate from that home institution of record.

Doctoral students may focus their studies on one or more of six interrelated themes: curriculum studies, educational foundations and leadership, inclusive education, lifelong learning, literacies, and the psychological aspects of education. Applicants are encouraged to review the research interests of education faculty members at all three participating universities, available at their respective websites. An average of 14 students normally will be admitted each year: six at MSVU, four at St FX and four at Acadia. The IDAC may consider applicants on a case-by-case basis and waive the fixed application date, if deemed warranted and if space is available in the program for that year.

Students enrol in EDUC 9001 and 9002 on site in July at one of the three universities. The site for these two courses will rotate amongst the three universities from year-to-year. Students complete EDUC 9010 and 9100 with their dissertation advisor and their committee at their home institution of record. The remaining courses are delivered using an e-learning platform. In some instances, doctoral students may arrange to enrol in an existing topic-related masters level course, augmented with doctoral level analysis and applications. Doctoral students have the right to take courses and seminars and use the academic facilities of any of the three participating universities in accordance with their approved plan of study.

9001 Foundations of Educational Inquiry
This course examines the purpose, process, nature and ideals of education. Students will engage with enduring educational philosophical and theoretical traditions and perspectives, the history of educational thought and the philosophy of education, in particular. A variety of foundational perspectives provides deeper understandings of the theoretical and methodological underpinnings of education. Co-requisite: EDUC 9002. Three credits.

9002 Methodological Perspectives on Educational Research
This course examines the importance of methodological paradigms in educational research (building on the foundations of educational inquiry). Students investigate ontological assumptions; epistemological views; the role of logic, sound evidence and justified beliefs; axiology (values and biases); and rhetorical (research reporting

9003 Doctoral Seminar: Contemporary Educational Theory
This course explores how educational philosophy, research paradigms and theories are manifested in contemporary educational research debates and dialogues. Through an intensive examination of a range of theories that inform studies in education, students gain an advanced and comprehensive understanding of contemporary educational theory within the Canadian and international contexts. Prerequisites: EDUC 9001, 9002. Co-requisite: EDUC 9004. Three credits.

9004 Focused Educational Studies
This course will provide for focused exploration of research topics that reflect the research interests of the current roster of doctoral students. In a seminar setting, individual students will study the research and theoretical literature in the educational area(s) that inform their research interests. Prerequisites: EDUC 9001, 9002. Co-requisite: EDUC 9003. Three credits.

9005 Advanced Research Seminar: Focus on Methods
Students will gain detailed knowledge and technical expertise related to methods appropriate for their particular research question(s), aligned with their chosen philosophical and methodological orientations. Issues related to particular research design processes will be addressed. Prerequisites: EDUC 9001, 9002. Three credits.

9006 Special Topics Educational Studies
Three credits.

9007 Special Topics Educational Studies
This course provides students with an opportunity to explore selected topics in educational studies related to the literature associated with their research area. Prerequisites: EDUC 9001, 9002. Three credits.

9008 Independent Study
Three credits.

9009 Independent Study
The curriculum for this course will be determined by the supervisor of the course in consultation with the student and other faculty members, as necessary. Prerequisites: EDUC 9001, 9002. Three credits.

9010 Comprehensive Examination: Research/Scholarly Portfolio
Students will develop and orally defend an extensive scholarly portfolio demonstrating sufficient breadth, depth, creativity and engagement to undertake substantive research in their field. The portfolio will demonstrate students’ knowledge and competence in each of five areas: general knowledge of educational theoretical traditions and trends, in-depth knowledge of their specific focal area, research and methodological knowledge and competence, professional competency in their focal area, and teaching competency in their professional area. Pass/Fail. The portfolio is created concurrently with EDUC 9001, 9002, 9003, 9004, 9005 and any EDUC 9006, 9007 and/or EDUC 9008. Nine credits.

9100 Dissertation
The dissertation must constitute a substantial and original contribution to the study of education. Students must prepare a research proposal for approval by an appropriate faculty dissertation committee, complete the proposed study, and defend the completed thesis in a final oral examination. Pass/Fail. Prerequisite: EDUC 9010. Eighteen credits.

9.18 ENGINEERING
F. Comeau, Ph.D., P.Eng.
E.C. Oguejiofor, Ph.D., P.Eng., FEC

Part Time
P. Dolton, P.Eng.

Program requirements are found in chapter 7. Year 1 is common to all disciplines. For year 2, students must follow the requirements for the disciplines to which they hold conditional admission at Dalhousie University third-year engineering, as outlined below:

Year 1 36 credits consisting of CHEM 120; ENGR 121, 122, 128, 132, 136, 147; PHYS 121, 122; 6 credits of writing courses taken from one or a combination of ANTH, ART 141/142, ENGL, HIST, MUSI, PHIL, PSCI, RELS, or WMGS. Students wishing to take a writing course not listed here must obtain the approval of the engineering department chair.

Year 2 33 credits consisting of ENGR 123, 211, 221, 222, 224, 232, 237, 242; 9 credits of the discipline-specific courses listed below:

Chemical ENGR 212, 227; CHEM 225
Civil ENGR 212, 216, 235
Electrical ENGR 238, 246; CSCI 162
Environmental ENGR 212, 216, 235
Industrial CSCI 162 and any two of ENGR 212, 216, 227, 231, 235, 238, 246; CHEM 225
Mechanical ENGR 212, 231, 235

For up to date information, please visit the department website: http://www.sites.stfx.ca/engineering/.

121 Calculus I for Engineers
This course examines the main idea of calculus of a single variable. It covers functions; limits; continuity; differentiation and integration of polynomial, exponential, logarithmic and trigonometric functions; product, quotient and chain rules; applications of differentiation to graphing; maximum-minimum problems and related rate problems; definite and indefinite integrals and the fundamental theorem of calculus. Credit will be granted for only one of ENGR 121 or MATH 106 or 126. Cross-listed as MATH 121. Three credits and one-hour lab and one-hour problem session.

122 Calculus II for Engineers
A continuation of ENGR 121, this course covers applications of integration including areas, volumes, moments, pressure and work; techniques of integration; numerical integration; length of curves; surfaces of revolution; parametric equations; polar co-ordinates; sequences and series and Taylor series. Credit will be granted for only one of ENGR 122 or MATH 107 or 127. Cross-listed as MATH 122. Prerequisite: ENGR 121. Three credits and one-hour lab and one-hour problem session.

123 Linear Algebra for Engineers
Covers geometric vectors in three dimensions; dot product; cross product; lines and planes; complex numbers; systems of linear equations; matrix algebra; matrix inverse; determinants; Cramer’s rule; introduction to vector spaces; linear independence and bases; rank; linear transformations; orthogonality and applications; Gram-Schmidt algorithm; eigenvalues and eigenvectors. Cross-listed as MATH 223. Three credits and two-hour lab.

126 Biology with Engineering Applications
This course provides an introduction to cell structure and function, and ecology. The course focuses on the interrelationship between living systems and man-made environment. Relevance of biology to industrial and engineering applications is emphasized. Three credits and three-hour lab.

128 Engineering Design and Graphics
Introduces the engineering profession through graphics and design. The engineering graphics language is presented through free hand sketches, instrument and computer-aided drawings. Students develop and enhance visualization skills as well as the ability to produce and interpret simple drawings. Students complete a design project that includes drawings and a report. Credit will be granted for only one of ENGR 128, ENGR 131, or ENGR 133. Three credits and three-hour lab.

132 Technical Communications
The main objective of this course is to provide students with technical communication skills, both written and oral. The history of engineering will be studied. Methods of producing engineering documents and presentations will be covered. Students will learn how to locate, use, and reference engineering information sources. Credit will be granted for only one of ENGR 132 or ENGR 244. Three credits and two-hour lab.

136 Statics
Covers statics of particles and rigid bodies. Designed to teach the principles and application of mechanics, and to develop an analytical approach to solving problems. Vector analysis is used extensively. Three credits and three-hour lab.

147 Engineering Computer Programming
An introduction to computer programming with a focus on engineering applications. The basic programming control structures, data structures, and modularization will be covered using the C or C++ language. Students will implement programs on a traditional IDE. In addition, the Arduino platform will be used to interface software with hardware. Three credits and three-hour lab. Credit will be granted for only one of ENGR 147, ENGR 144, ENGR 198 (2017-2018) or CSCI 161. Cross-listed as CSCI 161. Prerequisite: ENGR 132. Three credits and two-hour lab.

211 Thermo-Fluids I
This is the first of two courses in which the content of the traditional introductory thermodynamics and fluid mechanics courses is presented in a unified manner.
Fluid properties; fluid statics; conservation of mass for both steady and unsteady flow systems; the first and second laws of thermodynamics and the application of these laws to closed systems and to steady and unsteady open systems; Bernoulli's equation; vapour and gas cycles will be covered. Credit will be granted for only one of ENGR 211 or ENGR 233 or ENGR 234. Prerequisites: ENGR 121, 122, 136; CHEM 120. Three credits and three-hour lab.

212 Thermo-Fluids II
The second of two courses on thermo-fluids engineering will present availability; irreversibility; the control volume form of the continuity, momentum and energy equations; Euler's equation of motion; fluid kinematics; dimensional analysis and similitude; viscous flow in pipes and ducts. Credit will be granted for only one of ENGR 212 or ENGR 233 or ENGR 234. Prerequisites: ENGR 123, 211. Three credits and three-hour lab.

216 Geology for Engineers
This course covers minerals, igneous rocks, weathering, sedimentary rocks, metamorphic rocks, geologic time, mass wasting, running water, groundwater, glaciations, shorelines, ocean floors, deformation and mountain building, earth's interior, earthquakes. Three credits and two-hour lab.

221 Differential Equations for Engineers
Covers first order linear and non-linear ordinary differential equations; ordinary differential equations of higher order with constant coefficients; applications to engineering problems; Laplace transforms; periodic functions; applications of Laplace transforms to linear systems; Fourier series. Credit will be granted for only one of ENGR 221 or MATH 367. Cross-listed as MATH 221. Prerequisites: ENGR 121, 122 or MATH 121, 122. Three credits and two-hour problem session.

222 Calculus III for Engineers
Extends the ideas introduced in ENGR 121 to the calculus of several variables, and covers space curves, arclength, curvature; partial derivatives; implicit functions; constrained and unconstrained extrema; multiple integrals; line, surface, and volume integrals; change of variables in multiple integrals; scalar and vectors fields; gradient, divergence, and curl; Stokes theorem. Credit will be granted for only one of ENGR 222 or MATH 267. Cross-listed as MATH 222. Prerequisites: ENGR 121, 122 or MATH 121, 122. Three credits and two-hour problem session.

224 Probability and Statistics for Engineers
This course covers probability laws and the interpretation of numerical data, probability distributions and probability densities, functions of random variables, joint distributions, characteristic functions, inferences concerning mean and variance, tests of hypotheses, linear regression, and time series analysis. Engineering applications are emphasized and statistical computer packages are used extensively. Cross-listed as STAT 224. Prerequisite: ENGR 122 or MATH 122. Three credits and two-hour problem session.

226 Fundamentals of Environmental Engineering
This course focuses on sources of environmental pollutants, the effects of pollutants on living and non-living systems, processes by which pollutants are generated or by which their effects can be minimized or remediated. Lectures are supplemented by guest speakers, case studies and field trips. Credit will be granted for only one of ENGR 226 or ENGR 228. Prerequisite: ENGR 211. Three credits.

227 Fundamentals of Chemical Engineering
Covers mass and energy balances for reacting and non-reacting chemical processes. Topics include the system of units; processes and process variables; mass balances for single-phase and multi-phase systems; Gibbs phase rule; Raoult's law; Henry's law; colligative properties; energy balances; combined mass and energy balances on reactive and non-reactive processes and on transient processes. Prerequisite: CHEM 120. Three credits and two-hour lab.

231 Dynamics
This second course in the study of engineering mechanics covers dynamics of particles and rigid bodies. Topics include kinematics; kinetics of particles and rigid bodies in plane motion using Newton's second law; the principle of work and energy; and the principle of impulse and momentum. Vector analysis is used extensively and there will be computer applications. Prerequisites: ENGR 121, 122, 123; PHYS 120 or ENGR 136. Three credits and three-hour lab.

232 Engineering Design and Communications II
This project-based course offers students the opportunity to integrate and apply skills and knowledge learned in previous courses to a constrained engineering design project. Students work individually and as part of a design team. Project design outcomes are presented orally and in formal written reports, as well as electronically on the internet. Elementary project management concepts are introduced. Ethical and legal issues that impact the practice of engineering are discussed. Credit will be granted for only one of ENGR 232 or ENGR 236 or ENGR 248. Prerequisites: ENGR 144 or CSCI 125; ENGR 211, 221, 242; ENGR 237 or PHYS 221. Three credits and three-hour lab.

235 Strength of Materials
An introduction to basic principles of stress, strain, and stability. Topics include plane stress and strain; relationships between stress and strain; mechanical properties of materials; shear force; bending moment; axial force; torsion; stresses and deformations due to foregoing force effects; elastic and inelastic buckling. Prerequisite: ENGR 136. Three credits and three-hour lab.

237 Electric Circuits Theory
Topics include introductory concepts; resistive networks; response to linear circuits with energy storage; exponential excitation functions; steady-state AC circuits; analysis; network analysis; systems. Cross-listed as PHYS 221. Prerequisite: ENGR 221 or MATH 221 concurrent; PHYS 121, 122. Three credits and three-hour lab.

238 Digital Logic
This hands-on, practical course introduces digital electronics with applications to computer hardware and micro-computer peripherals. Topics include the families of digital electronic technology; combinational and sequential logic; digital device characteristics; micro-computer interfacing; data acquisition; instrument control; data transmission. Labs provide an opportunity to design and test practical digital devices. Cross-listed as PHYS 223. Prerequisite: PHYS 120. Three credits and three-hour lab.

242 Engineering Economics
This course provides an introduction to the economic aspects of decision-making in engineering. Topics include fundamental concepts; cash flow diagrams; interest factors; discounted cash flow techniques; rate of return; inflation; accounting; tax; project financing; sensitivity and risk analysis; replacement analysis; public sector analysis. Three credits and two-hour lab.

246 Circuit Analysis
Covers advanced circuit analysis techniques, starting with sinusoidal excitation. Topics include grounding and harmonics; symmetrical components and dealing with unbalanced networks; real and reactive power flow; balanced three-phase circuits for power distribution; phasors and complex impedance. Mutual inductance and magnetically coupled coils are used to introduce transformer behaviour and performance. Cross-listed as PHYS 246. Prerequisites: ENGR 144 or CSCI 125; ENGR 237 or PHYS 221. Three credits and two-hour lab.

9.19 ENGLISH
M. D'Arcy, Ph.D.
J. Khoury, Ph.D.
P.A. Marquis, Ph.D.
M.B. McGillivray, Ph.D.
M.A. Moynah, Ph.D.
M. Nilges, Ph.D.
J. Potts, Ph.D.
C. Rushton, Ph.D.
D. Smith, Ph.D.
E. Wilputte, Ph.D.
K. Wright, Ph.D.

Part Time
K. Edwards, Ph.D.
A. Simpson, MA

English courses are organized into nine categories.

Medieval Literature
206* World Masterpieces I: The Classical World
207* World Masterpieces II: Medieval and Renaissance
290 The Canterbury Tales
388 Heroic Literature of the Middle Ages
389 The Ricardian Age: Chaucer's Contemporaries

Renaissance Literature
238 Shakespeare's Early Works
239 Shakespeare's Later Works
304 The Early Tudor and Elizabethan Renaissance
305 The Later Elizabethan Renaissance
308 Milton and His Time

18th-Century Literature
253 Coffeehouse Culture of 18th-Century England
254 Topics in 18th-Century Literature
355 Restoration and 18th-Century Drama and Prose
356 18th-Century Novel and Poetry
491 Selected Topics: The Coquette
Advanced Major Program
Advanced majors in English complete the following courses: ENGL 100, 111/112 or equivalent; 24 credits of English electives from four of the five following historical periods, including: Medieval; Renaissance; Restoration and 18th century; 19th century; and 20th- and 21st-century literature; and six credits of senior seminars, one 3-credit senior seminar in the fall term, and another 3-credit senior seminar in the winter term. Students must also write an advanced major thesis in their final year in one of the senior seminars. See section 4.1 for degree regulations.

Honours Program
Students complete ENGL 100, 111/112, and 24 credits of English electives from four of the five following historical periods of literature: Medieval; Renaissance; Restoration and 18th century; 19th century; 20- and 21st-century literature. Students also take 18 credits of English electives from three of the following four categories: Postcolonial literature; literary criticism and cultural theory; Canadian literature; and creative writing. An honours thesis is also required (6 credits), as well as 6 credits of senior seminars. See section 4.1 for degree regulations.

Honours with a Subsidiary Subject
Honours (ENGL) with a subsidiary subject requires 60 credits in the same pattern as the English honours program. A subsidiary subject in English requires 24 credits in English, with at least 6 credits at the 300 or 400 level.

Senior Seminar
Each year certain advanced courses will be designated senior seminars. All honours and advanced major students must be enrolled in one of these during their senior year, one in the first term and the other in the second term. Normally students will have third-year standing and have taken a minimum of 15 credits in English. Priority will be given to honours and advanced major students in English. Students may enrol in additional English seminars as part of their normal degree pattern.

Humanities Colloquium
The humanities colloquium is an optional and interdisciplinary way of studying three first-year courses, usually ENGL 100, HIST 100, and PHIL 100. See section 4.4 for further information.

100 Introduction to Literature and Critical Writing
This course introduces students to the critical tools and methods of literary study, including close reading and argumentative writing. Students will learn about the history of genres (e.g. poetry, drama, and the novel) and forms of literature (e.g. tragedy, realism). Texts may include the earliest writing in English to more recent works in various media. Credit will be granted for only one of ENGL 100, ENGL 110 or ENGL 111/112. Six credits.

111 Literature and Academic Writing I
This course will give students key skills such as: how to write literary-critical essays; how to build a question or problem from a close-reading of a literary work; how to frame an argument in a way that gives it purpose; how to develop that argument by presenting and analyzing evidence; how to engage in scholarly debate; how to do literary critical research. Credit will be granted for only one of ENGL 111, 100 or 110. Three credits.

112 Literature and Academic Writing II
This course follows ENGL 111. It introduces students to the study of literature by familiarizing them with literary critical concepts and terminology, by fostering an understanding of genre and form, by teaching the fundamental skill of close-reading, and by introducing them to literary works from a range of historical periods. Prerequisite: ENGL 111. Credit will be granted for only one of ENGL 111, 100 or 110. Three credits.

201 Science Fiction and Fantasy
This course will examine the history of speculative literature, including the relationship between science and narrative, the rise of science fiction and fantasy, and ways in which the future and the past might be imagined. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits. Not offered 2018-2019.

206 World Masterpieces I: The Classical World
Through a reading of Homer's classical and influential poems (the Iliad and Odyssey), the course will explore how the ancient world thought texts worked. Readings will include Plato, Aristotle, Longinus, Horace and others. The course will also look at the New Testament's adaptation of older texts, including the Old Testament, from a literary vantage point. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits. Not offered 2018-2019.

207 World Masterpieces I: Medieval and Renaissance
"Imagination, Dream and Vision." An introduction to masterpieces in Western literature, in translation, focused on medieval and Renaissance/early modern Europe. Texts might include The Dream of the Rood, The Wife of Bath's Tale, excerpts from The Faerie Queene, The Rime of the Ancient Mariner and The Eve of Saint Agnes. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits.

211 Introduction to Film and Media Studies
This course will consider concepts and discussions that have developed in the history of film, television, and media studies. Students will be introduced to the vocabulary of film and media studies, techniques of analysis, and major theoretical
215 Principles and Practices of Literary Criticism
This course builds on the skills students acquire in ENGL 100. Its aim is twofold. On the one hand, it will concern itself with philosophical questions regarding literariness, form and genre, and schools of critical approach (e.g. rhetorical, historical, sex and gender, sociological, political, psychoanalytic, neo-formal). On the other, it will develop practical skills by: expanding critical vocabulary; developing abilities to write argumentatively; and increasing proficiency with sources and databases. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits. Not offered 2018-2019.

217 British Fiction, 1900-1950
A study of British fiction in the first half of the 20th century. Literary works will be considered in relationship to central cultural and intellectual developments of this period, as well as crucial historical points of reference (the world wars, colonialism and decolonization). Authors to be studied may include Joseph Conrad, E.M. Forster, James Joyce, Virginia Woolf, and Elizabeth Bowen. Credit will be granted for only one of ENGL 217 or ENGL 350. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits. Not offered 2018-2019.

218 Contemporary British Fiction
This course will examine British fiction published since 1950. We will be concerned in particular with the following issues: changing conceptions of British national identity, and the relationship between these changes and the development of British fiction; ongoing discussions in this period on the capabilities and responsibilities of fictional narrative; the notions of postmodernism and late modernism and the persistence of these periodizing terms in post-war British fiction. Credit will be granted for only one of ENGL 218 or ENGL 350. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits. Not offered 2018-2019.

233 Children's Literature: 1865 to the Present
Using the landmark publication of Lewis Carroll's Alice's Adventures in Wonderland as a starting point, this course provides a critical survey of children's literature in Britain, America, and Canada. Authors to be studied may include: Carroll, L.M. Montgomery, Maurice Sendak, Roald Dahl, R.L. Stevenson, E.B. White, and various picture books. Credit will be granted for only one of ENGL 233 or ENGL 234. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits.

CREATIVE WRITING COURSES
Students wishing to enrol in any creative writing course are required to submit a portfolio to the English Department. The portfolio must be submitted electronically to english@stfx.ca as an attachment by June 1. The portfolio should consist of 10-15 pages of prose fiction, poetry, drama, or any combination thereof. If in any calendar year a course is restricted to a particular genre, the portfolio should consist solely of work in that genre. Students must indicate the creative writing course for which they wish to be considered and provide a complete list of English courses previously taken.

231 Introduction to Creative Writing
This course teaches students how to write creatively in two genres -- poetry and fiction -- in a workshop setting. Students will explore those elements of composition (imagery, dialogue, point of view, characterization, etc.) that make for interesting and challenging writing. Six credits.

232 Intermediate Creative Writing
Students will be expected to choose one genre through which they will continue to explore and develop the basic elements of composition learned in English 231. Prerequisite: ENGL 100, 110 or equivalent, three credits creative writing. Three credits. Not offered 2018-2019.

242 Advanced Creative Writing
Explores the techniques of writing prose narrative, poetry, and drama to help students develop their powers of creative expression. Techniques include regular exercises, set assignments, free submissions, free submissions, parodies, and imitations. Occasional guest writers. Prerequisite: ENGL 100, 110 or equivalent; six credits creative writing. Three credits. Not offered 2018-2019.

238 Shakespeare's Early Works
An introduction to Shakespeare's early works, covering his writing from 1585 to 1600. Works may include histories, comedies, and poetry. Credit will only be granted for one of ENGL 238 and ENGL 237. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits.

239 Shakespeare's Later Works
An introduction to Shakespeare's later works, from roughly 1600 to his death in 1616. Works studied may include tragedies, romances, comedies and poetry. Credit will only be granted for one of ENGL 239 and ENGL 237. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits.

240 Literature of the Middle East
This course will introduce students to the rich literary heritage of various countries in the Middle East. In addition to the geographic range, the course will also introduce students to various kinds of literature including traditional poetry and folk tales, but the main focus will be the novel and the short story of the twentieth century. Writers to be studied may include Najib Mahfuz, Elias Khoury, Hanan al-Shaykh, Ghasan Kanafani, Tayeb Salih, Muhammad Shukri, and others. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits. Not offered 2018-2019.

241 Modern and Contemporary Poetry
A study of some of the major poets of the 20th and 21st centuries, including Elizabeth Bishop, T.S. Eliot, Wallace Stevens, Marianne Moore, W.B. Yeats, Gwendolyn Brooks, Philip Larkin, Derek Walcott, Sylvia Plath, Adrienne Rich, Henri Cole, Eavan Boland. Credit will be granted for only one of ENGL 241, 320 or 298 ST: Modern & Contemporary Poetry. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits.

243 The Protomodern American Novel
"Grit, Opportunity, (In) equality." American stories and novels from the 19th and 20th century raise questions about whether equality is an ideal in name only. Are all opportunities equal? Are playing fields level? Does effort matter? How do race, gender and class affect one's chances? How do stories help us understand these problems? Credit will be granted for only one of ENGL 243 and ENGL 244. Three credits.

245 Postcolonial Literature
This course will introduce you to the culture of empire and to a growing body of writing that has come to be called "postcolonial.." Broadly defined as the literature of peoples who have experienced colonialism, this body of writing raises important questions about place, identity and belonging, and about the role of literature in representing nation, empire, and globalization. We will read fiction, poetry, and essays by writers from Europe, Africa, South Asia, and the Caribbean. Credit will be granted for only one of ENGL 245 or ENGL 247. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits.

253 Coffeehouse Culture of 18th Century England
A course exploring a variety of works through the lens of the 18th-century coffeehouse. Focusing primarily on the periodic literature of the time—The Tatler, The Spectator, The Plain Dealer and The Female Spectator—and novels and poetry, the course will consider themes like conversation, urban space, taste and culture, consumerism, gender fashioning, and the private subject made public. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits.

254 Topics in 18th Century Literature
The Whore's Story. This course explores the changing literary, social and cultural significance of the figure of the whore in a variety of 18th century works. Poetry, pornography, and pamphlets, as well as Hogarth's engravings A Harlot's Progress, Behn's play, The Rover, and Cleland's novel, Memoirs of a Woman of Pleasure (a.k.a. Fanny Hill) will be studied among other works. Graphic language and content may offend some students. Cross-listed as WMGS 254. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits.

257 The 21st Century American Novel
This course will introduce students to recent formal and generic developments in the American novel and situate these trends within the history of the novel as a literary form. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits.

258 Television Today
This course introduces students to current debates about television and its role in contemporary culture. We will emphasize the manner in which programs develop narratives (episodically, serially, in story arcs) and the manner in which they are received (weekly, binge watching). Subscription fees for online content providers may be required. Credit will be granted for only one of ENGL 258 and 297 offered in 2016-2017. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits.

263 Canadian Literature I: 18th and 19th Centuries
This course will survey Canadian poetry and prose in the historical contexts of exploration, settlement, and Confederation. Students will examine early Canadian authors' engagements with the Romantics and Victorians, and will consider the emergence of a national literature. Selected authors may include Frances Brooke, Samuel Hearne, John Richardson, Thomas Chandler Halliburton, Susanna Moodie, James de Mille, Isabella Valancy Crawford, and Sir Charles G. D. Roberts. Credit will be granted for only one of ENGL 263 or ENGL 265. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits. Not offered 2018-2019.
264 Canadian Literature II: The 20th Century and After
This course examines the major genres of Canadian writing during the 20th and 21st centuries, including fiction, poetry, and non-fiction. The course will emphasize key aesthetic developments within the contexts of modernism, feminism, postcolonialism, regionalism, postmodernism, environmentalism, culture, and race. Credit will be granted for only one of ENGL 264 or ENGL 265. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits. Not offered 2018-2019.

270 The Romantic Gothic: Poetry and Short Fiction
A study of Gothic literature in its historical and philosophical context, this course will explore 19th-century short fiction and poetry as well as a play and influential 18th-century literary sources. Authors may include: Walpole, Burke, Kant, Wordsworth, Smith, Robinson, Hogg, Scott, Coleridge, Keats, Lord Byron, and Baillie. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits. Not offered 2018-2019.

271 Gothic Fiction: The 18th and 19th Century
Gothic Novel
An examination of the Gothic novel and the cultural forces that produced it. The course will explore supernatural tales from the classical and medieval periods which acted as forerunners to the genre. Authors may include: Horace Walpole, Ann Radcliffe, Matthew “Monk” Lewis, and Jane Austen; students may also read Frankenstein and Dracula. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits. Not offered 2018-2019.

290 The Canterbury Tales
This course will introduce Geoffrey Chaucer’s Canterbury Tales, but it does more than that. The generic and formal diversity of Chaucer’s collection allows for discussion of medieval literary form and content, while also introducing significant aspects of medieval culture (the problem of “courtly love,” medical theory and political life). Further, the course allows discussion of manuscript tradition and theories of influence. Credit will be granted for only one of ENGL 290 or ENGL 390. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits. Not offered 2018-2019.

295 Selected Topics
The topic for 2018-2019 is Sex, Love, and Literature. This course examines how literature and film imagine sex and love and their social roles, addressing in particular how culture’s imagination of sex and love has varied according to different historical conditions. Prerequisite: ENGL 100 or 111/112, or 110, or equivalent. Three credits.

297 Selected Topics
Three credits.

298 Selected Topics
Three credits.

304 The Early Tudor and Elizabethan Renaissance
A study of texts produced during the Tudor dynasty. Authors may include Christopher Marlowe, William Shakespeare, Thomas Kyd, Edmund Spenser, and others. Prerequisite: ENGL 100, 111/112 or equivalent. Three credits.

305 The Later Elizabethan Renaissance
William Shakespeare’s sonnet sequence, along with Edmund Spenser’s epic allegory, The Faerie Queene, will be read in the context of the 1590s, the last full decade of the reign of Elizabeth I. In close readings of these two masterpieces, we will examine the relations between literature and culture and the way in which politics and gender provide a context for aesthetic production. Prerequisite: ENGL 100, 111/112 or equivalent. Three credits.

308 Milton and his Time
This course will provide an intensive study of Milton’s life and major poems, especially Paradise Lost, and some of his polemical prose. The course will also focus on the historical and political contexts of this revolutionary age, and Milton’s contributions to the Republicanism of the era. Credit will be granted for only one of ENGL 308 or ENGL 312. Prerequisite: 9 credits ENGL. Three credits.

311 Photography and Narrative
This course examines the role of visual technologies of mechanical reproducibility — including film and photography — in twentieth-century considerations of experience, aesthetics, and memory, addressing in particular the encounter between photography and narrative in literature, theory, and cinema. Authors and visual artists studied may include André Breton, Walter Benjamin, Roland Barthes, Hollis Frampton, and W.G. Sebald. Three credits.

313 Literary Theory’s Histories
This course introduces students to the histories of literary theory. Depending on the instructor, the course may cover either a specific period in literary studies (e.g. Medieval, Early Modern, Romantic) or a broader historical accounting of contemporary theory’s antecedents. Credit will be granted for only one of ENGL 313 or ENGL 445. Prerequisite: 9 credits of ENGL; ENGL 215 is recommended. Three credits. Not offered 2018-2019.

314 Contemporary Literary Theory
This course introduces students to current issues in literary criticism including (but not limited to): formalism, gender and sexuality, materialism, psychology and historicism. Our aim will be to consider the usefulness of different approaches in opening up our readings of texts. We will examine a sample of different types of works — a novel, a play, a film, lyric poems — in testing different theoretical approaches. Credit will be granted for only one of ENGL 314 or ENGL 445. Prerequisite: 9 credits of ENGL; ENGL 215 is recommended. Three credits.

318 Cultural Theory through Popular Culture
An introduction to the study of culture as a system of constructing values and identities, primarily through textual production. The course will combine case studies of genre fiction, film, and television with analyses by practicing cultural scholars. Prerequisite: 9 credits ENGL. Six credits. Not offered 2018-2019.

319 Topics in Film Studies
This course will address the development of cinema from a historical and formal perspective. Topics to be covered include movements and periods in the history of the cinema, the impact on cinema of technological developments, different modes of narrative cinema, and major categories of formal analysis, such as mise-en-scêne, editing, and cinematography. One focus of the course will be on the techniques and conventions of writing about cinema. Prerequisite: 9 credits of ENGL; ENGL 211 is recommended. Three credits. Not offered 2018-2019.

323 Victorian Medievalism
This course will examine Victorian treatments of the medieval. Texts studied will include non-fiction, fiction, and poetry. We will also consider the Gothic Revival in architecture and the Pre-Raphaelite movement in painting. Authors may include Thomas Carlyle, Alfred Lord Tennyson, E. B. and Robert Browning, John Ruskin, George Eliot, Edward FitzGerald, William Morris, and Christina and D. G. Rossetti. Prerequisite: 9 credits ENGL. Three credits. Not offered 2018-2019.

325 The American Novel, 1850-1940
What kinds of social creatures are people? What causes our social lives to fall into patterns, shapes, and configurations? How do these forms define our social worlds? In this class we will look at American novels written at the end of the 19th and the start of the 20th century as resources for understanding the complexity of modern social life. Three credits. Not offered 2018-2019.

327 Celtic Kings, Heroes and Monsters: Medieval Ireland
From hot-headed heroes to terrifying monsters and death-tales, this course will examine topics and texts from medieval Irish literary tradition in detail. Credit will be granted for only one of CELT 327 and CELT 221. Cross-listed as CELT 327. Three credits.

328 Celtic Kings, Heroes and Monsters: Medieval Wales
From King Arthur to Culhwch and from dragons to giants, this course will examine topics and texts from medieval Welsh tradition in detail. Credit will be granted for only one of CELT 328 and CELT 222. Cross-listed as CELT 328. Three credits.

329 Studies in Women Writers: Feminisms and Their Literatures
An introduction to feminist theories within historical, cultural, and philosophical contexts, this course explores the relationship between feminist theories and literary texts that exemplify or extend them. Cross-listed as WMGS 329. Prerequisite: 9 credits ENGL. Three credits. Not offered 2018-2019.

330 Studies in Women Writers: Genres, Cultures, and Contexts
This course explores modern and contemporary poetry written by women in English. Cross-listed as WMGS 330. Prerequisite: 9 credits ENGL. Three credits.

337 Children’s Literature: Genres and Themes
Prerequisite: 9 credits ENGL. Three credits. Not offered 2018-2019.

338 Canadian Drama
This course will examine how Canadian drama has been (re)defining our national identity for the past four hundred years. Introducing students to theatrical forms such as vaudeville, minstrelsy, clowning, and verbatim theatre, this course will simultaneously consider issues of nationality, race, and gender. Playwrights include Tomson Highway, Margaret Atwood, Djanet Sears, and Guillermo Verdecchia. Credit will be granted for only one of ENGL 338 or ENGL 366. Prerequisite: 9 credits ENGL. Three credits. Not offered 2018-2019.

347 Literature of Africa and the African Diaspora
A study of the literature of sub-Saharan Africa and/or the African Diaspora, including African-Canadian, African-American, Afro-Caribbean, and Black British literatures.
Topics will vary from year to year. Prerequisite: 9 credits of ENGL. Three credits. Not offered 2018-2019.

353 Tolkien and the Inklings
Works by Tolkien (the Silmarillion materials), C. S. Lewis (the Narnia books) and Roger Lancelyn Green will be included. Three credits. Not offered 2018-2019.

355 Restoration and 18th-Century Drama and Prose
The libertine is the Restoration’s bad boy and its cultural icon. This course explores the character and philosophy of the libertine as depicted in several Restoration plays, and modeled on the real-life Earl of Rochester. Womanizer, drunkard, poet, wit, and master of masquerade, the libertine embodies the attractive and repulsive aspects of masculinity. Plays include Wycherley’s *The Country Wife*, Shadwell’s *Libertine*, Etherege’s *Man of Mode*, Behn’s *The Rover*, and the movie, *The Libertine*. Prerequisite: 9 credits ENGL. Three credits. Not offered 2018-2019.

356 18th-Century Novel and Poetry
A study of the rise of the novel from Aphra Behn to Laurence Sterne, the course examines the imagined lives of mistresses, misfits, magicians, and crossdressers as authors explore the secret springs of human thought and motivation as they experiment with form and style. Works include Behn’s *The Fair Jilt*, Defoe’s * Roxana*, Haywood’s *Eovaai*, Fielding’s *The Female Husband*, and Sterne’s *Tristram Shandy*. Prerequisite: 9 credits ENGL. Three credits. Not offered 2018-2019.

366 Topics in Canadian Literature
Prerequisite: 9 credits ENGL. Three credits. Not offered 2018-2019.

367 Canadian Prose Fiction
Students will read novels and short stories in English to develop a sense of the thematic patterns, style, and changing narrative strategies in Canadian fiction, especially in works since 1930. Credit will be granted credit for only one of ENGL 365 and 367. Six credits.

368 Canadian Poetry
A study of Canadian verse in English with selected examples of French verse in translation, since colonial days, with emphasis on the period since 1920. Prerequisite: 9 credits ENGL. Six credits. Not offered 2018-2019.

379 American Literature
Prerequisite: 9 credits ENGL. Three credits. Not offered 2018-2019.

388 Heroic Literature of the Middle Ages
Knights and Comics. A study of medieval texts and their reception, especially graphic novels. Texts may include Malory’s *Morte Darthur* and other Arthurian poems, crusade romances, Norse myth, Marvel’s Thor books, Vertigo’s ‘The Royals’, Camelot 3000, and others. Medieval texts will be read in the original language. Prerequisite: 9 credits ENGL. Three credits.

389 Chaucer’s Contemporaries
Prerequisite: 9 credits ENGL. Three credits. Not offered 2018-2019.

397 Selected Topics in Literature I
The topic for 2018-2019 is Judge a Book. Although you might have heard that you can’t judge a book by its cover, this course encourages students to do just that. This course offers a broad overview of the importance of paratexts-from advertisements to indices-from the Middle Ages to the present. A work’s presentation affects its reception and meaning, and we will consider texts like manuscripts, electronic editions, anthologies, and scholarly editions. Never simple, judging a book by its cover is a learned art. Prerequisite: 9 credits ENGL. Three credits.

398 Selected Topics in Literature II
Prerequisite: 9 credits ENGL. Three credits. Not offered 2018-2019.

Notes: Normally students enrolling in an honours seminar will have third-year standing and have taken a minimum of 15 credits in English. Priority will be given to honours and advanced major students in English.

400 Honours Thesis
Honours students write a thesis under the supervision of a faculty thesis director. Students must meet the thesis director in March of the junior year to prepare a topic. Honours students must register for the thesis as a six-credit course in their senior year. The thesis must be submitted no later than March 31 of the senior year. See chapter 4. Six credits.

SENIOR SEMINARS

491 Selected Topics I
The topic for 2018-2019 is The Coquette in 18th-century literature is a trope for modernism as well as a woman who transgresses social and gender boundaries. Using *The History of Miss Betsy Thoughtless* as our main focus, we will examine how the coquette is characterized variously as inconsequential, threatening, flighty, fiery, feminist, and in need of reform. A conspicuous consumer, she resists marriage, refuses to settle, and “chooses too much.” The coquette is damned or delightful depending on who judges her. Cross-listed as WMGS 491. Prerequisites: third-year standing and 15 credits ENGL. Three credits.

492 Selected Topics II
The topic for 2018-2019 is Poetry of Atlantic Canada. The Atlantic region is an often-overlooked geographic and cultural locus of emergent and divergent voices in the literature of Canada. This course will examine the rich development of Atlantic Canadian poetry from colonial to post-colonial eras. Students will encounter a variety of poetic forms and genres, as well as voices from the Mi’kmaq and African Canadian communities, along with those of women and men of the settler societies in the region. Prerequisites: third-year standing and 15 credits ENGL. Three credits.

497 Advanced Major Thesis
Advanced major students write a thesis as part of the senior seminar. See chapter 4. No credit.

499 Directed Study
In consultation with the department and with approval of the chair, students may undertake a directed study program in an approved area of interest, which is not available through other course offerings. See section 3.5. Three or six credits.

FRENCH see 9.26 Modern Languages

GERMAN see 9.26 Modern Languages

9.20 HEALTH

The BASc in Health is designed to allow students to approach health and health-related issues from an interdisciplinary perspective. The program aims to provide students with a contemporary education in health by drawing on knowledge from disciplines. Since the field of health is most fully understood when scientific, social, and humanistic contributions to its definition, the program is developed within the BASc structure - a four-year combined degree in both Arts and Science. The program will be suitable for students who want to pursue a career in a health-related field or who want to pursue a graduate degree in health studies or health sciences. This is not a professional program that prepares students to become practitioners, but rather provides students who have an interest in health with the opportunity to explore health from multiple disciplinary perspectives. This program will prepare students for the topics covered in the MCAT exams.

Students are required to meet with their program coordinator or an academic advisor every year to assess their academic progress.

HLTH 101, 102, 201, 202, 203, 301, 302, 401, and 402 are restricted to students enrolled in the BASc in Health program.

Major Requirements
Core courses are HLTH 101, 102, 201, 202, 203, 301, 302, 401, 402.

a) 100-level restriction: For the primary concentration, students may complete a maximum of 18 credits at the 100-level (not including STAT 101), and for secondary concentration, students may complete a maximum of 12 credits at the 100-level.

b) 300- and 400-level: 9 credits in the primary concentration and 3 credits in the secondary concentration. The total number of 300- and 400-level credits needed for major students in BASc, including core courses is 24 credits.

c) Arts: a minimum of 24 credits

d) Science: a minimum of 24 credits, 12 of these credits must include a laboratory component at the 200-level or above.

e) Humanities: 12 credits of humanities in addition to the above-mentioned arts requirement (see glossary definition) from the health humanities designated course list. As part of the humanities requirement, students must complete a minimum of 3 credits from the health ethics designated course list.

Honours Requirements
a) same as major requirements, see above
b) honours students are required to complete 15 credits of 300- and 400-level in their primary concentration, including HLTH 490, as opposed to the 9 credits required of the major, for a total of 30 credits.

Major with Biomedical Concentration (BIME)

Year 1:
- BIOL 111, 112; CHEM 100; HLTH 101, 102; PSYC 100;
- SOCI 101, 102;

Year 2:
- HLTH 201, 202, 203; STAT 101; 3 credits health humanities; 9 credits BIME designated courses; 3 credits SDHE designated courses; 3 credits electives
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SOCIAL DETERMINANTS AND HEALTH EQUITY
DESIGNATED COURSES

Departmental prerequisites will apply.

**Anthropology**

- ANTH 111 Introduction to Physical Anthropology/Archaeology 3
- ANTH 112 Introduction to Socio-Cultural Anthropology 3
- ANTH 218 Anthropology of Health and Illness 3
- ANTH 320 People and Development 3
- ANTH 325 Feminist Anthropology 3
- ANTH 415 Anthropology of HIV/AIDS 3

**Development Studies**

- DEVS 211 Local and Community Development Economics 3
- DEVS 321 People and Development 3

**Economics**

- ECON 101 Introductory Microeconomics 3
- ECON 102 Introductory Macroeconomics 3

**Chemistry**

- CHEM 220 Organic Chemistry 6, lab
- CHEM 255 Introductory Biochemistry 3, lab
- CHEM 355 Advanced Biochemistry 3, lab
- CHEM 455 Medicinal Chemistry 3, lab

**Computer Science**

- CSCI 161 Introduction to Programming 3, lab
- CSCI 162 Programming and Data Structures 3, lab
- CSCI 215 Social Issues in the Information Age 3
- CSCI 364 Mobile Application Development 3, lab

**Economics**

- ECON 101 Introductory Microeconomics 3
- ECON 102 Introductory Macroeconomics 3
- ECON 211 Local and Community Development Economics 3
- ECON 364 Health Economics 3

**Earth Sciences**

- ESCI 272 Understanding Climate Change 3, lab
- ESCI 273 Health and the Environment 3
- ESCI 274 Health Impacts of Global Climate Change 3

**History**

- HIST 101 Western Civilization: Earliest Civilizations to the War of Religion 3
- HIST 102 Western Civilization: Columbus to Decolonization 3
- HIST 111 Introduction to Global History 1300-1759 3
- HIST 112 Introduction to Global History from 1789 3
- HIST 113 Life and Times: Pre-Confederation Canada 3
- HIST 115 A History of Canada: Post Confederation 3
- HIST 317 Canadian Women’s and Gender History: From Colony to Nation 3
- HIST 318 Canadian Women’s Gender History: Modernity 3
- HIST 332 The Medieval Body 3
- HIST 360 Gender and Sexuality in Modern European Empires 3
- HIST 398 Themes in the History of Sexuality 3

**Human Kinetics**

- HKIN 136 Foundations of Sport and Exercise Psychology 3, lab
- HKIN 215 Introduction to Motor Control and Learning 3, lab
- HKIN 265 Exercise Physiology 3, lab
- HKIN 395 Disability, Health and Community Rehabilitation 3
- HKIN 416 Control of Human Movement 3, lab
- HKIN 425 Child Growth and Development 3, lab
- HKIN 466 Clinical Exercise Physiology 3
- HKIN 492 Exercise Metabolism 3

**Human Nutrition**

- HNU 161 Food and Nutrition for Health in Society 3
- HNU 261 Introduction to Nutrition 3
- HNU 262 Principles of Nutrition in Human Metabolism 3
- HNU 351 Nutritional Assessment 3, lab
- HNU 352 Nutrition in Chronic Disease Prevention & Management 3
- HNU 353 Nutritional Management of Human Disease 3
- HNU 425 Nutrition in Aging 3
- HNU 461 Nutrition in Metabolic Disease 3

**Human Kinetics**

- HKIN 426 Health Education 3
- HKIN 433 Introduction to Policy for Health-Interdisciplinary Strategies 3

**Human Kinetics**

- HNU 425 Nutrition in Aging 3
- HNU 433 Introduction to Policy for Health-Interdisciplinary Strategies 3

**Philosophy**

- PHIL 100 Introduction to Philosophy 6
- PHIL 231 Human Nature I: Consciousness & Epistemology 3
- PHIL 232 Human Nature II: The Emotions 3
- PHIL 332 Contemporary Moral and Social Issues 3
- PHIL 335 Ethics in Health and Medicine 3

**Political Science**

- PSCI 101 Introduction to Power and Politics 3
- PSCI 102 Introduction to Comparative & Global Politics 3
- PSCI 221 Canadian Politics I: Structures & Institutions 3
- PSCI 341 Canadian Public Administration 3
- PSCI 342 Canadian Public Policy 3

**Psychology**

- PSYC 100 Introduction to Psychology 6, lab
- PSYC 220 Cognitive Psychology 6, lab
- PSYC 225 Sensation and Perception 6, lab
- PSYC 230 Brain and Behaviour 6, lab
- PSYC 327 The Psychology of Pain 3
- PSYC 328 Neural Mechanisms of Pain Analgesia 3
- PSYC 362 Applications of Psychology to the Health Sciences 3
- PSYC 367 Basics of Psychopharmacology 3
- PSYC 368 Pharmacology of Drugs of Abuse 3
- PSYC 373 Human Neuropsychology 3
- PSYC 376 Abnormal Psychology 3
- PSYC 379 Introduction to Clinical Psychology 3

*Psychology falls within the Faculty of Arts, therefore, labs completed in these courses are not counted towards the degree's lab requirement.

**Social Determinants and Health Equity Designated Courses**

**Anthropology**

- ANTH 111 Introduction to Physical Anthropology/Archaeology 3
- ANTH 112 Introduction to Socio-Cultural Anthropology 3
- ANTH 218 Anthropology of Health and Illness 3
- ANTH 320 People and Development 3
- ANTH 325 Feminist Anthropology 3
- ANTH 415 Anthropology of HIV/AIDS 3

**Development Studies**

- DEVS 211 Local and Community Development Economics 3
- DEVS 321 People and Development 3

**Economics**

- ECON 101 Introductory Microeconomics 3
- ECON 102 Introductory Macroeconomics 3
- ECON 211 Local and Community Development Economics 3
- ECON 364 Health Economics 3

**Earth Sciences**

- ESCI 272 Understanding Climate Change 3, lab
- ESCI 273 Health and the Environment 3
- ESCI 274 Health Impacts of Global Climate Change 3

**History**

- HIST 101 Western Civilization: Earliest Civilizations to the War of Religion 3
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- HIST 398 Themes in the History of Sexuality 3

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- HKIN 426 Health Education 3
- HKIN 433 Introduction to Policy for Health-Interdisciplinary Strategies 3

**Human Nutrition**

- HNU 425 Nutrition in Aging 3
- HNU 433 Introduction to Policy for Health-Interdisciplinary Strategies 3

**Human Kinetics**

- HKIN 426 Health Education 3
- HKIN 433 Introduction to Policy for Health-Interdisciplinary Strategies 3

**Philosophy**

- PHIL 100 Introduction to Philosophy 6
- PHIL 231 Human Nature I: Consciousness & Epistemology 3
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- PHIL 332 Contemporary Moral and Social Issues 3
- PHIL 335 Ethics in Health and Medicine 3

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- PSCI 101 Introduction to Power and Politics 3
- PSCI 102 Introduction to Comparative & Global Politics 3
- PSCI 221 Canadian Politics I: Structures & Institutions 3
- PSCI 341 Canadian Public Administration 3
- PSCI 342 Canadian Public Policy 3

**Psychology**

- PSYC 313 Health Psychology 3
- PSYC 364 Psychology of Gender 3
- PSYC 365 Developmental Social Psychology of Gender 3
- PSYC 372 Cultural Psychology 3
- PSYC 378 Human Sexuality 3
- PSYC 379 Introduction to Clinical Psychology 3

**Public Policy and Governance**

- PGOV 101 Modern Challenges for Public Policy and Governance 3
- PGOV 201 Public Policy 3
- PGOV 301 Comparative Public Policy 3

**Religious Studies**

- RELS 111 World Religions I: Compassionate Global Citizenship 3
- RELS 112 World Religions II: Compassionate Global Citizenship 3
- RELS 117 Ethical Principles for Health Care Providers 3
- RELS 120 Religion, Spirituality, and Health 6
- RELS 200 Introduction to Religious Ethics 6
HEALTH ETHICS DESIGNATED COURSES

Departmental prerequisites will apply.

<table>
<thead>
<tr>
<th>Philosophy</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PHIL 332</td>
<td>Contemporary Moral and Social Issues</td>
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<td>PHIL 335</td>
<td>Ethics in Health and Medicine</td>
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<tr>
<th>Religious Studies</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>RELS 117</td>
<td>Ethical Principles for Health Care Providers</td>
</tr>
<tr>
<td>RELS 200</td>
<td>Introduction to Religious Ethics</td>
</tr>
<tr>
<td>RELS 300</td>
<td>Health Care Ethics</td>
</tr>
</tbody>
</table>

9.21 HISTORY

N. Forestell, Ph.D.
C. Frazer, Ph.D.
S. Kalman, Ph.D.
G. Lalande, Ph.D.
P. McInnis, Ph.D.
R. Semple, Ph.D.
L. Stanley-Blackwell, Ph.D.
D. Tremblinski, Ph.D.
R. Zecker, Ph.D.

Senior Research Professor
P. Phillips, Ph.D.

The Discipline of History

Curiosity inspires every generation to study the lives and societies of people who lived before them. The discipline of history has been developed to help us do this in a systematic, rigorous and critical way. The history program offers a wide-range of fascinating courses, from global history and the history of western civilization to more focused courses about nations, social groups and special topics. As well, its program equips students to develop the critical tools necessary to investigate the past effectively and to express their findings with clarity, vigour and intelligence. Students can take history courses as electives or pairs, or to complete a minor, major, joint major, advanced major, joint advanced major, honours or honours with subsidiary program.

Department Requirements

Students must follow the degree regulations found in chapter 4 and must consult with the department chair to plan their specific program and have it approved. The fundamental requirements of each program are outlined below. Departures from these regulations require the permission of the department chair and/or the Dean of Arts. Students following the major degree programs strive to balance specialization with breadth in their selection of courses. They must have some degree of specialization in one of the three designated areas of concentration: (1) Canadian, (2) European, or, (3) American/Latin American/Asian history.

Transfer credit limitations: Of the 36 credits required for a history major or advanced major, normally at least 24 must be obtained from SFX; of the 60 credits required for a history honours, normally at least 42 must be obtained from SFX; of the 48 credits required for a history honours with subsidiary, normally at least 36 must be obtained from SFX. The seminar and thesis requirements must be completed through SFX.

Note: Six credits from HIST 100, 101, 102, 110, 111, 112, 113, or 115 are required as a foundation for all first- and second-year students taking further history courses but this requirement is normally waived for third- and fourth-year students seeking a first course in history.

Minor or Subsidiary in History

a) 6 credits from HIST 101, 102, 111, 112, 113, 115
b) 18 additional credits above the 100 level
c) Total: 24 history credits with at least 6 credits at the 300/400 level

Major Program

a) 6 credits from HIST 101, 102, 111, 112, 113, 115
b) 6 credits in Canadian history above the 100 level
c) Total of 18 credits in a chosen concentration
d) Total of 12 credits from areas outside the chosen concentration
e) Total: 36 history credits with at least 15 credits at the 300/400 level

Joint Major Program

Same history requirements as major above.

Advanced Major Program

a) 6 credits from HIST 101, 102, 111, 112, 113, 115
b) 6 credits in Canadian history above the 100 level
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 445</td>
<td>Joint Advanced Major Program</td>
<td>Same history requirements as advanced major above. Students are required to complete a senior advanced major essay in a 400-level class. However, students are not required to do a senior advanced major essay if they choose history as their major subject B.</td>
</tr>
<tr>
<td>HIST 101</td>
<td>Honours Program</td>
<td>a) 6 credits from HIST 101, 102, 111, 112, 113, 115</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b) 6 credits in Canadian history above the 100 level</td>
</tr>
<tr>
<td>HIST 445</td>
<td>Honours Program</td>
<td>c) HIST 445 (counts outside the chosen concentration)</td>
</tr>
<tr>
<td>HIST 232</td>
<td>Recognized Courses</td>
<td>d) A seminar (counts in the chosen concentration)</td>
</tr>
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<td></td>
<td>e) Total of 33 credits in a chosen concentration (includes HIST 490)</td>
</tr>
<tr>
<td>HIST 230</td>
<td>Recognized Courses</td>
<td>f) Total of 21 credits from areas outside the chosen concentration</td>
</tr>
<tr>
<td>HIST 490</td>
<td>Recognized Courses</td>
<td>g) HIST 490 (Thesis, 6 credits) with a faculty member</td>
</tr>
<tr>
<td></td>
<td></td>
<td>h) Total: 60 history credits with at least 24 credits at the 300/400 level.</td>
</tr>
</tbody>
</table>

**101 Western Civilization: Earliest Civilizations to the War of Religion**

This course explores the varied history of our modern world from early complex societies to the Wars of Religion in the 17th century. From the ziggurats of ancient Mesopotamia, to the fracturing of "Christendom" during the Reformation, this class explores the events that shaped the modern world. The course also provides an introduction to the practices of history. Lectures are supplemented by discussions, exercises and assignments about how historian find and use sources. Credit will be granted for only one of HIST 101 or HIST 100. Three credits.

**102 Western Civilization: Columbus to Decolonization**

This course explores the history of Western Civilization from the European conquest of the Americas to the end of the Cold War. Topics include: Europe’s overseas expansion; the age of absolutism; the scientific revolution; the Enlightenment; the American War of Independence; the French Revolution and Napoleon Bonaparte; the Industrial Revolution; Nationalism, liberalism, feminism, and imperialism; the two World Wars; decolonization; and the Cold War. Credit will be granted for only one of HIST 102 or HIST 100. Three credits.

**111 Introduction to Global History 1300-1795**

By the 1300s technology allowed sea trade to supplant overland trade between western and eastern Asia. More closely connected societies became culturally distinct, while growing economies allowed for political stability. This three-credit survey traces the growing interconnectedness of human society and historical processes that have shaped institutions and ideas from the 14th century to the end of the 18th century. Credit will be granted for only one of HIST 111 or HIST 110. Three credits.

**112 Introduction to Global History from 1789**

We are all connected in this global world. The ideas that sparked the French Revolution were in part the result of earlier exploration and they generated change throughout the Atlantic world and as far away from Europe as south Asia. The world has remained interconnected ever since. This course examines how this is the case by investigating human society and the historical processes that have shaped institutions and ideas since the 18th century. Credit will be granted for only one of HIST 112 or HIST 110. Three credits.

**113 Life and Times: Pre-Confederation Canada**

This introductory survey lecture course is designed to examine the life and times of the Pre-Confederation Canada from a political, social, cultural and economic perspective. In this journey back in time in Canadian history, student will learn about the diversity of historical figures, experiences, events and ideas. Credit will be granted for only one of HIST 113 or HIST 200 or HIST 213. Three credits.

**115 A History of Canada: Post Confederation**

This course provides an introduction to the major themes in Canadian history from Confederation to the contemporary era. It will explore the crucial political, economic, and social themes in Post-Confederation history. Regional, racial, ethnic, and gender variations will be addressed in this survey. Students will learn to identify, analyze, and discuss key issues in Canadian history. Credit will be granted for only one of HIST 115 or HIST 200 or HIST 215. Three credits.

**216 Modern France, 1789 to the Present**

Explores French history from the end of the old regime to the present. Topics include the 1789 revolution and its aftermath, Napoleon, the July Monarchy, the Second Empire, class and gender in 19th-century France, the Third Republic, the Dreyfus Affair, the “Hollow Years” of the interwar era, the defeat of 1940 and the authoritarian Vichy Regime, decolonization and the rise of De Gaulle, and the role of feminism/memory/multiculturalism in post-war France with concentration on social, intellectual, cultural trends, and politics. Prerequisite: Six credits from HIST 100, 101, 102, 110, 111, 112, 113, or 115 or permission of the instructor. Three credits.

**221 Medieval Russia**

Topics include the origins of the Slavs; their adoption of Christianity; the establishment and development of the Kievan state; the coming of the Mongols and the Mongol “yoke”; the concurrent emergence of Muscovy; Ivan the Terrible and the Time of Troubles. Three credits.

**222 Imperial Russia**

Topics include 17th-century Muscovy: the Romanovs, serfdom, schism, and territorial expansion; the 18th century: Peter the Great, Catherine II, and Westernization; and the 19th century: autocracy, culture, the abolition of serfdom, industrialization, the revolutionary movement, foreign policy, World War I and the collapse of tsarism; the revolution of 1917. Three credits.

**228 History of Maritime Provinces: Pre-Confederation**

This survey course examines the political, social, cultural and economic development of the Maritime Provinces from the 16th century to the 1860s. It will explore such topics as relations between Europeans and First Nations; the clash of empires; the Acadian Expulsion; the impact of immigrant cultures; the Age of Sail; and federation with Canada. Credit will be granted for only one of HIST 228 and HIST 209. Three credits.

**229 History of Maritime Provinces: Post-Confederation**

This survey lecture course is designed to examine the political, social, cultural and economic development of the Maritime Provinces from the 1860s to the 1960s. It will examine such topics as the federation with Canada; industrialization and deindustrialization; labour unrest; social reform; the world wars; the impact of modernity and state intervention; out-migration; and the historical experiences of African-Canadians, Mi’kmaq, Acadians, and Maritime women. Credit will be granted for only one of HIST 229 and HIST 209. Three credits.

**231 Martyrs, Monks & Marauders: Piety & Violence in Early Medieval Europe (300-1050 CE)**

The history of the Early Middle Ages has been much debated in recent years. Did Rome fall as Germanic warlords poured over its borders or were the Germanic migrations peaceful? Did Vikings only seek to pillage and destroy or to trade goods and share knowledge? What were the social, political and military roles of early Christian martyrs and monks? This course will answer such questions, while providing an overview of the history of Europe between 300 and 1050 CE. Credit will be granted for only one of HIST 231 or HIST 230. Three credits.

**232 Surviving Chivalry & the Four Horsemen: Europe’s High & Late Middle Ages (1050-1521 CE)**

In 1050, Europe embarked on a long period of economic, intellectual and cultural growth. This was the time of the Crusades, chivalry and scholasticism. Beginning in 1300, however, Europe faced new crises characterized by some as the horsemen of the Apocalypse: famine, plague, war and death. Yet out of this disastrous period, new intellectual and artistic growth occurred, leading to the Renaissance. This course traces the history of medieval Europe through the highs and lows discussed above. Credit will be granted for only one of HIST 232 or HIST 230. Three credits.
233 French Imperialism
This course examines the history of French Imperialism during the 19th and 20th centuries in the Maghreb, Africa, Asia, and the Pacific. It explores various themes associated with colonial politics, society, economy, and culture, including the historiography of French imperialism, the construction and maintenance of the colonial governing system, the gendered nature of colonial discourse and practice, the social impact of religious customs in various locations within the empire, racial hierarchies and concomitant administrative repression, colonial representations in metropolitan French culture, and nationalist movements and revolts before and during the era of decolonization. Prerequisite: Six credits from HIST 100, 101, 102, 110, 111, 112, 113, or 115 or permission of the instructor. Three credits.

235 Introduction to South Asian History
The Indian sub-continent has been a crossroads of people and cultures throughout human history and its diasporas provide working communities, successful business models, rich history and beautiful culture from yoga to Freddy Mercury. South Asia is of central geopolitical, economic and cultural importance in the modern period. This course begins with the arrival of the Mughals in the 16th century and ends with decolonization and partition in 1947. Three credits.

236 Vikings! The Course
Vikings did more than plunder and pillage - they explored, farmed, and traded along vast travel networks that stretched from the east coast of Canada to the sophisticated cities of Constantinople and Baghdad in the East. Vikings! The course will survey the spread of Norse influence and culture from their initial steps out of Scandinavia in the 8th century - attacking monasteries and cities - to the founding of Norse kingdoms in Normandy, Sicily and Novgorod. Three credits.

242 The United States Before 1865
Survey of the US from colonial times to the Civil War, with emphasis on aboriginal beginnings and civilizations; colonization; the rise of slavery and racism in British North America; the place of the colonies in the British Empire; the War of Independence; territorial expansion; the beginning of industrialization and its effects on the Jeffersonian notions of republican; the “problem” of slavery and growing sectionalism; and the road to Civil War and disunion. Three credits.

244 The United States After 1865
Topics emphasized are the Civil War as a black freedom movement; the federal government’s brief and grudging commitment to black citizenship during Reconstruction; the abandonment of Reconstruction and the imposition of segregation in the late 19th century; industrialization and age of fabulous robber barons and desperate immigrants; the Depression and the coming of the New Deal; the civil rights movement and Vietnam and its sequels. Three credits.

247 Crusades and Their Cultures
This class explores history of the medieval religious wars that are now known as the crusades. Although often treated collectively, these wars differed greatly in character, from penitential crusades to the holy land to disciplinary crusades against the Cathars and Hussites, to the economic war of aggression that was the Fourth Crusade. Organized as a brief chronological survey of the crusades from 1096 to 1430. This course will also examine various themes in recent crusade historiography. Three credits.

250 A Survey of German History from 1648 to the Present
This survey of German history emphasizes the 19th and 20th centuries. It includes topics such as the rise of Brandenburg-Prussia; German nationalism; Bismarck and the unification of Germany; the industrial revolution and organized labour; the coming of the war in 1914; the revolution of 1918; the trials of democracy in the Weimar Republic; Hitler and Nazism; and Germany in a divided world. Six credits.

255 History of Colonial Latin America
Surveys Spanish and Portuguese America, 15th to the 19th centuries. Themes include the indigenous, African and Iberian heritages of Latin America; the clash of civilizations and conquest in the Americas; the interaction of diverse cultures and the creation of new societies; the social, economic and cultural evolution of colonial Latin America; the age of piracy and challenges to the Spanish and Portuguese empires; the rise of hierarchies and inequalities based on gender, sexuality, ethnicity and class; and the struggle for independence. Three credits.

256 History of Modern Latin America
Introduces the political, social, economic and cultural history of Latin America from independence to the present. Themes include the struggles for independence; the creation of new nations and cultures in the 19th century; the abolition of slavery; the struggles of indigenous peoples to preserve their culture; modernization in the late 19th century; the evolution of social classes and ideas about ethnicity, gender, and sexuality; economic dependency and neocolonialism; nationalism and revolution; foreign intervention in Latin America; and the contemporary impact of democratization and globalization. Three credits.

257 Canada and the “Global South”: Connections and Disconnections in the 20th Century
This course examines economic, political, military, and cultural ties between Canada and the Global South during the 20th century. The course explores how Canada’s relationships with the Global South was shaped by its own colonial history and then examines different aspects of governmental, organizational, and person-to-person relations. Topics will include: policies on immigration and refugees, business investments, concerns related to human rights, and international aid. Cross-listed as DEVS 257. Three credits.

261 Europe in the 19th Century
A survey of the European “long” 19th century from the French Revolution until the Great War. The course covers a variety of political, economic, social, cultural, and intellectual themes, including: Revolutionary/Napoleonic France, the Industrial Revolution, the age of ideologies (liberalism, conservatism, nationalism, socialism), bourgeois and working class society and culture, Italian/German unification, the evolution of gender roles, the rise of consumerism/material culture, scientific/technological/intellectual trends, the “new” Imperialism, and the origins of the Great War. Three credits.

262 Europe in the 20th-Century
A survey of the European “short” 20th century from the Great War to the collapse of the USSR. The course covers a variety of political, economic, social, cultural, and intellectual themes, including: the Great War/Russian Revolution, European society and culture during the “roaring 1920s”, the Great Depression, interwar dictatorships (Fascist Italy, Nazi Germany, Stalin’s Russia), World War II/the Holocaust, the Cold War, Decolonization, post-1945 economic prosperity and social change, intellectual/cultural trends and protest during the 1960s, and the fall of the Soviet Union. Credit will be granted for only one of HIST 262 or HIST 260. Three credits.

300 A Cultural and Intellectual History of Canada
From long houses to skyscrapers, from oral legends to action comics, from petroglyphs to abstract paintings, Canada’s architects, writers and painters have shaped and reflected Canada’s cultural and intellectual development. This course covers, covering the period from pre-Contact to 1967, demonstrates how literature, art and architecture offer multi-dimensional and fresh perspectives on Canadian history. Cross-listed as ART 300. Six credits.

303 Capitalism and Social Justice in Early Canada
This course traces the emergence of capitalism in early Canadian society. It examines the rise of this dynamic economic model for governments, entrepreneurs, and working people. The political and cultural aspects of the period between
1800-1919 will be analyzed from multiple perspectives including: gender, race, immigration, technological innovation, and workplace skills. Credit will be granted for only one of HIST 303 or HIST 309. Three credits.

304 Capitalism and Social Justice in Modern Canada
A continuation of HIST 303, this course broadens the analysis of modern capitalism and responses by working people to ongoing consequences of rapid economic and political change. Focusing on the challenges of world wars, depression, and globalization, between 1920-21st Century, elements of state development, business innovation, and workers’ responses will be discussed in detail. The course will conclude with an assessment of how Canada fits into a contemporary world of trade and labour. Credit will be granted for only one of HIST 304 or HIST 309. Three credits.

314 Canada and the Cold War Era
Examines Canada’s response to the atomic/nuclear age and divisions between the two superpowers from 1945-1991. Students will learn how the Cold War affected Canada and the West through a study of selected themes: political and cultural dimensions of the Red Scare; Canadian diplomacy during the Cold War; Canada’s role in the Vietnam War, and participation in NATO and NORAD; the influence of the Cold War on gender, business, labour, and popular culture. Three credits.

317 Canadian Women’s and Gender History: From Colony to Nation
This course introduces students to major themes in the field of Canadian women’s and gender history. Covering the period from the late 18th century to the late 19th century, the course examines the historical development of women’s roles, experiences, identities and gender relations. Particular attention is given in this course to the impact of colonialism, and the intersection of gender, race, economic class status, and Indigenous/non-Indigenous status in shaping women’s work, family roles, sexuality, political engagement and activism. Credit will be granted for only one of HIST 317 or HIST 308. Cross-listed as WMGS 317. Three credits.

318 Canadian Women’s & Gender History: Modernity
This course introduces students to major themes in the field of Canadian women’s and gender history. Covering the period from the late 19th century to the late 20th century, the course examines the historical development of women’s roles, experiences, identities and gender relations. Particular attention is given to the intersection of gender, race, economic class status, and Indigenous/non-Indigenous status in shaping women’s work, family roles, sexuality, political engagement and activism. Credit will be granted for only one of HIST 318 or HIST 308. Cross-listed as WMGS 318. Three credits.

319 Myth and Memory in Canadian History
What is told? How is it told? Why is it told? And, who is telling the story? By examining a variety of events, hero figures, communities, regions and time periods, students will look critically at how Canadians have used myth and memory to create their pasts and to construct group identities and national narratives. Three credits.

320 The USSR, 1917-1991
Examines the fall of the tsarist regime; the ideological roots of the Bolshevik Revolution; the economic, social, cultural, and political developments of the Soviet Union, from Lenin to Gorbachev; the failure of Soviet communism. Six credits.

322 Canadian Immigration, Race & Ethnicity to 1896
This course traces the history of Canadian immigration, settlement, ethnicity, race relations, and multiculturalism to 1896. It demonstrates the central contribution of immigrants to the formation of Canada while also introducing important debates about immigration policy, refugees, minority rights, equality of opportunity, racism, ethnic identity, the commemoration of ethnic pasts, the creation of transnational communities, concepts of citizenship, and the policy of multiculturalism. Credit will be granted for only one of HIST 322 or HIST 310. Three credits.

324 Plagues and Peoples
Through in-depth case studies this course explores the impacts various epidemics had on historical cultures. Short-term medical responses will be examined along with longer-term economic, social, religious and cultural effects. Course content highlights how new scientific research has furthered understandings of historical diseases and how studying historical diseases can help prepare us for the next pandemic. Case studies may include cancer, plague, syphilis, smallpox, leprosy, cholera, influenza, HIV/AIDS and Ebola. Three credits.

325 Eastern Europe, 1848-1995
This course covers the Ottoman, Austro-Hungarian, Russian, and German empires of the long 19th century; World War I, the interwar emergence of new states; World War II; the people’s democracies and the coming to power of the communists; the imposition of a Stalinist model of economic, cultural, political, and social development; the resistance to sovietization in Yugoslavia, Hungary, Czechoslovakia, and Poland; the revolutions of 1989; and the dismantlement of Yugoslavia and Czechoslovakia. Six credits.

326 History of Cuba from Independence to the Revolution
This course examines Cuban history from the early 19th century to the present. This includes the late stage of Spanish colonialism and the slave economy based on sugar, coffee and tobacco; the struggle for abolition and national independence; the Spanish-American War of 1898 and U.S. domination in the 20th century; the 1933 revolution and armed struggle against the Batista dictatorship; Fidel Castro, Che Guevara and the socialist experiment; the Cold War and Cuba’s role in Latin America; and Cuban society in a post-Soviet world. The course will also address Afro-Cuban culture, gender and sexuality, and human rights. Prerequisite: HIST 255 or 256 recommended. Three credits.

332 The Medieval Body
This class explores late medieval conceptions of the physical body, which were always essential to identity in the Middle Ages. Medieval discussions of the practice of reading, clothing and fashion and even spiritual union with God, often involved debates and metaphors based upon the physical body. Through an exploration of primary and secondary texts along with seminar discussions, the class will explore the interconnectedness of late medieval ideas of corporeality, identity, spirituality and sexuality. Cross-listed as WMGS 333. Three credits.

333 The Individual in Medieval Society
Common scholarly discourse posits that individualism developed in the wake of the “civilizing process” of the early modern period and the 18th-century Enlightenment. Yet many medieval scholars decry this chronology, citing examples of medieval people who did not satisfy the requirements for modern individualism and exploring medieval theories of identity that permit the development of something like modern individualism. This course will explore and take part in this intense debate both by reading the scholarly literature on the subject and by reading primary sources that describe the experiences of medieval people. Credit will be granted for only one of HIST 333 or HIST 330. Three credits.

334 Society and Ritual in the High Middle Ages
Like people living in the modern West, medieval individuals marked significant rites of passage such as birth, marriage and death with rituals. In the medieval West, these rituals usually revolved around the Catholic Church. This class will explore the major rites of passage through which medieval peasants, townpeople and nobles alike marked their lives, exploring not only the meaning and purpose of the rituals, but the rich social lives of those individuals participating in them. Credit will be granted for only one of HIST 334 or HIST 330. Three credits.

337 History of Modern Mexico
This course examines the history of modern Mexico from independence to the present. This includes the independence war of 1810-1821; civil war, rebellion, and banditry in the 19th century; indigenous peoples’ struggles to preserve their culture in the 19th and 20th centuries; foreign intervention and Mexican relations with North America and Europe. Special attention is paid to the Mexican Revolution of 1910. The course follows developments in the post-revolutionary era to explore popular culture, gender and sexuality, modernization, democracy and social justice. Prerequisite: HIST 255 or 256 recommended. Three credits.

341 A History of Canadian-American Relations
A study of Canadian-American relations from the American Revolution to the modern era. Topics include the founding of separate American and provincial societies; the tensions of continental and nationalist identities; the evolution of a North American economy and culture; policy making and bilateral relations in NATO and the UN; post-9/11 security arrangements; complementary and conflicting national interests in political, military, economic, social, and cultural issues. Three credits.

343 The Place of Race in the United States
Explores the enduring importance of race in America. Survey of African American history includes slavery; white-black relations; abolition; the Civil War and Reconstruction; Jim Crow segregation; the Harlem Renaissance and the great migration; black nationalism; the long civil-rights movement; and conservative backlash to affirmative action. Three credits.

346 American Social Movements, 1865-1945
Examines the triumphs and failures of social movements from the post-Civil War era to the New Deal. Explores the nature of protest and its effectiveness in the era. Topics include radical Reconstruction; populism; women’s suffrage; radical pacifism; industrial unionism; and the unemployed people’s councils of the Great Depression. Three credits.

347 American Social Movements, 1945-Present
Examines the triumphs and failures of social movements from New Deal era to the present. Students will study the tactics and achievements, as well as failures,
of grassroots social movements. The nature of civil disobedience in the second half of the 20th century will be studied through topical case studies. Movements covered include industrial unionism; anti-nuclear activism; McCarthyism; black civil rights; gay rights; and the conservative backlash of groups such as Moral Majority. Three credits.

351 United States Immigration and Ethnicity
Explores the history of immigration to the U.S. and the role of ethnicity in American social, cultural and political life. Topics include immigrant images of status and success; migration and return migration; American acculturation; bi-nationalism; and the persistence of ethnic identities; anti-immigrant xenophobia; and the construction of immigrants' "white" identities. Three credits.

353 Explorers and Exploration before Columbus
Though tradition credits Christopher Columbus with beginning an age of exploration, Columbus himself knew that he drew from a long tradition of explorers who came before him including peoples as diverse as Islamic scholars, Venetian merchants, Basque fishermen and Viking sailors. He knew about the multicultural cities of Jerusalem and Karakorum where individuals from all over Eurasia traded knowledge and goods. This course will examine the science, technology, literature and history of exploration that so inspired Columbus and the extent to which the different cultures of the premodern world were interconnected by trade, pilgrimage and exploration. Three credits.

355 The Sixties: A Social History
Examines the tumultuous 1960s and situates the Canadian experience within the international context - primarily the USA and Western Europe. Connections will be made between civil rights movements, anti-colonialism, environmentalism, "second-wave" feminism, Québécois nationalism, the New Left, student activism, and the importance of the counter-culture. The course will retain a historical perspective but draw upon interdisciplinary scholarship. The decade's lasting significance and its current invocation as a cultural and political artefact will be debated. Three credits.

356 History of Early Israel
Cross-listed as RELS 351; see RELS 351. Three credits.

360 Gender & Sexuality in Modern European Empires
This course examines major issues in the history of gender and sexuality in the new imperialism. Themes to be covered include imperial families, race, gender and professionalism, gender, sexuality and citizenship, and women in imperialism and global movements. Cross-listed as WMGS 370. Three credits.

362 European Fascism
This course will explore the history of fascism from its late 19th-century origins to the present day. Topics include the political and doctrinal origins of fascism and its crystallization during the Great War; the fascistization of politics, economy and society in Mussolini's Italy and Hitler's Germany; anti-Semitism; the appeal of fascism in interwar Europe; and its subsequent apogee during World War II and the Holocaust. Prerequisites: 6 credits of HIST 100, 101, 102, 110, 111, 112, 113, 115 or permission of the instructor. Three credits.

363 Reformation Europe
Topics include the Catholic Church on the eve of the Reformation, Renaissance humanism, Martin Luther and Lutheranism, John Calvin and Calvinism, Henry VIII and Anglicanism, radical reformers, women and witchcraft, the Jesuits and the Council of Trent, the wars of religion within the Holy Roman Empire and France, Philip II and his Grand Project, the rivalry between Spain and England, the Thirty Years' War (1618-48), and the historiography of the Reformation. Three credits.

364 The Holocaust
Explores the history and legacy of the destruction of the Jews in Europe during World War II. Topics include historical anti-Semitism; the rise of the Nazis; euthanasia; the ghettos; the death camps; the actions of collaborationist regimes; Jewish and non-Jewish resistance; the role of ordinary Germans; the establishment of Israel; and post-war trials and controversies. Three credits.

372 Imperial China
Topics include: Confucianism; the dynastic cycles; the fall of the Ming dynasty; the Manchus; the intrusion of the West; the missionaries, the Canton System, the opium wars and the unequal treaties; the Taiping Rebellion; the failed attempts at modernization; the Boxer uprising; the revolution of 1911. Credit will be granted for only one of HIST 372 or HIST 370. Three credits.

374 The People's Republic of China
Covers the revolution of 1911, World War I, and warlordism; Chiang Kai shek and the Guominandang; Mao Zedong and the Chinese Communist Party; World War II (1937-45); the civil war (1945-1949); the profound economic, social, cultural, and political transformations of the country under Mao Zedong and Deng Xiaoping; China as a world power today. Credit will be granted for only one of HIST 374 or HIST 370. Three credits.

383 Victorian Britain: Quakers, Queens, and Queers
The long 19th century was understood by Britons as 'theirs'. An industrial powerhouse, grown on science and credit, Britain gained access to raw materials worldwide. Politically dynamic, British democracy went global, and a stable monarchy allowed for seemingly unparalleled Progress. Not everyone experienced this change in the same manner, however. It will explore how broad historical trends - changing ideals of citizenship and democracy, industrial growth, urbanism and the challenge of racial diversity - were experienced in this era. Three credits.

384 20th-Century Britain: State and Identity
Britain began the 20th century as a leading world power. By the end of the century this was much less the case, but the country had become one of the foremost welfare states. During this transformation, Britain faced important challenges in the two world wars, the ending of empire, and the Irish Question. This course deals with these and other challenges and the responses to them. Three credits.

386 Tudor England
Beginning with the foundation of Tudor rule in 1485, the course will explore the Reformation under Henry VIII and the statecraft of Elizabeth I. Students will explore the social, economic, political, religious, and diplomatic developments during this period. Three credits.

390 World War I
This course is an in-depth study of the major aspects-social, cultural, economic, political, and military-of the Great War. Six credits.

398 Themes in the History of Sexuality
A comparative study of the history of sexuality during the modern period from the eighteenth through the twentieth centuries. Following a broadly chronological and thematic approach to a diverse history of sexualities, the course will explore in particular the changing meanings of and connections between sexuality, race, class and gender. Topics will include: indigenous sexual cultures; sexuality and colonialism; inter-racial sexual relationships; the "invention of heterosexuality"; moral panics, prostitution, the regulation of sexual desire; and sexual subcultures. Cross-listed as WMGS 398. Three credits.

399 Selected Topics
The topic for 2018-2019 is From Museums to Video Games: Creating Public History in the 21st Century. This course examines the theory of public history while exploring the venues in which it is practiced: from historic sites and museums, to online exhibits and apps, to Hollywood films, Broadway plays, and video games. Through a combination of interactive lectures, discussions, and experimentation with the tools of public history, students investigate the tension between history and public memory, examine how public historians have addressed (or failed to address) difficult and controversial topics, and learn the skills required to create an effective and meaningful work of public history. Working together, students will employ these skills to complete a class public history project. Three credits.

401 Topics in Canadian History
This course examines important themes and interpretations in Canadian history. The specific focus of the seminar will reflect the interests of the professor and the students. Three credits.

445 Historiography
This is a seminar in theories and methods in the discipline of history, with corresponding readings in the related historiography. Combining a survey of historiography across time with writing and research projects, the seminar will introduce students to key concepts, methods, and interpretations of history. The subject matter will emphasize 20th-century historiography, including the impact that diverse approaches have had on the discipline today. This course is mandatory for all advanced major and honors students. Majors may take this course with the permission of the instructor. Three credits.

Seminar Notes:
a) Seminars are open to advanced major and honors students. Majors may take a seminar with the permission of the instructor. Advanced majors complete a senior research paper in the context of a seminar.
b) Seminars will be offered on a rotating basis depending on faculty resources and student demand, normally two per year; the department will make every effort to ensure that honors students will have the opportunity to study their chosen field of history at an advanced level.

455 Topics in Medieval European History
This course examines important themes and interpretations in Medieval European history. The specific focus of the seminar will reflect the interests of the professor and the students. Three credits.
BA in Human Kinetics with Major in Kinesiology

This course examines important themes and interpretations in American history. The specific focus of the seminar will reflect the interests of the professor and the students. Three credits.

461 Topics in Modern European History
Explores major developments in 19th- and 20th-century European history. The specific focus of the seminar will reflect the interests of the professor and the students. Three credits.

462 Topics in Latin American History
This course examines important themes and interpretations in Latin American history. The specific focus of the seminar will reflect the interests of the professor and the students. Three credits.

490 Thesis
Each student works under the supervision of a chosen professor who guides the selection of a thesis topic, use of resources, methodological component, quality of analysis and execution, and literary calibre of the final version. Required for all honours students. Six credits.

499 Directed Study
Under the direction of a faculty member, students may pursue an individual program of study in an area of history not available in the course offerings. For eligibility, see section 3.5. Three or six credits.

9.22 HUMAN KINETICS

J. Boucher, Ph.D.
A. Casey, Ph.D.
D. Kane, Ph.D.
A. Kolen, Ph.D.
M. Lam, Ph.D.
S. Mackenzie, Ph.D.
O. Nzindukiyimana, Ph.D., ABD
M. Palmer, Ph.D.
R. Rasmussen, Ph.D.
D. Vossen, Ph.D.
C. Weaving, Ph.D.

The Department of Human Kinetics offers a four-year arts or science degree program in the study of human movement from a humanities, social sciences or scientific perspective. Both the BA and the B.Sc. in Human Kinetics offer the student further specialization with the option to major in either the kinesiology program or the pre-education program, both of which are nationally accredited.

Selection of the major comes at the end of the second year of study and is dependent upon the student's interests and desired educational outcome. Each of the two majors consists of required and elective HKIN courses, selected skill courses, arts/science electives, approved and open electives.

Depending on course selection, the major in kinesiology prepares students for a variety of professional and educational options: professional programs such as medicine, dentistry, physiotherapy, athletic therapy, occupational therapy, and massage therapy; direct employment in the health and fitness sector, including coaching, recreation therapy, fitness training; graduate programs in sport psychology, sociology, philosophy, history, exercise physiology, biomechanics, child growth and development, health promotion and adapted physical activity/adapted physical education.

Students interested in teaching in the school system should select the pre-education major. Students who plan careers in other teaching-related professions should also choose the major in pre-education. Students may consult the department chair to ensure course selection for acceptance to B.Ed. programs. See chapter 6 for admission requirements to the StFX B.Ed. program.

Candidates must follow the degree regulations in chapter 4 (BA) or chapter 7 (BSc).

The normal sequence for the two human kinetics degrees and six majors are below.

Subject A is an arts minor in the BA HKIN
Subject B is an arts pair in the BA HKIN
Science A is a science minor in the BSc HKIN
Science B is 6 credits of a second science in the BSc HKIN
Arts X is an arts pair in the BSc HKIN
Arts Y is 6 credits of a second arts subject in the BSc HKIN

The HKIN sociocultural courses are 253, 264, 332, 352, 354, 431, 443, 455.

BA in Human Kinetics with Major in Kinesiology

<table>
<thead>
<tr>
<th>Year</th>
<th>Required Courses</th>
<th>Electives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>3 credits skills; HKIN 115, 136, 151, 152, 150 or 154; 6 credits arts subject A; 6 credits arts subject B</td>
<td>12 credits arts subject A; 6 credits science B</td>
</tr>
<tr>
<td>Year 2</td>
<td>3 credits skills; HKIN 215, 265; 6 credits HKIN electives; STAT 101; 6 credits arts subject A; 6 credits arts/science electives</td>
<td>12 credits arts subject A; 6 credits science electives</td>
</tr>
<tr>
<td>Year 3</td>
<td>HKIN 376; one of HKIN 374, 396, 397; 3 credits 300-level HKIN elective; 3 credits HKIN sociocultural; 12 credits subject A; 6 credits arts/science electives</td>
<td>12 credits arts subject A; 6 credits science electives</td>
</tr>
<tr>
<td>Year 4</td>
<td>3 credits HKIN sociocultural; 3 credits 400-level HKIN elective; 6 credits HKIN electives; 6 credits arts subject B; 6 credits approved electives; 6 credits open electives</td>
<td>6 credits open electives</td>
</tr>
</tbody>
</table>

BA in Human Kinetics with Minor in Sport Management

New for 2018-2019, students may earn an arts minor in sport management, consisting of 24 credits of students' arts subject A. Course requirements and the normal course progression are as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Required Courses</th>
<th>Electives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>SMGT 101</td>
<td>6 credits arts electives</td>
</tr>
<tr>
<td>Year 2</td>
<td>HKIN 264, HKIN 352, BSAD 231, 261</td>
<td>6 credits HKIN electives; STAT 101</td>
</tr>
<tr>
<td>Year 3</td>
<td>SMGT 322, 327, 3 credits SMGT designated courses</td>
<td>6 credits HKIN electives; STAT 101</td>
</tr>
<tr>
<td>Year 4</td>
<td>SMGT 423; 3 credits SMGT designated courses</td>
<td>6 credits HKIN electives</td>
</tr>
</tbody>
</table>

Sport Management Designated Courses for BA HKIN

Departmental prerequisites will apply.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSAD 221 Introductory Financial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 223 Introductory Managerial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 281 Foundations of Business Information Technology</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 331 Professional Sales</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 356 Entrepreneurship</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 384 Data Management and Analytics</td>
<td>3</td>
</tr>
</tbody>
</table>

BA in Human Kinetics with Major in Pre-Education

Year 1 | 3 credits skills; HKIN 115, 136, 151, 152, 150 or 154; 6 credits arts subject A; 6 credits arts subject B |
Year 2 | 3 credits skills; HKIN 215, 265; 3 credits HKIN elective; 6 credits arts subject A; 6 credits arts subject B; 6 credits arts/science electives |
Year 3 | 3 credits skills; HKIN 376, 385; 3 credits HKIN sociocultural; 12 credits arts subject A; 6 credits arts/science electives |
Year 4 | 3 credits HKIN sociocultural; 3 credits 400-level HKIN elective; 6 credits HKIN electives; 6 credits arts subject B; 6 credits approved electives; 6 credits open electives |

BA in Human Kinetics with Major in Kinesiology

Year 1 | 3 credits skills; HKIN 115, 136, 151, 152, 150 or 154; 6 credits science A; 6 credits science B |
Year 2 | 3 credits skills; HKIN 215, 265; STAT 101; 6 credits HKIN electives; 6 credits science A; 6 credits arts X |
Year 3 | HKIN 376; one of HKIN 374, 396, 397; 3 credits 300-level HKIN elective; 3 credits HKIN elective; 12 credits science A; 6 credits arts X |
Year 4 | 3 credits HKIN sociocultural; 3 credits 400-level HKIN elective; 6 credits HKIN electives; 6 credits arts X; 6 credits approved electives; 6 credits open electives |

If science A is biology then science B is normally chemistry.

BA in Human Kinetics with Major in Pre-Education

Year 1 | 3 credits skills; HKIN 115, 136, 151, 152, 150 or 154; 6 credits science A; 6 credits science B |
Year 2 | 3 credits skills; HKIN 215, 265; 3 credits HKIN elective; 6 credits science A; 6 credits arts X; 6 credits arts Y |
Year 3 | 3 credits skills; HKIN 376, 385; 3 credits 300-level HKIN elective; 12 credits science A; 6 credits arts X |
Year 4 | 3 credits skills; HKIN 425, 426; 3 credits HKIN sociocultural; 3 credits 400-level HKIN elective; 6 credits HKIN elective; 6 credits approved electives; 6 credits open electives |

If science A is biology then science B is normally chemistry.
The 12 credits of skill courses must be HKIN 127, 137, 141, 227; one of HKIN 125, 139, 143, 147; one of HKIN 126, 146, 148, 202; one of HKIN 119, 121, 122, 123, 124, 128, 129, 131, 132, 133, 134, 135, 140, 142, 144, 149; one additional 200-level skill course.

B.Sc. in Human Kinetics with Major in Kinesiology and Minor in Health Sciences

Year 1  
3 credits skills; HKIN 115, 136, 151, 152, 150 or 154; CHEM 100; 6 credits arts X (ENGL, PSYC, or SOCI)

Year 2  
3 credits skills; HKIN 215, 265; STAT 101; 6 credits HKIN electives; CHEM 220; BIOI 111, 112

Year 3  
HKIN 376; one of HKIN 374, 396, 397; 3 credits 300-level HKIN elective; 3 credits HKIN elective; CHEM 225; PHYS 101, 102; one of BIOL 201 or 204; 6 credits arts Y (ENGL, PSYC, or SOCI)

Year 4  
3 credits HKIN sociocultural; 3 credits 400-level HKIN elective; 6 credits HKIN electives; 6 credits arts X; 6 credits approved electives; 6 credits open electives

*Recommend that BIOL 204 be completed in year three if planning BIOL 315 as an approved or open elective in year four.

B.Sc. in Human Kinetics with Major in Kinesiology and Minor in Nutrition

Year 1  
3 credits skills; HKIN 115, 136, 151, 152, 150 or 154; CHEM 111, 112; CHEM 100

Year 2  
3 credits skills; HKIN 215, 265; STAT 101; 6 credits arts X; 6 credits arts Y; 6 credits approved electives

Year 3  
HKIN 376; one of HKIN 374, 396, 397; 3 credits 300-level HKIN elective; CHEM 225, 225; HNU 145, 261, 262; 6 credits arts X

Year 4  
3 credits HKIN sociocultural; 3 credits 400-level HKIN elective; 6 credits HKIN electives; 6 credits arts X; 6 credits approved electives; 6 credits open electives

For completion of B.Sc. in HNU in 5th year, see required course pattern below.

B.Sc. in Human Nutrition degree in 5th year for B.Sc. Human Kinetics students with minor in Human Nutrition

B.Sc. Human Kinetics students majoring in Kinesiology and minor in Human Nutrition who wish to pursue a degree in Human Nutrition in 5th year should follow the course pattern below. The required six credits of open electives in the HNK degree must be BSAD 102 and HNU 146. In third year, students must take HNU 146, moving the 3 credit HKIN elective to fourth year. In fourth year, students must take HNU 161, 235, 351 and 365 as their required 12 credits of HNU electives. HKIN 374 recommended, 396 or 397 fulfills the requirement of HNU 384/385 in the HNU degree program.

Recommended Course Pattern

Year 1-4  
HNU 145, 146, 161, 235, 261, 262, 351, 363, 365; BSAD 102

Year 5  
HNU 352, 353, 405, 475, 15 credits HNU electives; 3 credits open elective

Students must submit re-entry application through Admissions.

BA & B.Sc. in Human Kinetics with Honours

In addition to the major requirements, students in the kinesiology honours program must complete HKIN 491 (seminar) and 493 (thesis). HKIN 493 replaces an HKIN elective. Additionally, 6 credits of HKIN electives must be at the 400 level.

In addition to the major requirements, students in the pre-education honours program must complete STAT 101; one of HKIN 374, 396, 397; 491; and 493 (thesis). The additional 9 credits replace HKIN electives. The 6 credits of required 400-level HKIN electives are fulfilled by HKIN 425 and 426.

A student who fails to satisfy one or more requirements for the honours degree may be eligible for the advanced major degree.

B.Sc. Joint Advanced Major in Human Kinetics & Biology

See chapter 7 for requirements.

B.Sc. in Human Kinetics with Diploma in Engineering (Major in Kinesiology and Minor in Math)

Year 1  
3 credits skills; HKIN 115, 136, 150 or 154; PHYS 121, 122; ENGR 121, 122, 131, 132

Year 2  
3 credits skills; HKIN 151, 152, 215; CHEM 100, ENGR 136, 198; 6 credits arts elective

Year 3  
HKIN 265, 376; ENGR 123, 221, 222, 224, 237; 3 credits ENGR elective; one of HKIN 374, 396 or 397; 3 credits HKIN elective

Year 4  
3 credits HKIN elective; ENGR 211, 232, 242; 6 credits ENGR electives; 6 credits MATH electives; 6 credits arts elective

Year 5  
3 credits 400-level HKIN elective; 15 credits HKIN electives, 6 credits arts electives

Note: HKIN skills, 115, 151, and 152 are restricted to human kinetics students. Other HKIN courses are open to students outside of the human kinetics program with permission of the professor and the department chair.

Skills

Skill courses run 12 weeks in first and second terms. Each skill has a credit value of 1.5 credits. Grades will be pass/fail and are not included in the academic average. The maximum number of skills for the pre-education major is 15 credits and for the kinesiology major is 12 credits. Credit will be granted for only one of the same or similar skills. (i.e. if one previously took Outdoor Soccer in 2017-2018, then credit cannot also be granted for HKIN 132 Soccer).

The following 100-level skills will introduce students to the basic skills:

119 Aquatic Activities (snorkeling, water polo, aquafit)
121 Badminton
122 Ball & Wall (handball, squash, raquetball)
123 Basketball
124 Batting & Fielding (baseball, softball, criquet)
125 Contemporary Dance
126 Fitness
127 Gymnastics
128 Football
129 Hockey
131 Rugby
132 Soccer
133 Volleyball
134 Golf
135 Ice Games (power skating, ringette, broomball)
137 Low and Organized Games
138 Mountain Biking (Aug 30/31/Sept 1/2), (Sep 8/9/15/16/22/23)
139 Movement Education
140 Net Games (pickle ball, tennis, team handball, Sepak)
141 Outdoor Education Camps (Oct 12-14), (Oct 19-21)
142 ParaSport (goal ball, wheelchair basketball, sitting volleyball)
143 Social Dance
144 Target Games (curling, bowling, bocce)
145 Track & Field
146 Weight Training
147 World Dance
148 Yoga
149 Invasion/Territory Games (ultimate frisbee, lacrosse, field hockey)

The following 200-level skills involve advanced instruction and coaching instructional strategies and analysis:

202 Instructional Group Fitness
203 Judging and Officiating
227 Gymnastics
228 Football
229 Hockey
231 Rugby
232 Soccer
233 Volleyball

115 Principles of Human Movement

This course provides an introduction to human kinetics. The functional and psychosocial aspects of human movement form the core components of this course. Topics include physical activity, physical fitness, sedentary behaviours, healthier eating, stress, chronic diseases, mental health, body composition and issues with weight management, and behaviour change. Three credits and lab.

136 Foundations of Sport and Exercise Psychology

This course provides an introduction to the basic concepts and principles of sport and exercise psychology, and how they apply to teaching, coaching, and fitness instruction. Credit will be granted for only one of HKIN 136 or HKIN 236. Three credits and lab.

150 Introduction to Sport in the Humanities

This course serves as an introduction to the philosophical and sociocultural dimensions of sport. Topics include the nature of sport, rules and values in sport, and avenues for further study of sport in the humanities. Ideas to be explored include the conceptualization of sport, the significance of sport, knowledge and excellence in sport, the beauty of sport, right and wrong in sport, and the morality of sport. Credit will be granted for only one of HKIN 150 or HKIN 250. Three credits.

151 Applied Human Anatomy and Physiology I

The human body is able to operate by the intricate coordination of multiple systems. Each has a purpose, and is regulated at cellular, tissue, and organ levels. The focus...
of this course is to understand the structure, function, and organization of major systems. Individual and combined functions will be outlined for the nervous, skeletal, and muscular systems. Students will explore these concepts in complementary laboratory activities. Credit will be granted for only one of HKIN 151 or BIOL 251. Three credits and a lab.

152 Applied Human Anatomy and Physiology II
The human body is able to operate by the intricate coordination of multiple systems. Each has a purpose, and is regulated at cellular, tissue, and organ levels. The focus of this course is to understand the structure, function, and organization of major systems. Individual and combined functions will be outlined for the cardiorespiratory, endocrine, and digestive systems, among others. Students will explore these concepts in complementary laboratory activities. Credit will be granted for only one of HKIN 152 or BIOL 252. Three credits and a lab.

154 Introduction to Ethics of Sport
This course will introduce students to some of the main themes, topics and issues in ethics of sport. The course is designed to provide an introduction and critical analysis of classic and contemporary readings in the ethics of sport. We will explore issues such as fair play and cheating, doping, equity and gender, the use of animals in sport, violence, and disability. Credit will be granted for only one of HKIN 154 or HKIN 254. Three credits.

215 Introduction to Motor Control and Learning
This course offers students a comprehensive overview of the major areas of study in motor control and learning. Students will first learn how the nervous system perceives and integrates sensory input and generates motor output through the musculoskeletal system (motor control). They will then be introduced to the processes involved in motor skill acquisition (motor learning) and the factors that enhance or inhibit an individual's capability to perform a motor skill. Three credits and lab.

222 Care and Prevention of Athletic Injuries
A study of the injuries that occur in popular physical activities, including the nature, course, prevention, and non-medical management of these injuries. Prerequisite: BIOL 251 or HKIN 151. Three credits and lab.

226 Focus on Personal Health
This multidisciplinary and self-reflective course addresses personal health of university students. Topics include healthier living and behaviour change, mental health and illness, communication, dietary intake, physical activity, sedentary behaviours, drugs, the environment and sexuality. Three credits.

234 Coach Leadership and Planning
This practical course seeks to introduce students to the practice of coaching through the development of five core competencies: problem solving, valuing, critical thinking, leading, and interacting. This course design allows students to earn a NCCP certification in 'Introduction to Competition'. Credit will be granted for only one of HKIN 234 or HKIN 334. Three credits.

253 Sport Philosophy
This course serves as a philosophical inquiry into the nature, meaning and significance of sport. The advancement of a philosophy of existential fitness represents a central feature of the curriculum. Topics include the relationships between work, game and play, mind, body and spirit, as well as game-playing and existence. Ideas to be explored include being-in-the-zone, sporting intelligence, sport as a mental health practice, sport as a spiritual practice, and the game of life. Credit will be granted for only one of HKIN 253 or HKIN 353. Three credits.

262 Performance-Enhancing Substances
The drive to succeed in sports and exercise has led to the use of nutritional, chemical, pharmacologic, and physiologic means of performance enhancement. The purpose of this course is to provide an overview of substances used in sports and exercise, addressing their mechanisms of action, safety and efficacy in consultation with valid scientific literature. Prerequisite: HKIN 115. Three credits. Not offered 2018-2019.

264 The Sociology of Sport
This course provides students with a sociological interpretation of sport in contemporary Canadian society. By contextualizing sporting behaviours and activities, the course challenges dominant ideas about sport in society and positions sport as an institution that both liberates and limits possibilities. The course will demonstrate the connection between sport and issues of deviance, violence, gender, race, the economy, media, and politics. The role of sport in constructing specific values in Canadian society will be emphasised. Credit will be granted for only one of HKIN 264 or HKIN 331. Three credits.

265 Exercise Physiology
An introduction to the responses and adaptations (acute and chronic) of the musculoskeletal, cardiovascular, and respiratory systems to disruptions due to muscular activity. Credit will be granted for only one of HKIN 265 or HKIN 365. Prerequisites HKIN 151/152 or BIOL 251/252. Three credits and lab.

316 Motor Control in Special Populations
First and foremost, students will come to appreciate that perception and action are interdependent processes. They do not work independently, rather they interact and influence one another. This happens at the level of movement production, modification, and understanding. Atypical perceptual processing in special populations (e.g., Down syndrome, Parkinson's disease) can manifest itself as aberrant social and motor behaviour. Students are asked to refrain from making assumptions about observable behaviours for risk of erroneous conclusions. Instead, to consider how unobservable brain processes may come into play. A mandatory service learning placement will provide students with the opportunity to integrate meaningful community service and what they learn in the classroom. Prerequisite: HKIN 215. Three credits.

321 Advanced Care & Prevention of Athletic Injuries
An in-depth study of the assessment and management of athletic injuries. Students will learn proper assessment protocol, advanced assessment techniques, and specialized taping techniques. Prerequisites: HKIN 151 or BIOL 251; HKIN 222. Three credits.

332 Gender in Sport and Physical Activity
Explores the role of women and men in sport/physical activity/recreation from a historical, philosophical, and sociocultural perspective. This course covers embodiment, objectification, equity, racism, homophobia, politics of difference and identity. Cross-listed as WMGS 332. Three credits.

345 Essential of Personal Training
An introduction to exercise program prescription and leadership. Students will learn techniques for prescribing, following, and leading exercise programs; participate in and analyze exercise activities and programs; design and lead group, individual, and periodized exercise programs. Students will be prepared to meet national criteria for recognition as a certified personal trainer. Credit will be granted for only one of HKIN 345 or HKIN 446. Prerequisites: HKIN 151/152 or BIOL 251/252; HKIN 265 or 365. Three credit and lab.

347 Rehabilitation Techniques of Athletic Injuries
This course will provide upper level HKIN students with an interest in further pursuing rehabilitation therapy as a career, a guide to understanding, designing, implementing and supervising rehabilitation programs for sports related injuries. Credit will be granted for only one of HKIN 347 or HKIN 447. Prerequisites: HKIN 222, 321. Three credits.

352 Historical Foundations of Sport and Physical Activity in Canada
An overview of the history of sport in Canada. Using the forces of class, ethnicity, race and gender as an interpretative foundation, the class will examine the context and social conditions under which Canadians have created, refined, participated in and interpreted sports. Three credits.

354 Sport Morality
Interpreting sport as a trial of the moral self, this course serves as a philosophical inquiry into the moral significance of sport. The advancement of a philosophy of moral excellence represents a central feature of the curriculum. Topics include the relationships between sport and moral reasoning, games and peace, play and the pursuit of happiness, and game-playing and the moral ideal of humanity. Ideas include sportspersonship, moral idealism, moral virtue, and the good of sport. Three credits.

357 Aging and Exercise
Aging is an innate feature of human biology, and among the greatest known risk factors for most human diseases. This course involves an in-depth study of the changes in exercise capacity and sport performance that occur beyond adulthood, with a focus on changes attributable to aging itself compared to aspects linked to an increasingly sedentary lifestyle. The role of physical activity and exercise training in minimizing aging-related losses in performance capacity and physical conditioning is also addressed through practical, experiential learning with older adults. Credit will be granted for only one of HKIN 357 or HKIN 398 (2017-2018). Prerequisites: HKIN 151/152 or BIOL 251/252; HKIN 265 or 365. Three credits.

374 Mixed Methods in Research
This course introduces students to mixed methods research design (qualitative and quantitative). The course will help answer such questions as why, what, how and where to mix research methods. Specifically, the course is designed to provide
an understanding of a research purpose, research process, research approaches, research design, data collection methods, and research proposal development and report in human kinetics. Students also will have the opportunity understand ethical issues related to the conduct of research. Credit will be granted for only one of HKIN 374, HKIN 371 (2016-2017, 2017-2018), HKIN 396 or HKIN 397. Three credits. Not offered 2018-2019.

376 Biomechanics
Students will be exposed to the concepts of kinetic analysis of motion through the application of Newton’s Laws. The course will provide the mechanical information necessary to enable the student to objectively criticize any human movement which the student may one day have to teach, coach or ergonomically evaluate. Three credits and lab.

385 Adapted Physical Education
Future educators learn about advocacy, the philosophy and implementation of inclusion as well as the nature of various physical, intellectual, developmental and emotional disabilities. Students translate theoretical knowledge into practice forming collaborative partnerships with local schools, families and peers, designing individualized education plans and participating in the Motor Activities with X applied lab alongside people with disabilities. Credit will be granted for only one of HKIN 385 or HKIN 395. Three credits and practicum.

386 Sports Biomechanics
This course will focus on understanding the key biomechanical principles in executing individual sporting skills. Students will spend about 30% of the regular class time in the sports biomechanics research lab learning to use selectedized equipment and collect data. Students will gain hands-on experiential learning in a research lab environment analyzing sporting skills and developing recommendations for athletes and/or coaches. An emphasis will be placed on understanding the biomechanics of the golf swing. Credit will be granted for only one of HKIN 386 or HKIN 474. Prerequisites: HKIN 376. Three credits.

387 Exercise Physiology in Extreme Environments
Human physiology is marvelously adaptable, and we are able to function in variable environments and under a wide variety of stresses. Exercise is one such stress, but coupling exercise with extreme temperatures, pressures, etc. can lead to catastrophic failure. It is the goal of this course to explore how the human physiological system operates in “non-normal conditions”. Emphasis will be placed on interpretation and critical analysis of primary research relating environmental exercise physiology and performance. Credit will be granted for only one of HKIN 387 or HKIN 473 (2016-2017, 2017-2018). Prerequisites: HKIN 151/152 or BIOL 251/252; HKIN 265 or HKIN 365. Three credits.

395 Disability, Health and Community Rehabilitation
This applied course focuses on clinical research design in the field of disability, health and community rehabilitation. Emphasis is placed on implementation science and the social, behavioural and physical characteristics of diverse populations. Evidence-based service learning allows students to gain community and rehabilitation experience with vulnerable populations including autism, Down syndrome, intellectual disability, orthopedic impairment, mental health, deafness and unique medical cases. Credit granted for only one of HKIN 395 or HKIN 385. Three credits.

396 Quantitative Research Methods
An overview of the scientific method of problem solving. The course covers problem identification, hypothesis testing, data collection, and analysis of research findings. A detailed examination of experimental design assists the student in conducting research, writing the proposal and the report, and critically analyzing published literature. Restricted to upper year students; required for third-year honours students. Three credits.

397 Qualitative Research Methods
An overview of qualitative research methodologies, including the major theories, methods, and approaches (i.e. case studies, content analysis, interviews, observations, and ethnography). Problem identification, literature review analysis, research design, theoretical and empirical analysis, and dissemination are the major focus of this course. Practical experience will be included. Restricted to upper year students; required for third-year honours students. Three credits.

416 Control of Human Movement
Movement is central to our nature. This course offers students a broad overview of the neural contributions to motor control. For example, students will learn how the human mind has been likened to a computer, suggesting that we too are information processors. Internal models will explain why most of us cannot tickle ourselves. The notion of two visual systems will be introduced; one responsible for perception, the other for action. The discovery of the mirror neuron system and how it has changed the study of motor control will also be explored. Finally, the phenomenon of neuroplasticity (the notion that the brain can reorganize itself) will be considered. Prerequisite: HKIN 215. Three credits and lab.

425 Child Growth and Development
This course covers the physical growth, maturation, and development in children and adolescents. The implications of changes in structure and function as they relate to physical education, physical activity, and physical fitness will be discussed. Prerequisites: HKIN 151/152 or BIOL 251/252; HKIN 265 or HKIN 365. Three credits and lab. Service learning option.

426 Health Education
This course introduces the basic concepts and topics associated with physical, and mental health with specific application to children and adolescents. Emphasis will be placed upon the application of these concepts to the promotion of health in the school system and more broadly in the community. Service learning option. Three credits.

431 Sport and Identity
This course explores the intersection of sport with social identities. Using seminars, lectures, readings, and films, students will explore how various social identities have been and continue to be shaped through the sport institution, and are reinforced by sport participants, and affect the shape of sport itself. Through the lens of sport, students will also explore the historical foundation of social categories of identity, as well as the ways they intersect to produce unique sporting experiences. Credit will be granted for only one of HKIN 431 or HKIN 471 (2017-2018). Prerequisites: HKIN 264 or 331 or 332 or 352. Three credits.

433 Introduction to Policy for Health-Interdisciplinary Strategies
Designed to create an interdisciplinary learning experience for nursing, human nutrition and human kinetics students, this seminar course is an introduction to public policy change for health. The objective is to develop a basic understanding of healthy public policy development, analysis, and change from interdisciplinary and social justice perspectives. Issues such as healthy public policy, social determinants of health, social justice, health equity, and interdisciplinary/cross-sectoral and citizen lead policy action are explored. This course would be beneficial for students pursuing professions in the health care field. Credit will be granted for only one of HKIN 433 and NURS 495, HKIN 495, HNU 495. Cross-listed as NURS 433 and HNU 433. Three credits.

435 Psychology of Motivation and Performance in Sports

437 Designing Interventions for Population Health
This advanced course explores the scope and current trends with respect to the design and implementation of sustainable evidence-based interventions for populations at-risk for adverse health outcomes. Subject matter encourages design thinking and innovation. Topics include preventative medicine, universal design, rural healthcare, pediatric rehabilitation, assistive technology, community-engaged scholarship and knowledge translation. The service learning component focuses on implementation science and applying theoretical knowledge in intervention settings with vulnerable populations. Credit will be granted for only one of HKIN 437 or HKIN 495 (2017-2018). Prerequisites: HKIN 151/152 or BIOL 251/252; HKIN 265 or HKIN 365. Three credits.

443 Modern Olympic Games
This advanced seminar course is designed to provide opportunities for students to critically examine the Olympic Games and the modern Olympic Movement. Students will examine the Olympic Games from a sociocultural interdisciplinary approach. Restricted to third and fourth year HKIN students. Three credits. This course will only be offered in the second term of Olympic years (Winter 2020, and Winter 2022). Not offered 2018-2019.

445 Instructional Strategies in Human Kinetics
Future educators are increasingly expected to familiarize themselves with inclusive practices. In this applied course, students familiarize themselves with both traditional and alternative teaching and learning strategies. Students simultaneously apply this theoretical knowledge while teaching physical activity classes to diverse learners. Students will practice various instructional strategies in order to design an effective inclusive learning environment and accommodate for individual differences and learning objectives. Three credits and practical experience.

455 Games, Life & Leadership
Embracing the existential quest for meaning and significance, this course serves as a philosophical inquiry into the human condition. The elucidation of life as a game we are playing represents a central feature of the curriculum. Topics include the
meaning of life, human nature, the ideal of existence, servant leadership, and the games Utopians play. Restricted to upper year students. Prerequisite: HKIN 253 or 354. Three credits. Not offered 2018-2019.

456 Fitness Assessment and Exercise
This course is designed to provide the theory and practical experience in a wide range of exercise science-related laboratory techniques and exercise training principles. Components of this course are intended to provide students with the necessary background information to pursue personal trainer certification through the Canadian Society of Exercise Physiology. Prerequisites: HKIN 265 or 365; HKIN 151/152 or BIOL 251/252. Three credits and lab.

466 Clinical Exercise Physiology
This course examines several chronic diseases prevalent in our society, which are positively influenced by regular exercise or physical activity, and include: obesity, osteoporosis, cardiovascular disease, diabetes, arthritis, certain cancers and depression. The nature of the disease, methods of assessment, the role of exercise in the possible prevention, treatment and/or rehabilitation of these diseases are considered. Restricted to fourth-year students. Prerequisites: HKIN 151/152 or BIOL 251/252; HKIN 265 or 365. Three credits and lab.

474 Applied Biomechanics
This course will further the student's understanding of the qualitative approach to biomechanics, and provide the necessary skills for conducting a quantitative biomechanical analysis of human motion. Students will be introduced to several techniques used in biomechanics research. Emphasis will be placed on the collection and analysis of biomechanical data. Concepts will be illustrated with examples taken from areas of sport and exercise with a special focus on the practical applications to golf. Prerequisites: HKIN 376; MATH 106 or 126 and PHYS 102 recommended. Three credits and lab. Not offered 2018-2019.

491 Senior Seminar
In addition to classroom sessions and round table discussions, the senior seminar may include lectures by visitors, faculty, and staff on aspects of human movement. Required for allhonour students. The theses of honour students form the basis of their presentations. No formal credit is given for the senior seminar; however, satisfactory attendance and seminar presentation is a requirement for the BA or B.Sc. in Human Kinetics with Honours. No credit.

492 Exercise Metabolism
An in-depth study of the metabolic adaptations (acute and chronic) by the human body to disruptions to homeostasis caused by muscular activity. Credit will be granted for only one of HNK 492 or HKIN 392. Prerequisites: HKIN 151/152 or BIOL 251/252; HKIN 265 or 365. Three credits.

493 Honours Thesis
Honours students must submit a thesis under the direction of a faculty member. The thesis will document the student's research work. Students must meet all department deadlines and requirements, and submit an acceptable thesis to earn a BA or a B.Sc. in Human Kinetics with Honours. No credit.

499 Directed Study
Designed for students with high academic standing who wish to pursue a directed, in-depth study in a selected topic. See section 3.5. Three credits.

SPORT MANAGEMENT COURSES

101 Intro to Sport Management
An introduction to sports management. Primary focus is on sport industry, including professional sport entertainment, amateur, for-profit & nonprofit sport participation, sporting goods, and sport services. Students will examine applications of managerial concepts and processes, and look at the ways in which sport organizations interact with each other, and with corporations, the government and non-governmental organizations. Micro aspects of management applied to sport, including human resources, sport marketing, sponsorship, finance, event management, and sport law. Credit will be granted for only one of SMGT 321 and BSAD 363. Restricted to students in the sport management minor program. Prerequisite: SMGT 101. Three credits. Not offered 2018-2019.

327 Sport Management Ethics and Law
This course investigates moral issues in sport and judgments about right and wrong behavior amongst all stakeholders in sport. Examination of ethical theories, principles and applications, with case study analyses, and personal and professional ethical issues in sport management. Focus on the three major areas of the law that have a direct impact on the management of sport: tort liability and risk management; contract law, employment law, and constitutional law. Restricted to students in the sport management minor program. Prerequisite: SMGT 101. Three credits. Not offered 2018-2019.

423 Sports Marketing and Event Management
This course introduces the concepts, theories, and marketing strategies utilized in the context of the sport industry. Topics include, but are limited to the marketing planning process, components of the marketing mix, branding, event planning, operational logistics, media marketing and sponsorship. Restricted to students in the sport management minor program. Prerequisites: BSAD 101; SMGT 101. Three credits. Not offered 2018-2019.

9.23 HUMAN NUTRITION
M. English, Ph.D.
A. Fox, Ph.D., P.Dt
J. Jameson, Ph.D.
L. Reid, M.Ed., P.Dt., C.D.E.

Part Time
F. Haley, M.H.S.A., P.Dt., C.H.E.
P. Mazier, Ph.D.
P. St. James, M.Sc., P.Dt.

Senior Research Professor
D. Gillis, Ph.D.

The B.Sc. in Human Nutrition is a professional program which integrates foundational knowledge meeting core requirements in foods, nutrition and related areas with studies in biology, chemistry, statistics, business, humanities and social sciences. Collectively, the course requirements are designed to provide graduates with the expertise needed by food and nutrition professionals today. Depending upon the choice of emphasis, the Human Nutrition program prepares graduates for careers in areas such as dietetics, education, health promotion, industry, food service management, and research, and development and entrepreneurship in food and nutrition. Graduates may qualify for entrance to a dietetic internship accredited by the Partnership for Dietetic Education and Practice (PDEP) in Canada.

In second year, students who meet the requisite average may apply for either the advanced major program, which has a seminar requirement; or the honours program, which has a seminar requirement, a three-credit thesis course and 21 credits HNU electives (minimum 12 credits at the 400-level). Students' selection of seminar topics will reflect the research areas of faculty members.

With the proper selection of courses, (including HNU 325, 352, 353, 356, and HNU 456 as HNU electives), students may meet the requirements for admission to a graduate dietetic internship and/or the SIFX Integrated Dietetic Internship. Both programs are accredited by the Partnership for Dietetic Education and Practice (PDEP) in Canada and admission is competitive. The SIFX Integrated Dietetic Internship enables students to attain PDEP competencies for entry level practice. Students must normally declare their intent to apply for the SIFX Dietetic Internship Program by the end of their second year at the normal time of application for the advanced major or honours program. This Integrated Internship consists of three 12-week practicum courses. Each practicum includes one or more supervised placements in dietetic practice settings. At the earliest, students may commence the first practicum after completing the third-year sequence of HNU courses. Students must earn an overall average of 70 in the HNU program, a minimum overall average of 75 in HNU courses, and satisfy the criteria for acceptance. Formal submission of the full application must be made by January 31.

With an appropriate selection of courses, students may also meet the requirements for admission to a B.Ed. program. In order to qualify for a family studies teachable, students must present a core of at least 18 credits of human nutrition. These courses must be augmented by a combination of courses in other subject areas which address the field of family dynamics. In general, these courses may be drawn from biology, psychology, sociology, and business administration. Students interested in pursuing this particular option should consult with the Faculty of Education. In addition, courses such as HNU 353 and HNU 461 can be used towards a biology teachable either as a minor or as a second major. (See section 6.1.4 for more details).

See chapter 7 for information on degree patterns, applications for advanced major and honours, advancement and graduation requirements.
All third- and fourth-year human nutrition students are required to attend the presentations in HNU 491. The attendance of first- and second-year students is recommended.

**Bachelor of Science in Human Nutrition**

The normal sequence for the program is shown below.

| Year 1 | BIOL 111; CHEM 100; HNU 145, 161, 235; 6 credits humanitites electives; 6 credits social sciences electives |
| Year 2 | BIOL 215, 251, 252; BSAD 102; CHEM 225, 255; HNU 146, 261, 262; STAT 101 |
| Year 3 | HNU 351, 365, 385; 12 credits HNU electives; 6 credits humanities or social sciences electives for a pair; 3 credits open electives |
| Year 4 | HNU 405, 475; 12 credits HNU electives; 12 credits open electives |

**B.Sc. in Human Nutrition with Advanced Major**

The normal sequence for the advanced major program is identical to that of the program above, with the addition of HNU 491 in year 4.

**B.Sc. in Human Nutrition with Honours**

The normal sequence for the honours program is shown below.

| Year 1 | BIOL 111; CHEM 100; HNU 145, 161, 235; 6 credits humanitites electives; 6 credits social sciences electives |
| Year 2 | BIOL 215, 251, 252; BSAD 102; CHEM 225, 255; HNU 146, 261, 262; STAT 101 |
| Year 3 | HNU 351, 365, 384, 485; 9 credits HNU electives; 6 credits humanities or social sciences electives for a pair; 3 credits open electives |
| Year 4 | HNU 405, 475, 491, 493; 15 credits HNU electives (minimum 12 credits at the 400-level); 6 credits open electives |

**Application to the StFX Integrated Dietetic Internship and the Dietitian of Canada's Graduate Internship**

Students planning to apply for dietetic internship programs follow the normal course sequence for B.Sc. in Human Nutrition with the exception of years 3 and 4.

| Year 3 | HNU 325, 351, 352, 356, 365, 384, 485; 6 credits humanities or social sciences for a pair; 3 credits open electives |
| Year 4 | HNU 353, 405, 456, 475; 9 credits HNU electives; 12 credits open electives |

**Co-operative Education Program in Human Nutrition**

The co-operative education is offered as an option for HNU students. Through co-op, students have the opportunity to complete professional development training, 12-16 months of relevant and paid work experience, and COOP 405 (3 credits). The co-op education HNU graduate will be prepared to work within the food industry (product development and evaluation, food safety, and etc), public relations, consumer affairs or marketing with various employers including not-for-profits, industry or government and other related areas of practice. The human nutrition co-op program is accredited by the Co-operative Education & Work-Integrated Learning Canada (CEWIL Canada). COOP 405 can be used as HNU elective or as an open elective. For further information on work term sequencing options and professional development training topics see section 9.13.

**B.Sc. in Human Nutrition degree in 5th year for B.Sc. Human Kinetics students with minor in Human Nutrition**

B.Sc. Human Kinetics students majoring in kinesiology and minoring in human nutrition who wish to pursue a degree in human nutrition in year 5 should follow the course pattern below. The required six credits of open electives in the HNU degree must be BSAD 102 and HNU 146. In third year, students must take HNU 146, moving the 3 credit HKN elective to fourth year. In fourth year, students must take HNU 161, 235, 351 and 365 as their required 12 credits of HNU electives. HKN 374, 396 or 397 fulfills the requirement of HNU 184 in the HNU degree program. Students must submit re-entry application. Recommended Course Pattern

| Years 1-4 | HNU 145, 146, 161, 235, 261, 262, 351, 363, 365; BSAD 102 |
| Year 5 | HNU 405, 475, 21 credits HNU electives; 3 credits open electives |

Students who select HNU 325, 352, 353, 356 and 456 as HNU electives while completing year 5 are eligible to apply for the StFX Integrated and Graduate Dietetic Internship programs.

**B.Sc. in Human Kinetics degree in 5th year for B.Sc. Human Nutrition students**

B.Sc. Human Nutrition students who wish to pursue a degree in human kinetics should complete the normal sequence of their HNU program and be sure to include BIOL 112 and 3 credits of HKN electives. In year 5 students will complete a HKN degree with the following courses: HKN 215, 236, 250, 254, 365, 376, 6 credits of HKN 105, and 2 courses from HKN 331, 332, 352, 353, 354, 443, 455; 6 credits of HKN electives. Students must submit re-entry application.  

**135 Introductory Nutrition for Nursing**

This course introduces nursing students to the fundamentals of nutrition with emphasis on macronutrients and micronutrients along with their functions, dietary sources, digestion and metabolism, and how and why nutrient needs change throughout stages of the life cycle. Discussion will include use of current dietary recommendations and guidelines for health and wellbeing by health professionals. The importance of inter-professional practice for nutritional care will also be introduced. Credit will be granted for only one of HNU 135, 215, 253, 261. Restricted to current nursing students. Three credits.

**145 Introduction to Foods**

This course will introduce the physical and chemical properties of the major food groups, the extent to which these properties are altered by various types of processing, as well as issues of food quality and safety and their implications for human health. Topics will include how chocolate is made, sugar crystallization, cheese manufacture and the role of gluten in bread structure. Skills in baking, measurement and the manipulation of food ingredients will be emphasized. Three credits and lab.

**146 Introduction to Food Science**

This course provides an introduction to scientific concepts as a basis for understanding foods as a complex chemical system. It includes a study of the properties of food components affected by chemical and physical changes; the foundations of various food preservation methods; food safety; and the principles of food evaluation by sensory and objective methods. Students will complete the TRAINCAN Management Level Food Safety Training. Three credits and lab.

**161 Food and Nutrition for Health in Society**

This foundation course examines the evolving role of food and nutrition in society from historical and contemporary perspectives. Students will be introduced to local, national and global influences on societal food consumption trends and factors influencing individual food choice and behaviour. The impact of socioeconomic factors and culture, such as customs and worldviews, on food selection and dietary practices will be explored. Credit will be granted for only one of HNU 161 or HNU 185. Three credits.

**215 Nutrition for a Healthy Lifestyle**

This course introduces nutritional science and the role that nutrition, exercise, and other lifestyle behaviours play in the promotion of health. Topics include the function of food and its role in maintaining and promoting health, vegetarianism, food safety, body weight, and healthy eating. Credit will be granted for only one of HNU 215 or HNU 261. Not acceptable for credit in the HNU, HKN (minor in HNU) or NURS programs. Three credits.

**235 Communication**

This course introduces the principles of human communications and the development of interpersonal, group, and public communication skills. It enables students to understand (through lectures) and apply (through labs) the written and oral communication process and the factors that influence its effectiveness in a wide range of dietetic practice and health promotion settings. Credit will be granted for only one of HNU 235 or HNU 335. Prerequisite: HNU 161. Three credits and lab.

**261 Introduction to Nutrition**

Students will learn the fundamentals of the science of nutrition with emphasis on energy nutrients, minerals and vitamins, their functions, their dietary sources, and how the body handles them from ingestion through excretion. Topics include the recommended nutrient intakes and guidelines for healthy eating. Credit will be granted for only one of HNU 261 or HNU 215. Prerequisites: CHEM 100 or 150; BIOL 111 or 105. Three credits.

**262 Principles of Nutrition in Human Metabolism**

Building on HNU 261, students will apply the principles of nutrition with an emphasis on nutrient functions and metabolism while drawing on foundational knowledge in biology and chemistry. Topics will include: energy metabolism, weight management, nutritional concerns across the life course and the emerging role of nutritional genomics. Credit will be granted for only one of HNU 262 or HNU 263. Prerequisites: HNU 261; BIOL 251, 252, completed or concurrent; CHEM 225, 255, completed or concurrent. Three credits.

**325 Professional Practices in Dietetics**

This course provides an introduction to the foundational knowledge and competencies integral to the profession of dietetics. It will examine the role of the nutritional care process as applied across the spectrum of diverse dietetic practice settings. Students will be engaged in simulation exercises involving critical thinking
and evidence-based decision making. Key topics will include reflective practice, ethical practice, nutrition education and counselling, cultural competence and interprofessional practice. Credit will be granted for only one of HNU 325 and HUN 398 offered in 2016-2017. Prerequisites: HNU 235, 351. Three credits.

351 Nutritional Assessment
This course addresses the principles and methods in nutritional assessment of individuals and populations with consideration for variations in health status and stages across the life course. It provides the theoretical foundation for nutritional assessment in the nutritional care process. Methods for dietary, anthropometric, biochemical, ecological and clinical evaluations of individuals and populations are examined, along with the development and appropriate use of the Dietary Reference Intakes. Prerequisites: HNU 262; CHEM 225, 255; BIOL 251, 252. Three credits and lab.

352 Nutrition in Chronic Disease Prevention & Management
Nutrition care principles will be applied while examining the epidemiology, pathophysiology, and role of nutrition in the prevention and management of chronic diseases including, but not limited to, weight management, cardiovascular disease, diabetes mellitus, and renal disease. The course will explore and provide applications of the nutrition care process including medical terminology and documentation of care. Credit will be granted for only one of HNU 352 or HNU 361. Prerequisite: HNU 351 concurrently. Three credits.

353 Nutritional Management of Human Disease
This course examines the etiology, pathophysiology, and nutritional management (including conventional feeding, enteral and parenteral nutrition therapy) of specific clinical conditions related to the upper and lower gastrointestinal tract, the liver and pancreas, the pulmonary system, neoplastic disease, HIV/AIDS, and metabolic stress. The nutrition care process and drug-nutrition interactions permeate the content. Case studies provide an opportunity to apply the knowledge from lectures. Credit will be granted for only one of HNU 353 or HNU 362. Prerequisite: HNU 352, completed or concurrent. Three credits.

356 Introduction to Food Service & Quantity Food Production
In this introduction to food service systems and quantity food production, principles, policies, and practices applied to the successful operation of quantity food service systems are examined. Topics include menu management; quantity recipe standardization and costing; procurement, production and service of quality food; marketing; quantity food service equipment; and environmental management. Prerequisites: HNU 262, 146. Three credits and lab.

363 Sport Nutrition
This course involves identification of the specific nutrient needs of the individuals engaged in vigorous physical activity, with a focus on the role of nutrients in energy metabolism as a means to support exercise performance. Students will demonstrate an understanding of energy, nutrient and fluid guidelines appropriate for power, endurance and team sports and apply the guidelines to food choices for training and competition. Skills in evaluating scientific evidence in the field of sports nutrition will be emphasized. Prerequisite: HNU 262. Three credits.

365 Community Nutrition
An introduction to the field of community nutrition and its role in health and health care, which assumes students’ familiarity with the theories and principles of normal nutrition. Students will explore the role of the community nutritionist in determining the needs of specific population groups; factors that influence eating behaviour; processes available for planning, delivering, and evaluating community nutrition services; and necessary tools, skills and techniques for practice. Prerequisite: HNU 262. Three credits.

366 Maternal and Child Nutrition
This class takes a life-course approach to examine the role of nutrition within the context of normal human development from pre-conception to adolescence. Emphasis is placed on nutritional concerns and recommended dietary practices during pregnancy, lactation, and early childhood. The management of common childhood and adolescent dietary concerns is also discussed. Prerequisites: BIOL 252; HNU 262 or 263. Three credits.

384 Research Methods: Theory and Design
This course introduces the research methodologies and techniques used to study human nutrition. Focusing on the research question, students will develop a research plan, through the review of existing literature, and articulation of methods that will best answer the research question. Different approaches to research will be covered including qualitative, quantitative and mixed methodologies, noting that each approach consists of multiple methods that may be used. Credit will be granted for only one of HNU 384 or 385. Prerequisites: STAT 101(201) and credit for all courses in the first two years of the human nutrition program sequence. Three credits.

398 Selected Topics
Three credits.

405 Food Availability
An examination of the vital issues that surround our national and global food supply from production to consumption. The course will explore interdependency of the many factors underlying the science of food and feeding of people, including the relation of nutrition to health and social policy decisions, the food supply, and access to food, food security, food technology, and domestic and global food distribution. Open to students in all faculties. Three credits.

421 Food and Nutrition for Global Health Equity
This course focuses on nutrition in tackling global disease burdens and achieving global health equity. It explores concepts, actors, governance, interventions, Sustainable Development Goals, nutrition transition, and other nutrition-related risk factors. The knowledge-translation framework, together with assets-based and integrated “bottom-up” approaches to community development, permeates the course and gives basis to the major course assignment. Various local and international guest speakers broaden the understanding of lecture topics. Credit will be granted for only one of HNU 421 and HNU 497(2017-2018). Prerequisite: HNU 351. Three credits.

425 Nutrition in Aging
A study of nutrition related to older adults. Emphasis is on nutritional concerns and dietary recommendations for the older adult population. Topics covered include healthy aging, attitudes and demographic trends among aging in Canada. Dietary management of common concerns in older adulthood (including dementia and osteoporosis) is discussed. Prerequisites: HNU 262 or 263; BIOL 251, 252. Three credits.

428 Functional Foods
This course will introduce students to the growing global food industry trend of functional foods and their relationship to health and disease. Bioactive components of functional foods, their sources, chemistry, efficacy, safety, and metabolism will be examined. Evaluation of aspects of marketing and the regulatory environment related to health claims for functional foods will focus on consumer perceptions and roles of health professionals. Credit will be granted for only one of HNU 428 or HNU 498 (completed in 2015, 2016). Prerequisites: HNU 145, HNU 146; HNU 262 completed or concurrent. Three credits with lab.

433 Introduction to Policy for Health-Interdisciplinary Strategies
Designed to create an interdisciplinary learning experience for nursing, human nutrition and human kinetics students, this seminar course is an introduction to public policy change for health. The objective is to develop a basic understanding of healthy public policy development, analysis, and change from interdisciplinary and social justice perspectives. Issues such as healthy public policy, social determinants of health, social justice, health equity, and interdisciplinary/cross-sectoral and citizen lead policy action are explored. This course would be beneficial for students pursuing professions in the health care field. Credit will be granted for only one of HKN 433 and NURS 495, HKN 495, HNU 495. Cross-listed as NURS 433 and HKN 433. Three credits. Three credits.

445 Food Product Development
This course is designed to advance the scientific practices leading to the development of new and improved food products. Students will work with the Instructor and industry partners to carry out market research evaluations, and create and test the acceptability of new product formulations using the sensory evaluation laboratory. Prerequisites: HNU 145, 146; CHEM 225, 255; STAT 101(201). Three credits and lab.

456 Food Service System Management
Building on material introduced in HNU 356, this course focuses on managerial decision-making relevant to human resource and financial management of food service systems in a range of settings in the public and private sectors. Using a problem-based learning approach, students working in small groups on problems assigned by the professor will examine current issues in food service practice and learn to apply quality assurance mechanisms in their management. Prerequisites: HNU 356; BSAD 102. Three credits.

461 Nutrition in Metabolic Disease
This course examines the etiology and pathophysiology of rare, nutrition-related metabolic diseases which affect the body’s biochemical reactions. Topics include inherited defects in nutrient metabolism resulting in phenylketonuria, homocystinuria, glycogen storage diseases, thalassemias, and hemochromatosis, for example. Designed for senior students, this course develops skills in finding and understanding clinical research, as well as translating research findings into nutrition
467 Advanced Nutrition
An in-depth study of energy metabolism in human beings, with emphasis on integration and regulation. The application of current research and the rationale for current dietary guidelines will be emphasized. Prerequisites: HNU 262; BIOL 251, 252, CHEM 225, 255. Three credits.

471 Entrepreneurial Practices for Nutrition Professionals
This course examines the relationship of a variety of factors for entrepreneurial behaviours both in the workplace and in new venture development. Creativity and self-awareness are emphasized while basic business skills and planning processes are developed as the necessary tools for bringing goals and ideas to reality. Guest speakers from nutrition-related enterprises and business support agencies will augment the learning and creative experience in the classroom. Prerequisites: BSAD 102; HNU 262, completed or concurrent. Restricted to HNU students. Three credits.

475 Effecting Change
This capstone course focuses on the study of change, particularly as it relates to promoting and supporting healthy eating and nutritional health among individuals and population groups. Students will learn about various theories of change and their applications to effecting individual and social change for the purpose of enhancing nutritional aspects of health and wellness. Prerequisites: HNU 365 and credit for all courses in first two years of the HNU program sequence. Three credits.

481 Internship Practicum I
A 14-week practicum course which prepares students to meet the entrance requirements for dietetic practice. Students work with preceptors in institutional and community settings to develop their assessment and communication skills; learn to plan; learn the basis of nutritional care; and choose a practice-based research project. Prerequisites: HNU 145, 146, 161, 235, 325, 351, 352, 353, 356, 365, 385; an overall average of 70 in the HNU program and an overall average of 75 in HNU courses; acceptance into the IDI program. Six credits. Graded as pass/fail.

482 Internship Practicum II
A second 14-week (minimum) practicum course which provides opportunities to integrate theory and practice in a preceptor-supported environment, and to acquire the competencies required for entry-level dietetic practice. Interns will improve their skills in communicating, assessing, and implementing nutritional care, and complete a practice-based research project. Prerequisites: completion of the HNU program with an overall average of 70 and an overall average of 75 in HNU courses; HNU 353, 456, 481. Six credits. Graded as pass/fail.

483 Internship Practicum III
The final 14-week (minimum) practice course of the IDI program provides an opportunity to integrate theory with practice in a preceptor-supported setting of the IDI program. Students will develop their communication, assessment, implementation, and evaluation skills through participation in nutrition care activities. Completion of HNU 483 enables students to write the Canadian Dietetics Registration Exam (CDRE). Prerequisite: HNU 482. Six credits. Graded as pass/fail.

485 Research Methods: Application and Analysis
This course will provide an advanced understanding of approaches, theories and methods used in human nutrition research. Building on topics covered in HNU 385, students will apply, analyze and critique qualitative, quantitative, and mixed methods approaches. Formative research approaches using mixed methodologies will highlight nutrition program development and evaluation. Knowledge mobilization and dissemination of research findings is emphasized. Credit will be granted for only one of HNU 485, 486, 495, 497 (offered in 2016-2017). Prerequisite: HNU 385. Three credits.

491 Advanced Major and Honours Seminar
A critical study of current research in areas related to human nutrition. No credit.

493 Senior Thesis (Honours)
A full-year program of research in nutrition. An acceptable thesis based on original research must be submitted by the deadline to satisfy department requirements for a B.Sc. HNU honours degree. Three credits.

499 Directed Study
Designed for students with high academic standing who wish to explore, in depth, some aspect of human nutrition not available in other course offerings. See section 3.5. Three credits.
9.25 MATHEMATICS, STATISTICS, AND COMPUTER SCIENCE

The scope of mathematics ranges from computer science to philosophy, from physics to finance, from biology to art. Mathematics emphasizes precision and logic, but also creativity, elegance and problem-solving. While mathematics is a subject with a rich history (some techniques, results and open problems go back thousands of years), it is also a subject that is very much alive, with new theories and applications continually arising. While mathematical and statistical models and methods form the basis of scientific and engineering fields, they are also used in such diverse areas as modern communication, cryptography, animation, banking and finance, policy development and consultation, public health care, and architecture. With an undergraduate degree in mathematics and statistics, students often go on to pursue an education degree to become a teacher or a graduate degree to become a researcher. However, the career options are much broader. Students with a strong background in mathematics and statistics develop problem-solving skills, logical thinking, and creativity, which serve them well for any career path.

Statistics is the science of data and is a useful tool for research in virtually all areas of human endeavor. It involves collecting, organizing, summarizing, and analyzing information in order to draw conclusions. The practice of statistics takes into account the notion of uncertainty (variability), which leads to error when estimating something, predicting something, or making a decision. It is important, therefore, to measure and, if possible, control error. The framework for quantifying uncertainty is probability, which is a mathematical theory used to describe and analyze chance events. For this reason, probability is the foundation of statistics. Statistics is used in many different fields: medical studies, economics, GNP growth, forecasting, stock market valuations, futures pricing, sociological studies, social policy, marketing research, opinion polls, political polls, industrial processes, environmental processes, and ecological processes and issues.

The Department of Mathematics, Statistics, and Computer Science offers degrees in both the Faculty of Science and the Faculty of Arts. Because of the diversity of programs offered, students are encouraged to consider their academic goals at an early stage in their studies, and to consult the chair and other members of the department regarding course selection.

Degrees Offered

BA with Major, Advanced Major, and Honours

BA Honours with subsidiary subject programs are available with the departments of economics and English

B.Sc. with Major, Advanced Major, and Honours

B.Sc. with Advanced Major in Mathematics with Business Administration

Joint B.Sc. programs are available with the departments of biology, chemistry, earth sciences and physics

Students interested in these programs should consult with the relevant department chairs. General requirements for these degrees are in chapters 4 and 7.

Concentrations

It is evident from descriptions of computer science given in section 9.12 and mathematics and statistics given in this section, that there are diverse career paths possible within the mathematical sciences. Concentrations for students planning to pursue a career in secondary teaching, statistics, or actuarial science are given in this section. Information on concentrations for other possible career paths within the mathematical sciences are available from the department chair.

Department Regulations

The following pairs or groups are considered so similar that a student may only receive credit for 1 in each group: MATH 106, 111, 126, 121; MATH 107, 112, 127, 122; STAT 101, 231, 24; MATH 221, 367; MATH 222, 267; MATH 223, 253; CSCI 125, 161, ENGR 147, INFO 155, 255, CSCI 162, INFO 156, 256; CSCI 275, INFO 275; CSCI 465, INFO 465; CSCI 483, INFO 355.

MATH 100, 101, 102, 105 cannot be counted in the major, advanced major or honours credits.

The senior seminar, MATH 491, is required for all major, advanced major and honours candidates. In addition, MATH 493 is required for all honours students.

COMPUTER SCIENCE Requirements for the BA and B.Sc. in computer science are listed in section 9.12.

MATH 100, 101, 102, 105 cannot be counted in the major, advanced major or honours credits.

The senior seminar, MATH 491, is required for all major, advanced major and honours candidates. In addition, MATH 493 is required for all honours students.

DEGREES OFFERED

BA Major in Mathematics

Typical Pattern:

Year 1
MATH 106 or 126(111), 107 or 127(112), 253, 267, 277, 491; STAT 231 (101(201)) if the degree is in the Faculty of Arts;
MATH 161 is required for advanced major and honours students but cannot be counted in the advanced major or honours credits, (CSCI 162 is also recommended).

BA Major in Mathematics

Typical Pattern:

Year 1
MATH 106 or 126(111), 107 or 127(112), 253, 267, 277, 491; STAT 231 (101(201)) if the degree is in the Faculty of Arts;
MATH 161 is required for advanced major and honours students but cannot be counted in the advanced major or honours credits, (CSCI 162 is also recommended).

BA or B.Sc. Major, Advanced Major or Honours in Mathematics (Actuarial Science Concentration)

Students wishing to pursue a concentration in actuarial science should follow the applicable major/advanced major/honours program in mathematics as listed, with 12 of the MATH/STAT credits being STAT 333, STAT 334, MATH 236, and one of STAT 331 or 435. In addition, the following courses are required: ECON 101, 102; and BSAD 221, 241, 342, any of which may be used as approved electives for this concentration.

STAT 334; ECON 101, 102; BSAD 241, 342 have been approved for Validation by Educational Experience (VEE) credits by the Society of Actuaries (SOA) for the period ending December 12, 2019. STAT 333 covers a large portion of the material on the first preliminary examination (Exam P–Probability) of the new SOA. STAT 445 is strongly recommended. STAT 331, 445, and MATH 236 covers some of the material on the SOA (starting Sep 2016) “Statistics for Risk Modeling Exam”. Students planning a career in actuarial science are strongly encouraged to complete two or more of the SOA preliminary exams by graduation date. Further information is available at http://sites.stfx.ca/mcss/actuarialscience.

BA or B.Sc. Major in Mathematics (Pre-Education Concentration)

Students wishing to pursue the pre-education concentration should follow the applicable major in mathematics as listed above. In years 3 and 4, 15 credits of MATH/STAT must be chosen from MATH 254, 347, 371, 372, 387; STAT 333. Second teachable may be chosen from any subject category identified in section 6.1.4. Candidates must follow the degree regulations in the sections 4.1 or 7.1.

BA or B.Sc. Major in Mathematics (Statistics Concentration)

Students wishing to pursue the statistics concentration should follow the applicable major in mathematics as listed above. In years 3 and 4, nine of the 15 credits of MATH/STAT must be STAT 333, STAT 334, MATH 236, and one of STAT 331 or 435. In addition, the following courses are required: ECON 101, 102; and BSAD 221, 241, 342, any of which may be used as approved electives for this concentration.

Typical Pattern:

Year 1
MATH 106 or 126(111), 107 or 127(112), 253, 267, 277, 491; STAT 231 (101(201)) if the degree is in the Faculty of Arts;
MATH 161 is required for advanced major and honours students but cannot be counted in the advanced major or honours credits, (CSCI 162 is also recommended).

Typical Pattern:

Year 1
MATH 106 or 126(111), 107 or 127(112), CSCI 161

Year 2
MATH 253, 267, 277, STAT 101(201)

Year 3
9 credits from MATH/STAT

Year 4
MATH 491; 6 credits from MATH/STAT

Typical Pattern:

Year 1
MATH 106 or 126(111), 107 or 127(112), CSCI 161

Year 2
MATH 253, 267, 277, STAT 231

Year 3
9 credits from MATH/STAT

Year 4
MATH 491; 6 credits from MATH/STAT

BA or B.Sc. Major, Advanced Major or Honours in Mathematics (Actuarial Science Concentration)

Students wishing to pursue a concentration in actuarial science should follow the applicable major/advanced major/honours program in mathematics as listed, with 12 of the MATH/STAT credits being STAT 333, STAT 334, MATH 236, and one of STAT 331 or 435. In addition, the following courses are required: ECON 101, 102; and BSAD 221, 241, 342, any of which may be used as approved electives for this concentration.

STAT 334; ECON 101, 102; BSAD 241, 342 have been approved for Validation by Educational Experience (VEE) credits by the Society of Actuaries (SOA) for the period ending December 12, 2019. STAT 333 covers a large portion of the material on the first preliminary examination (Exam P–Probability) of the new SOA. STAT 445 is strongly recommended. STAT 331, 445, and MATH 236 covers some of the material on the SOA (starting Sep 2016) “Statistics for Risk Modeling Exam”. Students planning a career in actuarial science are strongly encouraged to complete two or more of the SOA preliminary exams by graduation date. Further information is available at http://sites.stfx.ca/mcss/actuarialscience.

Advanced Major in Mathematics

In addition to core courses, MATH 254 and one of 354 or 366 are required. Additional courses must include nine credits of MATH or STAT courses at the 300 or 400 level, and an additional three credits (nine for B.Sc. students), which may be chosen from MATH/STAT; MATH 493 or STAT 493 is optional.

Typical Pattern:

Year 1
MATH 106 or 126(111), 107 or 127(112); CSCI 161, 162

Year 2
MATH 253, 254, 267, 277; STAT 231 or 101(201)

Year 3
MATH 354 or 366; additional MATH/STAT courses

Year 4
MATH 491; additional MATH/STAT courses
BA or B.Sc. Advanced Major in Mathematics (Statistics Concentration)

Students wishing to pursue the statistics concentration should follow the applicable advanced major in mathematics as listed above. In years 3 and 4, 12 credits of MATH/STAT must be STAT 311, 331, 333, 334.

B.Sc. Advanced Major in Mathematics with Business Administration

Science A MATH 106/126, 107/127, 253, 254, 267, 277, 491; STAT 231; MATH 354 or 368; 9 credits of MATH/STAT at 300/400 level; 3 additional MATH/STAT credits

BSAD BSAD 101, 102, 471; 12 credits from BSAD 221, 223, 231, 241, 261, 281, 9 additional BSAD credits

Science B 12 credits

Science C 6 credits

Arts X 12 credits humanities or social science (could be ECON)

Arts Y 6 credits (could be ECON)

Approved electives CSCI 135; 9 credits from MATH/STAT, CSCI, BIOL, CHEM, ESCI, PHYS

Open electives 6 credits (must be ECON if not in arts X or arts Y)

Honours in Mathematics

In addition to core courses, MATH 254, 354, 366, 367, 493 or STAT 493 for statistics concentration, CSCI 162 and one of MATH 454, 466, or STAT 435 are required. Additional courses must include at least twelve credits in MATH or STAT courses at the 300 or 400 level, with no fewer than three credits at the 400 level, plus 12 credits which may be chosen from MATH/STAT.

Typical Honours Pattern:

Year 1 MATH 106 or 126(111), 107 or 127(112); CSCI 161, 162

Year 2 MATH 253, 254, 267, 277, STAT 231 or 101(201)

Year 3 MATH 354, 366, 367; additional MATH/STAT courses

Year 4 MATH 454, 466 or STAT 435; MATH 491, 493 or STAT 491, 493 for statistics concentration; additional MATH/STAT courses

BA or B.Sc. Honours in Mathematics (Statistics Concentration)

Students wishing to pursue the statistics concentration should follow the applicable honours in mathematics as listed above. In years 3 and 4, 15 credits of MATH/STAT must be STAT 311, 331, 333, 334, 435; and STAT 493.

Co-operative Education Program in Mathematics

This optional academic program offers mathematics students the opportunity to gain 12 months of professional, paid work experience in a range of opportunities in industry, government and not-for-profit across Canada. Students can gain valuable technical and professional experience in areas including (but not limited to) modelling, analysis and design to reinforce classroom-based instruction and to increase students’ networks and employability. COOP 405 can be used as MATH elective or as an open elective. For further information on work term sequencing options and professional development training topics see section 9.13.

Minor in Mathematics

Students planning to complete a minor in mathematics should complete 6 credits of calculus, 3 credits of statistics, and 15 additional credits of MATH or STAT courses. Student completing a minor and who plan to pursue a career in secondary school teaching with mathematics as their second teachable are advised to select the remaining 15 credits of MATH or STAT from the following: MATH 101 (BA only), 102 (BA only), 105 (BA only), 253, 277, 347, 371, 372; STAT 311.

MATHEMATICS

101 Mathematical Concepts I: Sets, Logic, and Number Theory

This course surveys topics from diverse areas of mathematics, including problem solving, set theory, logic, historical numbering systems, and number theory. Students will solve problems using processes such as abstraction, pattern recognition, deduction and generalization. Credit will be granted for only one of MATH 102 or MATH 100. Acceptable for credit only in the Faculties of Arts and Business and the Departments of Human Kinetics, Human Nutrition and Nursing. Prerequisite: Grade 12 math or equivalent. Three credits.

102 Mathematical Concepts II: Graphs, Functions, Geometry, and Probability

This course surveys interesting and useful topics from diverse areas of mathematics, including problem solving, algebra, graphs and functions, geometry, counting methods, and probability. Students will solve problems using processes such as abstraction, pattern recognition, deduction and generalization. Credit will be granted for only one of MATH 102 or MATH 100. Acceptable for credit only in the

105 Business Mathematics

This course will give an introduction to some of the quantitative methods used in the fields of business. A presentation of mathematics applicable to business, including functions, modelling, finance, regression, forecasting, simulation, and linear programming. Use of spreadsheets will be a fundamental part of this course. Acceptable for credit in all programs. May only be used as an open or an approved elective in mathematics or computer science programs. Credit will be granted for only one of MATH 105 and MATH 205. Three credits and one-hour lab.

106 Calculus I

An introduction to differential calculus of a single variable, with applications to physical, life, and social sciences. Topics include limits, differentiation of polynomial, exponential, logarithmic, and trigonometric functions, inverse functions and their derivatives, implicit differentiation, curve sketching, and applied max-min problems. The format of MATH 106 has been structured to provide students with additional learning resources to support and foster a conducive learning environment. Credit will be granted for only one of MATH 106, ENGR 121 or MATH 126. Prerequisite: Grade 12 pre-calculus or equivalent. Six credits of calculus is required in the B.Sc. major, advanced major or honours program. Three credits and one-hour problem session and one-hour lab.

107 Calculus II

An introduction to integral calculus for functions of one variable. Topics include definite and indefinite integrals; the fundamental theorem of calculus; methods of integration; numerical approximation of definite integrals; applications to area and volume; probability density functions and distributions; differential equations; and Taylor polynomials. The format of MATH 107 has been structured to provide students with additional learning resources to support and foster a conducive learning environment. Credit will be granted for only one of MATH 107, ENGR 122 or MATH 127. Prerequisite: MATH 106 or 111 or 126. Six credits of calculus is required in the B.Sc. major, advanced major or honours program. Three credits and one-hour problem session and one-hour lab.

121 Calculus I for Engineers

This course examines the main idea of calculus of a single variable. It covers functions, limits, continuity; differentiation and integration of polynomial, exponential, logarithmic, and trigonometric functions; product, quotient, and chain rules; applications of differentiation to graphing; maximum-minimum problems, and related rate problems; definite and indefinite integrals, and the fundamental theorem of calculus. Credit will be granted for only one of MATH 121 or MATH 106 or 126(111). Cross-listed as ENGR 121. Prerequisite: grade 12 pre-calculus or equivalent. Three credits and one-hour lab and one-hour problem session.

122 Calculus II for Engineers

A continuation of ENGR 121, this course covers the applications of integration, including areas, volumes, moments, pressure, and work; techniques of integration; numerical integration; length of curves; surfaces of revolution; parametric equations; polar co-ordinates; sequences and series; and Taylor series. Credit will be granted for only one of MATH 122 or MATH 107 or 127(112). Cross-listed as ENGR 122. Prerequisite: MATH 121. Three credits and one-hour lab and one-hour problem session.

126 Calculus I

An introduction to differential calculus of a single variable, with applications to physical, life, and social sciences. Topics include limits, differentiation of polynomial, exponential, logarithmic, and trigonometric functions, inverse functions and their derivatives, implicit differentiation, curve sketching, and applied max-min problems. Credit will be granted for only one of MATH 106, ENGR 121 or MATH 126. Prerequisite: Grade 12 pre-calculus or equivalent. Six credits of calculus is required in the B.Sc. major, advanced major or honours program. Three credits and a one-hour lab every other week.

127 Calculus II

An introduction to integral calculus for functions of one variable. Topics include definite and indefinite integrals; fundamental theorem of calculus; methods of integration; numerical approximation of definite integrals; applications to area and volume; probability density functions and distributions; differential equations; and Taylor polynomials. Credit will be granted for only one of MATH 107, MATH 127 or ENGR 122. Prerequisite: MATH 106 or MATH 111 or MATH 126. Six credits of calculus is required in the B.Sc. major, advanced major or honours program. Three credits and a one-hour lab every other week.

211 Differential Equations for Engineers

Covers first order linear and non-linear ordinary differential equations; ordinary differential equations of higher order with constant coefficients; applications
222 Calculus III for Engineers

Extends the ideas introduced in MATH 121 to the calculus of several variables, and covers space curves, arclength, curvature; partial derivatives; implicit functions; constrained and unconstrained extrema; multiple integrals; line, surface, and volume integrals; change of variables in multiple integrals; scalar and vectors fields; gradient, divergence, and curl; Stokes theorem. Credit will be granted for only one of MATH 222 or MATH 267. Cross-listed as ENGR 222. Prerequisite: MATH 122. Three credits and two-hour problem session.

223 Linear Algebra for Engineers

Covers geometric vectors in three dimensions; dot product; cross product; lines and planes; complex numbers; systems of linear equations; matrix algebra; matrix inverse; determinants; Cramer’s rule; introduction to vector spaces; linear independence and bases; rank; linear transformations; orthogonality and applications; Gram-Schmidt algorithm; eigenvalues and eigenvectors. Credit will be granted for only one of MATH 223 or MATH 253. Cross-listed as ENGR 123. Prerequisites: MATH 122. Three credits and two-hour problem session.

236 Data Modeling for Business

Evidence-based decision-making in business required the use of the mathematical models to analyze data and to help identify and assess possible answers to what-if questions. This course introduces the student to what should be considered when using mathematical models for business. Topics include model construction, analyzing and modeling data sets, optimization, risk analysis and model testing. Prerequisite: MATH 106 or 126(111) or 105. Three credits. Not offered 2018-2019.

253 Matrix Algebra

An introduction to solution of linear systems, algebra of matrices, determinants, two- and three-dimensional vector spaces, and the matrix eigenvalue problem. Credit will be granted for only one of MATH 253 or MATH 223. Prerequisite: MATH 101/102 or 107 or 127(112) or 122 or CSCI 162. Three credits.

254 Linear Algebra

An introduction to abstract vector spaces, including discussion of bases, dimension and homomorphisms of vector spaces; linear transformations, including invariant subspaces; matrix representations and diagonalization procedures. Prerequisite: MATH 253. Three credits.

267 Calculus III

Topics include the Taylor polynomial theorem; indeterminate forms and l’Hôpital’s rule; improper integrals; infinite and power series and tests of convergence; parametric equations; partial differentiation; and selected concepts from multivariate differentiable calculus, and multiple integration. Credit will be granted for only one of MATH 267 or MATH 222. Prerequisite: MATH 107 or 127(112) or 122. Three credits.

277 Discrete Structures

An introduction to sets, binary relations and operations; induction and recursion; partially ordered sets; simple combinations; truth tables; Boolean algebras and elementary group theory; applications to logic networks, trees and languages; binary coding theory and finite-state machines. Cross-listed as CSCI 277. Prerequisite: MATH 101/102 or 107 or 127(112) or 122 or CSCI 162. Three credits.

287 Natural Resource Modelling

The course covers formulating real-world problems from renewable natural resources; using software to solve mathematical models; formulating and testing policies for managing dynamic systems; and developing communication skills through report writing. Prerequisite: MATH 107 or 127(112). Three credits. Not offered 2018-2019; next offered 2019-2020.

335 Management Science

This course prepares students for careers as analysts and consultants in industries with a focus on enhancing business value through operations, logistics and supply chain management. A variety of successful implementations of management science/operations research tools in different application areas will be studied. Tools such as linear programming, project scheduling with uncertain activity times, various inventory models and simulation will be introduced and coupled with application in the fields of managing operations in manufacturing, long term financial planning and management of healthcare systems. Cross-listed as CSCI 335. Prerequisites: MATH 106/126 or MATH 105 or CSCI 161. Three credits. Not offered 2018-2019; next offered 2019-2020.

347 Combinatorics

The course covers the principle of inclusion and exclusion; generating functions; recurrence relations; rings and modular arithmetic; finite state machines; group and coding theory; Pólya’s method of enumeration; finite field and combinatorial design; graph theory. Prerequisite: MATH 277. Three credits. Offered 2018-2019 and in alternate years.

354 Modern Algebra I

This course introduces algebraic structures such as groups, rings and fields along with fundamental algebraic concepts such as symmetries, permutations, isomorphisms and homomorphisms. Applications from diverse areas may include coding theory, crystallography, circuits, logic, geometry and graph theory. Prerequisites: MATH 254, 277. Three credits.

361 Advanced Vector Calculus

Topics include vectors; vector differentiation including gradient, divergence, and curl; vector integration including the Gauss and Stokes theorems. Prerequisites: MATH 222 or 267 and 223 or 253. Three credits.

366 Real Analysis I

This course considers rigorous development of the real number system; numerical sequences and series; properties of continuous functions; metric spaces; sequences and series of functions. Prerequisites: MATH 254, 267 and 277. Three credits.

367 Differential Equations

Topics include first- and second-order linear differential equations; systems of linear differential equations; methods of solution including Laplace transforms and series solution; introduction to non-linear differential equations and numerical methods. Credit will be granted for only one of MATH 367 or MATH 221. Prerequisites: MATH 107 or 127(112). Three credits.

371 Modern Geometries

A brief survey of geometries including projective, affine, similarity, euclidean, Euclidean, and non-Euclidean. Emphasis is on the invariants of transformational geometry. Prerequisite: MATH 277. Three credits. Offered 2018-2019 and in alternate years.

372 Number Theory

Topics include divisibility of integers; congruences; the Chinese remainder theorem; quadratic residues and non-residues; Gaussian reciprocity law; number theoretic functions; and the Moebius inversion formula. Prerequisite: MATH 277. Three credits. Not offered 2018-2019; next offered 2019-2020.

384 Numerical Methods

This course covers methods used to solve mathematical problems on computer systems, including mathematical background and error analysis of solutions to non-linear equations; polynomial interpolations; integration and differentiation; quadrature methods; systems of equations and differential equations. Prerequisites: MATH 223 or 253; CSCI 161 or 125. Three credits. Not offered 2018-2019; next offered 2019-2020.

387 Mathematical Modelling

This course teaches the use of mathematical models to solve real-world problems. The modelling cycle will be practiced using problems found in the real world. Prerequisites: MATH 222 or 267, and MATH 223 or 253. Three credits. Offered 2018-2019 and in alternate years.

389 Financial Mathematics

Topics include stochastic models of financial markets; forward and futures contracts; European options and equivalent Martingale measures; hedging strategies and management of risk; term structure models and interest rate derivatives; and optimal stopping and American options. Ito’s lemma and Girsanov’s theorem to develop methods for pricing financial derivatives are examined. Pricing problems are considered in discrete (Binomial option price model) and continuous-time (Black-Scholes Merton price model). Credit will be granted for only one of MATH 389 or MATH 471 offered in 2012-2013. Prerequisites: MATH 106 or 126(111); STAT 101(201) or 231. Three credits. Not offered 2018-2019; next offered 2019-2020.

454 Modern Algebra II

The topics are: polynomial rings, unique factorization, irreducible polynomials; Sylow theorems, solvability of polynomial equations; Galois theory; and the Jordan canonical form. Prerequisite: MATH 354. Three credits. Offered 2018-2019 and in alternate years.

462 Complex Variables

Topics include complex numbers, elementary functions, series and integration, Laurent series, and residue theory. Prerequisites: MATH 221 or 367 and 222 or 361. Three credits. Offered 2018-2019 and in alternate years.

466 Real Analysis II

Material includes: topology of Euclidean n-space; differentiation; Riemann Stieltjes integration; limits and continuity in n-dimensions; differentiation of nonlinear transformations; and the implicit function theorem. Prerequisite: MATH 366. Three credits. Not offered 2018-2019; next offered 2019-2020.
471 Topics in Mathematics
This course will cover current mathematical topics such as graph theory, multivalued logic, dynamical systems, optimization theory, point set topology or mathematical finance. Three credits. See http://sites.stfx.ca/mscs/math_courses for more information.

481 Partial Differential Equations
The study of special functions and partial differential equations, including the wave, heat, and Laplace equations in various coordinate systems. Prerequisites: MATH 254 and 221 or 367 and MATH 267 or 222. Three credits. Not offered 2018-2019; next offered 2019-2020.

491 Senior Seminar
Cross-listed as CSCI 491 and MATH 491. The purpose of this non-credit course is to assist students in carrying out research, composition, and oral presentation. Students will present a project topic in the fall term and their project in the spring. Attendance at departmental seminars is mandatory. No credit.

493 Senior Thesis
Students will prepare and present a thesis based on original research conducted under the supervision of a faculty member. Required for honors students; permitted for advanced major students. Three credits.

STATISTICS

101 Introductory Statistics
This course will give an introduction to descriptive and inferential statistics. Topics include descriptive statistics; graphical display of data, random variables and probability distributions, parameter estimation, hypothesis testing and simple linear regression. Students will learn to use statistical software tools; to identify bias in data collection; to organize and summarize data; to make inferences from data and to be able to test the significance of the results. Acceptable for credit in the Faculties of Arts and Business, and the Departments of Human Kinetics, Human Nutrition and B.Sc. Nursing. STAT 101.H will focus on applications to health sciences and STAT 101.B will focus on applications to business and economics. Credit will be granted for only one of STAT 101, STAT 201, STAT 224, STAT 231, PSYC 290(292), Hkkin 301. Three credits.

224 Probability and Statistics for Engineers
This course covers probability laws and the interpretation of numerical data, probability distributions and probability densities, functions of random variables, joint distributions, characteristic functions, functions concerning mean and variance, tests of hypotheses, linear regression, and time series analysis. Engineering applications are emphasized and statistical computer packages are used extensively. Credit will be granted for only one of STAT 224, STAT 101(201), STAT 231, PSYC 290(292). Cross-listed as ENGR 224. Prerequisite: ENGR 122 or MATH 122. Three credits and a two-hour problem session.

231 Statistics for Students in the Sciences
Topics include descriptive statistics; data collection, tabulation, and presentation; measures of central tendency and variability; elementary probability; binomial, normal and chi-square distributions; parameter estimation and tests of hypotheses; linear regression and correlation. Students will learn about statistical significance and the communication of statistical evidence, and be introduced to a statistics computer package. Credit will be granted for only one of STAT 231, STAT 101(201), STAT 224. Prerequisite: MATH 107 or 127(112) or 122. Three credits and a one-hour lab.

311 Survey Sampling Design
Topics include simple random sampling, stratified sampling, systematic sampling, cluster sampling, multi-stage sampling, bootstrap samples. Prerequisite: STAT 101(201) or 224 or 231. Three credits and a one-hour lab. Offered 2018-2019 and in alternate years.

331 Statistical Methods
An investigation of statistics and experimental design in the context of biological and health science issues. Topics include analysis of variance, categorical data; distribution-free tests; linear and multiple regression. Students will learn to analyze data and interpret conclusions using a statistical software package. Recommended strongly for all major, advanced major, and honours students. Credit will be granted for only one of STAT 331, PSYC 394, PSYC 390. Cross-listed as BOL 331. Prerequisite: STAT 101(201) or 224 or 231. Three credits and a one-hour lab.

333 Introductory Probability Theory
Material will include: combinational analysis; axioms of probability; the law of total probability and Bayes' Theorem; discrete and continuous random variables; mathematical expectation and variance; joint distributions; introduction to moment-generating functions and their applications; limit theorems. Prerequisites: MATH 222 or 267 and MATH 223 or 253. Three credits.

334 Mathematical Statistics
Topics include distribution theory; order statistics; point and interval estimation; MVUEs and the Rao-Blackwell theorem; consistency and sufficiency; the method of maximum likelihood; the method of moments; uniformly most powerful tests and the Neymann-Pearson fundamental lemma; likelihood ratio tests; least squares theory; statistical models and estimation in ANOVA. Prerequisite: STAT 333. Three credits. Not offered 2018-2019; next offered 2019-2020.

435 Regression Analysis
Topics include straight-line regression, multiple regression, variable selection, residual analysis, multicollinearity, and partial correlations, analysis of covariance, logistic regression. Prerequisite: STAT 231 or 333. Three credits and a one-hour lab. Not offered 2018-2019; next offered 2019-2020.

445 Statistical Learning and Data Mining
The course covers the most current techniques used in data mining and machine learning and their background theoretical results. Two basic groups of methods are covered in this course: supervised learning (classification or regression) and unsupervised learning (clustering). The supervised learning methods include Recursive Partitioning Tree, Random Forest, Linear Discriminant and Quadratic Discriminant Analysis, Neural Network, Support Vector Machine. The unsupervised learning methods include Hierarchical Clustering, K-means, K-nearest-neighbour, model-based clustering methods. Furthermore, the course also covers the dimensional reduction techniques such as LASSO and Ridge Regression, and model checking criteria. Prerequisites: CSCI 161, STAT 224 or 231 or permission of department chair. Three credits. Not offered 2018-2019; next offered 2019-2020.

472 Selected Topics
The topic for 2018-2019 is Introduction to Epidemiology. This course is an introduction to epidemiology and biostatistics. Topics include measures of disease frequency and risk, study design, causation, and health concepts: population versus public health. Students will learn about the various methods for explaining or predicting risk estimates for various disease outcomes based on variables of interest, communication of statistical evidence, and be introduced to the statistics computer package R and SPSS. Three credits.

491 Senior Seminar
Cross-listed as CSCI 491 and MATH 491. The purpose of this non-credit course is to assist students in carrying out senior paper research, composition, and oral presentation. Students will present their research topic in the fall term and their completed research in the spring. Attendance at Departmental seminars is mandatory. No credit.

493 Senior Thesis
Students will prepare a thesis based on original research conducted under the supervision of a faculty member. Required for honors students; permitted for advanced major students. Three credits.

9.26 MODERN LANGUAGES

V. Kocay, Ph.D.
E. Langille, D. ès L.
R. LeBlanc, Ph.D.
M. Paz, Ph.D.
W. Tokarz, Ph.D.

Part Time
A. Atlakara
I. Bauge, Ph.D.
M. Lade, M.Ed.

Placement of Students
Students registering for a French course for the first time at STFX should note that the Department of Modern Languages offers several courses to first-time registrants in French, depending on their background. Please note:

a) First-time registrants in French at STFX must complete the online placement test prior to registering. This test is to assist in registering in the appropriate section (basic, intermediate or advanced level French). The link to the on-line placement test is http://moodle.stfx.ca, search French Placement Test.

b) First-time registrants who have not completed high school core French or its equivalent should enrol in FREN 111.

c) Results on the placement test are a determining factor in the enrolment for first-time registrants.
d) Students with native proficiency may register in any 200-level course.
e) The department reserves the right to place students.

**Recommendations**

Candidates for the major, advanced major or honours degrees in French are strongly encouraged to spend at least one summer (five weeks) in a French-speaking environment through an immersion program or one year in the junior year abroad program. Please see below for details.

Students hoping to pursue masters or doctoral studies in the humanities or social sciences are reminded that these programs often carry language requirements.

**Minor or Subsidiary Program**

A minor or subsidiary in French requires at least 6 credits at the 300- or 400-level. The minor or subsidiary in Spanish includes required courses: SPAN 306 and 334.

**Major Program**

**Major in French**

A student may take a major in French by completing 36 credits in FREN (excluding FREN 111/112), including FREN 312(215) and at least 15 credits at the 300- or 400-level. A thesis is not required.

**Major in Spanish**

The Department of Modern Languages offers a major in Spanish (language and literature) for students who have completed a minimum of one semester in a Hispanic country. Students completing the major requirement abroad will have to complete their course work at the 300- or 400-level, or equivalent, excluding courses already completed at StFX. Students who wish to apply for the major degree must seek permission from the department chair and submit relevant course descriptions of work to be done abroad to the Dean’s office for approval.

**Joint Major in French and Spanish**

A student may do a joint major in French and Spanish. The requirements for each subject are the same as for a major in French and a major in Spanish.

**Advanced Major Program**

A student may take an advanced major in French by completing 36 credits in FREN (excluding FREN 111/112), including FREN 312(215) and at least 21 other credits at the 300- or 400-level. Students registered in the advanced major program in French are required to do FREN 492, a three-credit senior seminar comprising a thesis in French of approximately 4,000 words.

**Honours Program**

A student may take an honours degree in French by completing 60 credits in FREN (excluding FREN 111/112), including FREN 312(215) and at least 33 other credits at the 300- or 400-level. Twelve of the 60 credits may be taken in a related field with department permission. Students registered in the honours program in French are required to do FREN 492, a three-credit senior seminar comprising a thesis in French of approximately 6,000 words.

**Certificate of Proficiency in French**

This certificate is awarded to students who wish to have their proficiency in French officially acknowledged by a distinction appearing on their transcript. It is not necessary to do a major in French in order to take the test, although certain requirements must be met. Students who wish to sit for the exams should make their intentions known by 15 December. The exams will take place during the last week of classes.

**Requirements:**

a) At least 18 credits beyond the 100 level, including FREN 312(215), and at least 6 credits at the 300- or 400-level.
b) A minimum grade of 70 is required in each FREN course.
c) Written and oral examinations with a minimum of 70 on each part (exam may be repeated after one year). The structure of the exam includes:
   i) An exam covering grammar and usage (2 hours), specifically on the following points: verb conjugations (all tenses and moods), relative pronouns, object pronouns, prepositions, agreement of adjectives, plural of nouns and adjectives, complex sentence structures.
   ii) A composition on a subject prompt provided (1 hour)
   iii) An oral exam: 45 minutes to read a text provided, and 15 minutes to present its content and answer questions from three professors (1 hour).

**Transfer Credit for French Immersion Courses**

Students may request a maximum of six transfer credits for a successfully completed immersion course. The following guidelines apply:

a) Newly admitted students may request transfer credit in French only for courses taken after completing grade 12 French. Normally, transfer credit will not be granted for courses taken five years prior to admission.
b) Students must obtain a letter of permission from their Dean prior to enrolling in an immersion course if credit is sought.
c) The Explore summer immersion course in French may not be used in a major or minor, but may be used as part of a pair or as an arts elective in any degree program. Other immersion courses will be assessed on an individual basis.

**Summer Language Bursary Program**

**Official Languages Programs**

To promote the study of Canada’s official languages, the Council of Ministers of Education, Canada (CMEC), in co-operation with the provinces and territories, administers Accent (formerly OLMP, part-time), Odyssey (formerly OLMP, full-time), Explore (formerly SLBP), and CMEC also co-ordinates official-language activities related to agreements between the federal and provincial/territorial governments.

For information on the summer language bursary program contact the provincial co-ordinator, French language bursaries, Department of Education, Box 578, Trade Mart Building, Halifax, NS, B3J 2S9, 902-424-5283, or visit the following websites: EXPLORE: www.myexplore.ca.

For information on immersion courses in France during the summer contact the French Consulate, 777 rue Main Suite 800, Moncton, NB, E1C 1E9, 506-857-4191. Program information is also available from the department chair.

**Junior Year Abroad Program**

The department encourages students in a four-year program to spend their junior year in a French-speaking environment. To this end, a study abroad program has been put into place allowing students to spend their third year at the Centre International d’Etudes Françaises in Angers, France. See section 3.18. For information about this program, see the chair or designate.

**Department Requirements**

A pair or a minor must be in one language. Students who complete a minor or a major in one language may also count a pair in a second language.

**FRENCH**

111 Basic University French I

This course corresponds to level A1 of the Common European Framework of Reference for Languages (CEFR). Students will acquire the necessary competence in the four language skills: listening, speaking, reading and writing, to use familiar words and simple phrases for concrete communication situations such as introduction of self, answering basic questions about home, family and surroundings.

This course is restricted to students with little previous background in French and who have not completed grade 12 core French. Credit will be granted for only one of FREN 111 or FREN 110. Three credits and one-hour lab.

112 Basic University French II

This course is a continuation of FREN 111 and corresponds to level A2 of the Common European Framework of Reference for Languages (CEFR). Students will learn to understand and communicate during easy or habitual tasks and will understand isolated phrases and common expressions that relate to areas of high personal relevance (like personal or family information, shopping, immediate environment, work). This course is recommended for students with some background in French or who have completed grade 12 Core French. Credit will be granted for only one of FREN 112 or FREN 110. Three credits and one-hour lab.

Notes:

a) The department reserves the right to refuse admission to these courses to students whose knowledge of French is inadequate according to the department placement test.
b) FREN 111 and FREN 112 may not be used as credit toward a major, advanced major or honours degree. They may be used toward a minor or subsidiary in French, as part of a pair, or as electives.
c) Closed to students who have completed 200-level French courses or higher, as well as to students from French schools and French Immersion programs.

211 Intermediate French I

This course corresponds to level B1 of the Common European Framework of Reference for Languages (CEFR). Students will acquire the necessary competence in the four language skills: listening, speaking, reading and writing, and will be able to communicate with some confidence on matters related to his/her interests and professional field. Students will be able to express thoughts on more abstract, cultural topics such as films, books, music etc. Recommended for students who have completed high school French Immersion Program, have completed FREN 112 (with a grade of at least 60), or who are placed into the course through the placement test. Credit will be granted for only one of FREN 211 or FREN 115. Three credits and one-hour lab.
212 Intermediate French II
This course corresponds to level B1 of the Common European Framework of Reference for Languages (CEFR). Students will acquire the necessary competence to interact with fluency and spontaneity and produce detailed text on a wide range of subjects. Recommended for students who have a strong background in French, who have completed FREN 211, or who are placed into the course through the placement test. Credit will be granted for only one of FREN 212 or FREN 115. Three credits and one-half hour.

225 (Français des affaires I) Business French I
An introduction to the language in which the French-speaking world conducts business. Students will acquire solid communication skills, including knowledge of specialized vocabulary. Practical drill in the language lab will familiarize students with commercial correspondence and professional telephone etiquette. Prerequisite: FREN 211(115) or permission of the department chair. Three credits.

235 (Français des affaires II) Business French II
A continuation of FREN 225, this course introduces the language of specialized areas of business, such as marketing, finance, management, and teaches basic legal terminology. Students will learn the protocol of a formal business presentation in French as well as meeting procedures according to the Code Morin. Prerequisite: FREN 211 (115) or permission of the department chair. Three credits.

253 Langue et culture: le francais en Europe
A history of French language and culture, starting with its Latin, Celtic and Germanic origins, and stressing the ethnic, political, social, technological factors that have helped shape the language down through the centuries. Specifically examined are the influence of such institutions as feudalism, the monarchy, the Church, the universities, print culture, the French Academy, colonialism and so forth. Credit will be granted for only one of FREN 253 and FREN 220. Prerequisite: FREN 212. Three credits. Not offered 2018-2019.

254 Langue et culture: Le francais dans le monde
This course focuses on contemporary French language and culture as spoken and lived in the Francophone world. Emphasis will be on discovering cultural similarities and differences featured in literary texts, songs, cinema, legends, superstitions, beliefs, and celebrations in some of the 29 countries where French is an official language. This course may be of particular interest to current or prospective French teachers. Credit will be granted for only one of FREN 254 and FREN 220. Three credits.

271 Survey of French Literature: Origins to Renaissance
A study in historical context and sequence of the most important works written in French from 1000 to 1600. Extracts of literary works in modern translation extending from la Chanson de Roland to Montaigne's Essays and including, early poetry, plays, the works of Villon, Rabelais and Ronsard. Recommended for all French major, advanced major, and honors students. Credit will be granted for only one of FREN 271 and FREN 216. Prerequisite: FREN 212. Three credits. Not offered 2018-2019.

272 Survey of French Literature: Classical Period to 1900
A study in historical context and sequence of the most important works written in French from 1600-1900. Extracts taken from the literary works of Corneille, Racine and Molière, and including eighteenth and nineteenth century writers such as Marivaux, Voltaire, Diderot, Hugo, Baudelaire, Verlaine, Balzac, Flaubert, Daudet, Zola and Maupassant. Recommended for all French major, advanced major, and honors students. Credit will be granted for only one of FREN 272 and FREN 216. Prerequisite: FREN 212. Three credits. Not offered 2018-2019.

311 Advanced French I
This course corresponds to level B2 of the Common European Framework of Reference for languages (CEFR). This focus is on complex sentence structure, the use of the verb tenses and moods, as well as on expressions of cause and consequence. Emphasis will be placed on language acquisition by means of text analyses, writing exercises (notably descriptive and argumentative texts) and oral presentations. Credit will be granted for only one of FREN 311 or FREN 215. Prerequisite: FREN 212(115) or completion of French School, or an exceptional result on the placement test. Three credits.

312 Advanced French II
This course corresponds to the level B2 of the Common European Framework of Reference for languages (CEFR). The focus is on complex sentence structure, including the use of relative pronouns, active and passive voice structures, indirect discourse, terms of articulation, expressions of attenuation and restriction. Emphasis will be placed on language acquisition by means of text analyses, writing exercises (notably descriptive and argumentative texts) and oral presentations. Credit will be granted for only one of FREN 312 or FREN 215. Prerequisite: FREN 212(115) or permission of the department chair. Three credits.

314 Selected Topics in French Studies
Three credits.

318 Classical French Theatre
This class offers an introduction to 17th-century French literature with a primary focus on representative works by three major dramatists: Corneille, Molière and Racine. It explores their vision of humanity and assesses their contribution to French literature and the history of ideas. Credit will be granted for only one of FREN 316 or FREN 318. Prerequisite: 6 credits of FREN at the 200 level or permission of the department chair. Three credits. Not offered 2018-2019.

319 Literary Works of the grand siècle (Les Moralistes)
This course studies a selection of primarily prose and poetry works from the classical period that was 17th-century France. It includes a study of works by Pascal, Descartes, La Rochefoucauld, La Fontaine, Boileau, Mme de Lafayette, and La Bruyère. Credit will be granted for only one of FREN 319 or FREN 316. Prerequisite: 6 credits of FREN at the 200 level or permission of the department chair. Three credits. Not offered 2018-2019.

321 French Cinema
A study of France's unique contribution to the seventh art, starting with the Frères Lumière's moving pictures in 1895 and covering the history of French cinema. Emphasis will be placed on such masterpieces as La Grande Illusion and Les Enfants du Paradis. Prerequisite: FREN 212(115) or permission of the department chair. Three credits. Not offered 2018-2019.

322 18th-Century French Theatre
An introduction to 18th-Century French theatre. This course focuses on the evolution of the field of theater during the Enlightenment. Presented in chronological sequence, the course gives special attention to works by Lesage, Voltaire, Marivaux, Diderot and Beaumarchais. Credit will be granted for only one of FREN 322 or FREN 326. Prerequisite: 6 credits of FREN at the 200 level, completed or concurrent or permission of the department chair. Three credits. Not offered 2018-2019.

324 18th-Century Literature: The Novel
An Introduction to the 18th-century French novel, this course gives special attention to works by Lesage, Montesquieu, Prévost, Voltaire, Marivaux, Diderot, Rousseau and Bernardin de Saint-Pierre. Credit will be granted for only one of FREN 324 or FREN 326. Prerequisite: 6 credits of FREN at the 200 level or permission of the department chair. Three credits. Not offered 2018-2019.

327 French Writing I
An introduction to the techniques of composition through the study and practice of appropriate sentence structure. This course is designed to improve students' expression of complex thought and to familiarize them with the idiomatic use of French language in a variety of contexts. The course combines vocabulary enrichment, detailed analysis of texts and a variety of writing activities: descriptions, portraits, narrations, and correspondence. Emphasis is on describing and narrating. Prerequisite: 6 credits of FREN at the 200 level or permission of the department chair. Three credits. Not offered 2018-2019.

329 Children's Literature
A critical survey of French children's literature. Authors to be studied include La Fontaine, Perrault, Séguar, Daudet, Cendrars, Aymé, Girmani, Sempé et Goscinny, PEF, Tournier. Prerequisites: 6 credits of FREN at the 200 level or permission of the department chair. Three credits.

331 From Self-expression to Self-denial: 19th Century France
This presents 19th century texts in the context of events, ideas and schools of thought that shaped this period, events such as the French Revolution, the Napoleonic era, and the Franco-Prussian war. Major currents of thought of this period involve Romanticism, Realism, Naturalism and Symbolism. Readings will include extracts from well-known authors of the period. Credit will be granted only for one of FREN 331 or FREN 347/348. Prerequisite: 6 credits of FREN at the 200 level or permission of the department chair. Three credits.

332 Ideas in French Literature: the 20th Century
This course proposes to present literary texts in the context of events, ideas and schools of thought that shaped 20th Century French literature, events such as the two world wars, and ideas associated with movements such as phenomenology, surrealism, communism, existentialism, and feminism. Readings will include extracts from texts of the period. Credit will be granted only for one of FREN 332 or FREN 347/348. Prerequisite: 6 credits of FREN at the 200 level or permission of the department chair. Three credits.
341 Linguistics I: Phonetics
An introduction to linguistics, this course presents the major concepts used in linguistics and outlines the phonetic structure of the French language as revealed in word formations and in sentence structures. It includes pronunciation exercises. Credit will be granted for only one of FREN 341 or FREN 340. Prerequisite: one of FREN 115, 211 or 212 or higher-level French course. Three credits.

342 Linguistics II: Morphology, Syntax & Semantics
This course presents three of the major branches of contemporary linguistics, morphology, or word form, syntax, or sentence structure, and semantics, or word meanings. Students will acquire an understanding of linguistic concepts and linguistic analysis through the study of practical examples. Credit will be granted for only one of FREN 342 or FREN 340. Prerequisite: one of FREN 115, 211 or 212 or higher-level French course. Three credits. Not offered 2019-2020.

351 Stylistic Comparison of French and English
This course develops theoretical and practical knowledge specific to the field of translation. Students will be initiated to the techniques and instruments of translation in order to reflect upon the notions of comparative stylistics and accordingly understand the fundamental differences between the English and French languages. Prerequisite: 6 credits of FREN at the 200 level or permission of the department chair. Three credits.

361 Acadian Literature
A critical description of the historical, socio-cultural, linguistic, and literary significance of Acadian writing. Consideration will also be given to stylistic evolution, from oral literature to poetry, novels, and short stories. Credit will be granted for only one of FREN 361 or FREN 376. Prerequisite: 6 credits of FREN at the 200 level or permission of the department chair. Three credits. Not offered 2018-2019.

362 Acadian Language and Culture
This course will examine the current linguistic situation in the Acadian communities of the Atlantic provinces. Students will study the cultural, social and historical circumstances which have influenced and contributed to the distinct cultural identity of the Acadian people. Credit will be granted for only one of FREN 362 or FREN 376. Prerequisite: 6 credits of FREN at the 200 level or permission of the department chair. Three credits. Not offered 2018-2019.

363 Québécois Literature I: Révolution tranquille to the Present
An introduction to the study of Québécois literature since the Quiet Revolution. Through a sampling of works representing the major literary genres, this course focuses on the role of literature in Quebec’s political and social affirmation as a society. Special attention is given to the works of Marie-Claire Blais, Pierre Vallières, Michel Tremblay, Gaston Miron and Gabrielle Roy. Prerequisite: 6 credits of FREN at the 200 level or permission of the department chair. Three credits. Not offered 2018-2019.

364 Québécois Literature II: Origins to the Révolution tranquille
A study of the major literary forms and authors of French Canada from the beginning of the colony to the Révolution tranquille (ca. 1960). Emphasis is placed on a structural and thematic approach to narrative, set against a background of cultural and ideological influences. Prerequisites: 6 credits of FREN at the 200 level or permission of the department chair. Three credits. Not offered 2018-2019.

410 Medieval French Literature
A study of literary genres from the chanson de geste, courtly romance, and the novels of chivalry to early French poetry covering the five-hundred year period from 1000-1500. Credit will be granted for only one of FREN 410 or FREN 400. Prerequisite: 6 credits of FREN at the 200 level or permission of the department chair. Three credits.

415 Renaissance French Literature
A study of the Renaissance period in literature and language through the works of Marot, Rabelais, Du Bellay, Ronsard, Montaigne and the poets of the baroque. The century’s concern with the French language provides a convenient introduction to the study of the development of modern French. Credit will be granted for only one of FREN 415 or FREN 400. Prerequisite: 6 credits of FREN at the 200 level or permission of the department chair. Three credits. Not offered 2018-2019.

456 Literary Criticism (Roman et Société)
The objective of this course is to introduce the field of French literary criticism and to illustrate several analytical methods based on current schools of literary theory. After establishing a socio-historical background, the class will focus in detail on five major schools of textual analysis, springing from the concepts of structuralism and post-structuralism: narratologie, sémioïque, psychocritique, thématique, and sociocritique. Prerequisite: 6 credits of FREN at the 200 level or permission of the department chair. Three credits. Not offered 2018-2019.

457 French Poetry from the Symbolist Movement to the Present
A study of major French poets beginning with the Symbolist Movement at the end of the 19th century and concluding with current trends in poetry. Authors include: Stéphane Mallarmé, Paul Valéry, Guillaume Apollinaire, Pierre Reverdy, Francis Ponge, Paul Claudel, Andre Breton, Henri Michaux, Francis Jammes, Blaise Cendrars, Jules Supervielle, Paul Eluard, René Char, Jacques Reda. Prerequisite: 6 credits of FREN at the 200 level or permission of the department chair. Three credits. Not offered 2018-2019.

492 Senior Seminar and Thesis
An in-depth study of an area of French or French-Canadian literature chosen by the student as the basis for his or her thesis. Working under the supervision of a chosen professor, students will research and write a thesis in French of approximately 4,000 words for an advanced major and 6,000 words for an honours student. Professor and student will meet once a month to review progress. Required for all advanced major and honours students in their final year of study. Three credits.

GERMAN

101 German for Beginners I
This course is an introductory course intended for students with no previous knowledge of the language. This course provides students with a sound basis for learning German as it is used in spoken and written communication today within the context of German-speaking culture. This course will also familiarize students with contemporary life and culture in German-speaking countries. Credit will be granted for only one of GER 101 or GER 100. Three credits and language lab.

102 German for Beginners II
This course is a continuation of GER 101 and stresses progress and systematic practice in the four language skills: listening, speaking, reading and writing. This course will provide a more advanced foundation in the basic elements of grammatical and syntactical structures in the target language. It promotes understanding of the culture of German speaking countries. Credit will be granted for only one of GER 102 or GER 100. Prerequisite: GER 101 or permission of department chair. Three credits and language lab.

201 Language and Culture
This course corresponds with the A2 level of the Common European Framework of Reference of Languages (CEFR), and is designed for students desiring to broaden and enhance their knowledge in the four language skills: listening, reading, speaking and writing through the study of authentic materials gleaned from German cultural productions. Students will be given the opportunity to understand and appreciate German culture through the introduction of language, texts, film, music, etc. Credit will be granted for only one of GER 201 or GER 200. Prerequisite: GER 102. Three credits.

202 Communications: Culture & Business
The course corresponds with the A2 level of the Common European Framework of Reference of Languages (CEFR) and puts the accent on understanding, speaking and writing. Students will review grammar structures and acquire active vocabulary appropriate to the business world. Students will learn and practice communication skills in context. This course will provide a sound basis for students planning to do an internship, work or study in a German-speaking country. Credit will be granted for only one of GER 202 or GER 200. Prerequisite: GER 102. Three credits.

300 German Language III
This course will develop proficiency in speaking and listening. Emphasis will be placed on advanced writing skills and grammatical structures. This course will also enhance knowledge of the German speaking world through insights into the cultural and literary life in German speaking countries. Prerequisite: GER 202 or GER 200. Six credits. Not offered 2018-2019.

315 Selected Topics
Prerequisite: GER 200. Three credits.

M'KMAQ

105 Introduction to Mi'kmaq Language & Culture
Introduces students to the various aspects of the Mi'kmaq language: phonetics, morphology, semantics, syntax, and language acquisition. Comparison will be made between French and English language structures and applied to the language acquisition of Mi'kmaq students. Three credits.

205 Advanced Mi'kmaq
This course is intended for student whose first language is Mi'kmaq or who are proficient speakers of the language. The aim of the course is to develop substantive knowledge of Mi'kmaq literacy. Students will be introduced to the different writing systems used by the Mi'kmaq over time. Three credits.
This course is intended for students with no previous knowledge of the language. Students will develop basic communicative skills in the target language, study Spanish grammar as a means to effective communication, express themselves in spoken and written Spanish, integrate their knowledge of grammatical structures and functions with thematically relevant vocabulary, and be introduced to the diversity of the Spanish-speaking world. Credit will be granted for only one of SPAN 101 or SPAN 100. Three credits and lab.

This course language course, which communicative objectives are centred on personal life, range from talking about family to narrating past events, focuses on past tenses, the use of indirect and direct object pronouns, and grammatical constructions with the present tense. This course continues to develop students’ writing, speaking, and comprehension skills through a variety of written, oral, and audio-visual activities that integrate cultural elements. Credit will be granted for only one of SPAN 102 or SPAN 100. Prerequisite: SPAN 101 or permission of the department chair. Three credits and lab.

This course, an intermediate course intended for students with previous knowledge of Spanish. It combines language and cultural elements that will allow students to improve their communicative competence in Spanish, review and practice the grammatical structures studied in 100-level Spanish courses, refine their language skills in reading, writing, listening, and speaking, and learn about the cultures of the Hispanic world. Credit will be granted for only one of SPAN 221 or SPAN 200. Prerequisite: SPAN 102 or 100. Three credits and lab.

A continuation of SPAN 221, students will learn advanced grammatical structures and further develop skills in reading, writing, listening, and speaking in Spanish, while continuing to learn about contemporary Hispanic cultures. Credit will be granted for only one of SPAN 222 or SPAN 200. Prerequisite: SPAN 221 or SPAN 299. Three credits and language lab.

Conducted in English, this interdisciplinary course will examine the history and reception of contemporary Latin American cultural production related to the defense of human rights. The course will cover controversial topics concerning repressed social group with a focus on textual and visual artifacts. This course will include the study of literature, films, documentaries, testimonies, street theatre performances and photography. The course provides a foundation for subsequent courses in Hispanic literature and culture. Three credits. Not offered 2018-2019.

This course is an extensive review of the conventions that govern grammar and language usage in Peninsular and Latin-American Spanish. Students will improve their overall communicative proficiency in spoken and written Spanish. Representative texts from the target culture with an aim in developing the critical reading and writing skills at the upper-intermediate level will be discussed. Required course for a minor in Spanish. Credit will be granted for only one of SPAN 306 or SPAN 305. Prerequisite: SPAN 222 or permission of the department chair. Three credits. Not offered 2018-2019.

Students completing this course can expect to be able to read and discuss advanced texts in Spanish. Reading and course material for this course will be drawn from texts on Hispanic civilization in the Iberian Peninsula and in the New World to 1800, with emphasis on the age of exploration and discovery. Credit will be granted for only one of SPAN 315 or SPAN 300. Prerequisite: SPAN 222 or permission of the department chair. Three credits. Not offered 2018-2019.

Students completing this course can expect to be able to read and discuss advanced texts in Spanish. Reading and course material for this course will be drawn from texts on the social and cultural development of Spanish speaking countries from 1800 onward. The decline of Spain as a major cultural power is counterbalanced by the emergence of Spanish American countries. Their quest for independence in the 19th century gives this course a natural narrative. Credit will be granted for only one of SPAN 325 or SPAN 320. Prerequisite: SPAN 222 or permission of the department chair. Three credits. Not offered 2018-2019.

This course, for advanced students, is an introduction to Spanish language films. It studies films and their language in a cultural, historical and geographic context. Essays, readings and film analysis are the main activities for this course. Students are advised that film screenings will be in addition to scheduled class time. Prerequisite: SPAN 222 or permission of the department chair. Three credits. Not offered 2018-2019.

An intermediate to advanced level composition course designed for students with a working knowledge of the language. Students will improve their overall proficiency in written Spanish, be exposed to representative texts from the target culture appropriate to developing their critical reading and writing skills, attain a deeper understanding of the significant socio-cultural aspects of the Spanish-speaking world, and learn the necessary writing skills to be able to participate in higher level academic courses in Spanish. Required course for a minor in Spanish. Prerequisite: SPAN 222 or permission of the department chair. Three credits.

This course will explore films based on novels. Students will acquire an understanding of the socio-cultural factors that engendered Spanish and Latin American novels and cinema. These socio-cultural issues pertain to, but not limited to: race, ethnicity, gender, politics, globalization and human rights. At the same time, students will acquire a critical perspective of contemporary issues addressed and incorporated in Latin-American and Spanish novels and cinema. Prerequisite: SPAN 222 or permission of the department chair. Three credits.

This course provides a survey of Latin American literature through the works of Latin American. This course will cover a selection of key literature readings, from the early nineteenth-century to present, with an emphasis on the ways in which literature gives a voice to value systems, traditions, and beliefs. The course is intended to complement language studies, and provides a sufficient grounding for subsequent courses in Hispanic literature and culture. Conducted in Spanish. Credit will be granted for only one of SPAN 431, 374 or 464. Prerequisite: SPAN 306 or SPAN 334. Three credits. Not offered 2018-2019.

The course covers Spanish literature from different regions of Spain. This course presents a selection of key literature readings from the early nineteenth-century to the present in their historical context. The course is intended to complement language studies, and provides a foundation to courses in Hispanic literature and culture. Conducted in Spanish. Credit will be granted for only one of SPAN 434, 363 or 463. Prerequisite: SPAN 306 or SPAN 334. Three credits. Not offered 2018-2019.

Three credits.

R. Billington, M.Mus.
K. Brunkhorst, M.Mus.
J. Hanlon, M.Mus.
P. Tynan, M.Mus.
B. Bannerman, BA
H. Choi, MA
T. Easley, B.Mus.
K. Omae, BA
T. Roach, B.Mus.

Professor Emeritus
J. O’Donnell, C.M., M.Mus., Ph.D.(hon) StFX

The department of music offers a curriculum that focuses on jazz studies and contemporary music. Degrees are windows to graduate study and commercial applications in the field of music. In addition to academically appropriate course work, award-winning faculty stress performance and composition as part of a well-rounded program.

In addition to the general admission requirements listed in chapter 1, candidates for admission to the music program are required to pass an audition on a major instrument or voice; see section 1.3 c. Re-entry students must re-audition.

Music students are initially admitted to the Bachelor of Music. Entrance to the Bachelor of Music Honours will be by application and based on grades. Qualifying students will be eligible to apply to the Bachelor of Music Honours program at the end of their second year of study. Students who fail to meet the admission requirements to the Bachelor of Music programs may be eligible for the BA with Major in Music.
Placement Auditions
It has become the practice of the department in certain instrument areas to provide instruction in the first year of study as a group format. The decision to place students in group/private lessons will be made in accordance with placement auditions held during registration/orientation week and private instructor availability.

Students in applied performance will participate in regular judged exams each term.

All courses offered by the Department of Music, except the Applied Performance courses, are available to any student who satisfies the prerequisite requirement. Applied Performance courses are only available to non-music majors with the permission of the instructor and the department chair.

Applied Music Fees
Students (including non-music majors) take music lessons with our outstanding faculty. Due to the costs associated with applied music instruction, additional fees, above tuition, are applicable. A fee of $750 will be applied for registration in a 3-credit applied music course. Should a student withdraw from an applied music course, regular refund policies will be applicable. See http://sites.stfx.ca/financial_services/StudentAccounts

Bachelor of Music
Year 1  MUSI 101, 103, 106 or 107, 165, 166*, 181, 195, 265; 6 credits arts/science and/or open electives
Year 2  MUSI 203, 206 or 207, 263, 276, 281, 295; one from MUSI 117, 118, 119, 217, 219, 235, 275; 9 credits arts/science and/or open electives
Year 3  MUSI 304, 306 or 307, 322, 323, 325, 235 or 360, 381; 9 credits of arts/science and/or open electives
Year 4  MUSI 395, 406 or 407, 426, 465, 492; 18 credits of arts/science and/or open electives
*Students with sufficient piano skill may test out of MUSI 166 upon passing a proficiency exam. Students exempted from this course are required to complete a music elective in place of MUSI 166.

Students are required to obtain a minimum grade of 65 in Applied Performance courses.

Bachelor of Music with Honours
Year 1  MUSI 101, 103, 106 or 107, 165, 166*, 181, 195, 265; 6 credits arts/science electives
Year 2  MUSI 203, 206 or 207, 235, 263, 276, 281, 295; one from MUSI 117, 118, 119, 217, 219, 275; 6 credits arts/science and/or open electives
Year 3  MUSI 304, 306 or 307, 322, 323, 325, 381, 395; 9 credits arts/s science and/or open electives
Year 4  MUSI 360, 406 or 407, 426, 465, 481, 494, 495; 9 credits arts/ science and/or open electives
*Students with sufficient piano skill may test out of MUSI 166 upon passing a proficiency exam. Students exempted from this course are required to complete a music elective in place of MUSI 166.

Students are required to obtain a minimum grade of 65 in Applied Performance courses.

Bachelor of Arts with Major in Music
Students may complete a major in music in the B.A program by completing 36 credits from the following, or others in consultation with the chair:

a) MUSI 101, 103;


d) A maximum of 15 credits at the 100-level (including MUSI 101, 103) are permitted in the major.

See section 4.1.3 for other degree requirements.

Minor in Music
Students may complete a minor in music with 24 credits from the following courses, or others in consultation with the chair: MUSI 101, 103, 106 or 107, 117, 118, 119, 165, 166, 203, 206 or 207, 214, 217, 219, 275, 276, 322, 323, 385. No audition is required for admission to a minor; however, an audition is required if a student wishes to take performance courses as part of the minor.

Pair in Music
A pair in music requires 12 credits with a maximum of 6 credits at the 100-level.

101 Structure of Music
This course covers the fundamentals and basic concepts of music theory, notation, and aural skills. The ability to read music is required. Three credits.

103 Jazz Theory I
The material studied in jazz theory is designed to be applied to the performance and writing of jazz. Topics include chord-scale relationships; chord construction; three-, four-, and five-part harmony; substitution and function; construction and analysis of harmonic progression. Prerequisite: MUSI 101 with a minimum grade of 60. Three credits.

106 Vocal Ensemble I
Participation in the StFX University Choral and Vocal Jazz Program provides students with an opportunity to develop vocal fundamentals and musicianship through the rehearsal and performance of high quality choral music from all periods and cultures. Vocal Jazz Ensembles provide a more advanced ground for ear-training and performance through the study of complex harmony in many jazz and popular styles. All ensembles are open to all university students by audition during the first week of fall classes. Two sections will be offered: section 11 is for voice majors and students participating in more than one ensemble and section 12 is for non-majors participating in one ensemble. Three credits over the full academic year.

107 Instrumental Ensembles I: Includes Jazz Ensemble, Combos, and Percussion Ensembles
These courses integrate materials from applied music and other courses with ensemble playing. Ensembles meet weekly; extra rehearsal sessions are expected. Coaching comes from professors and advanced students. Repertoire will reflect aspects of jazz, popular, folk, or rock music. Assessment includes performance outside of the classroom. Concert attendance in the visiting artist series is required. Attendance in weekly department master classes is required. Prerequisite: Successful audition. Three credits over the full academic year.

112 The Art of Listening
A survey course designed to acquaint students with the core elements of music, and musical periods, genres, and styles while developing critical listening skills. Not acceptable for credit in the Bachelor of Music programs. Three credits.

117 History of Popular Music

118 World Music
A survey course covering folkloric and ethnic musical traditions from around the world: Africa, Asia, North and South America, the Caribbean, Europe. Three credits.

119 Music in Film, Television & Video Games
A survey course designed to acquaint students with the music used in film, television and video games. Exploring the diverse relationship image and music share, the course will examine important composers, works and historical reasons why different styles of music are used in support of these various media. Three credits.

165 Jazz History
An introductory course in improvisational style specifically pertaining to the Jazz Idiom from 1900 to present. Extensive viewing and listening will be required. Three credits.

166 Basic Keyboarding Skills
The piano keyboard has historically been the workshop for the study of harmony and music theory. This class introduces basic piano skills for supplementing the musicianship of non-piano majors. The course includes weekly instruction and testing on fingering patterns for scales, common voicings for all chord types, common chord progressions, melody and bass-lines; all primarily for use in jazz and popular styles of music. Some basic reading skills are also covered. Students with sufficient piano skill may test out upon passing a proficiency exam. Students exempted from this course are required to complete a music elective in place of MUSI 166. Restricted to students in the programs of Bachelor of Music and Bachelor of Arts with Major in Music. Three credits.

181 Applied Performance I
This course provides students with private instruction on a major applied instrument or voice. Normally restricted to students in the Bachelor of Music program, or may be taken with permission of the chair. A jury performance is required at the end of term. Credit will be granted for only one of MUSI 181 or MUSI 190. Three credits.

191 Secondary Instrument I
This course provides students with instruction on an instrument other than their major instrument. Prerequisite: permission of the chair and studio teacher. Three credits over the full academic year.

195 Applied Performance II
This course provides students with private instruction on a major applied instrument or voice. Normally restricted to students in the Bachelor of Music program, or may
be taken with permission of the chair. A jury performance is required at the end of term. Prerequisite: MUSI 181 with a minimum grade of 65. Three credits.

303 Jazz Theory and Arranging
A continuation of Jazz Theory I, this course introduces many devices used in small group arranging: writing intros, endings, background figures, voicing, and rhythm section parts. Prerequisite: MUSI 103 with a minimum grade of 60. Three credits.

306 Vocal Ensemble III
A continuation of MUSI 206. Prerequisite: MUSI 206. Three credits over the full academic year.

307 Instrumental Ensembles III
A continuation of MUSI 207. Prerequisite: MUSI 207. Three credits over the full academic year.

322 Music History I: Medieval, Renaissance, and Baroque
An overview of musical styles and forms from the Middle Ages to the 18th century. This course addresses the broad spectrum of musical contributions that allowed for the development of Western music. The ability to read music is required. Credit will be granted for only one of MUSI 322 or MUSI 315. Prerequisite: MUSI 203 with a minimum grade of 60 or permission of the chair. Three credits.

323 Music History II: Romantic and 20th Century
An overview of musical styles and forms from the 18th to 20th centuries. This course addresses the broad spectrum of musical developments of Western music. Credit will be granted for only one of MUSI 323 and MUSI 316/416. Prerequisite: MUSI 203 with a minimum grade of 60 or permission of the chair. Three credits.

325 Jazz Composition
Designed to provide a foundation in the techniques of jazz composition with an in-depth study of modal harmony and its applications. Prerequisite: MUSI 203 with a minimum grade of 60. Three credits.

360 Advancing Improvisation
A continuation of MUSI 263 with a focus on the melodic, harmonic, and rhythmic vocabularies of jazz genres of 1960’s forward and its associated repertoire. Restricted to students in the Bachelor of Music Honours program or with permission of the chair. Prerequisite: MUSI 263. Three credits.

381 Applied Performance V
This course provides students with a major applied instrument or voice. Normally restricted to students in Bachelor of Music programs, or may be taken with permission of the chair. A jury performance is required at the end of term. Credit will be granted for only one of MUSI 381 or MUSI 390. Prerequisite: MUSI 281 with a minimum grade of 65. Three credits.

385 Selected Topics I
Three credits.

386 Selected Topics II
Three credits.

391 Secondary Instrument III
This course provides students with instruction on an instrument other than their major instrument. Prerequisite: permission of the chair and studio teacher. Three credits over the full academic year.

395 Applied Performance VI
This course provides students with private instruction on a major applied instrument or voice. Normally restricted to students in Bachelor of Music programs, or may be taken with permission of the chair. A jury performance is required at the end of term. Prerequisite: MUSI 381 with a minimum grade of 65. Three credits.

406 Vocal Ensemble IV
A continuation of MUSI 306. Prerequisite: MUSI 306. Three credits over the full academic year.

407 Instrumental Ensembles IV
A continuation of MUSI 307. Prerequisite: MUSI 307. Three credits over the full academic year.

426 Advanced Arranging/orchestration
This course will focus on advanced composition and arranging concepts using and expanding the techniques gained in previous theory and arranging classes. Topics include orchestration, formal analysis, examining contemporary writers, and writing for various ensembles. Credit will be granted for only one of MUSI 426 and MUSI 420. Prerequisite: MUSI 304 with a minimum grade of 60. Three credits.

465 Jazz Styles and Literature
A seminar that examines the historic so-called “ECM Explosion” of the late 60’s, 70’s, 80’s and the modern European influence. Important musicians and their contributions to improvised music will be examined. Current Canadian jazz and improvising musicians will also be covered. Three credits.
481  **Applied Performance VII**  
This course provides students with private instruction on a major applied instrument or voice. Restricted to students in the Bachelor of Music Honours program. A jury performance is required at the end of term. Credit will be granted for only one of MUSI 481 or MUSI 490. Prerequisite: MUSI 395 with a minimum grade of 70. Three credits.

491  **Secondary Instrument IV**  
This course provides students with instruction on an instrument other than their major instrument. Prerequisite: permission of the chair and studio teacher. Three credits over the full academic year.

492  **Recital**  
Students work under the supervision of their private studio instructor to produce a half-hour concert performance on their major instrument/voice. Taken currently with MUSI 395. Restricted to students in the Bachelor of Music program. No credit.

494  **Honours Recital and Thesis**  
Students work under the supervision of their private studio instructor to produce a one-hour concert performance on their major instrument/voice. Students also write a thesis on a topic relevant to their performing or compositional interest. Taken concurrently with MUSI 495. Restricted to students in the Bachelor of Music Honours program. Three credits over the full academic year.

495  **Applied Performance VII**  
This course provides students with instruction on a major applied instrument or voice. Taken concurrently with MUSI 494. Restricted to students in the Bachelor of Music Honours program. Prerequisite: MUSI 481 with a minimum grade of 70. Three credits.

499  **Directed Study**  
In consultation with the department, students may undertake a directed study in an approved area of interest. See section 3.5. Three or six credits.

9.28  **NURSING**  
Faculty  
M. Alex, MN, RN  
M. Arnott, MN, RN  
D. Halperin, Ph.D., RN  
P. Hansen-Ketchum, Ph.D., RN  
P. Hawley, Ph.D., RN (on leave)  
S. Lukeman, MN, RN  
C. MacDonald, Ph.D., RN  
J. MacDonald, Ph.D., RN (on leave)  
C. McPherson, Ph.D., RN (on leave)  
E. McGibbon, Ph.D., RN  
J. Purvis, MN, RN  
D. Sheppard-LeMoine, Ph.D., RN  
J. van Wijlen, MN, RN  
J. Whitty-Rogers, Ph.D., RN  

Nurse Educators  
D. Cabrera, MN, RN  
M. Chisholm, B.Sc.N., RN (on leave)  
D. Connolly, MN, RN  
D. Delorey, B.Sc.N., RN  
A.M. Dobbin, M.Ed., RN  
Y. Fraser, M.Ed., RN  
K. Kenny, M.Ed., RN  
F. Lepage, MN, RN  
S. Livingston, B.Sc.N., RN  
L. MacDonald, M.A.Ed., MN, RN  
A. MacDonnell, B.Sc.N., RN  
P. MacKenzie, B.Sc.N., RN  
M. MacNeil, M.A.Ed., RN  
J. Mbogua, M.Ed., RN  
W. Panagopoulos, M.Ed., RN  
S. Wood, M.A.Ed., RN  

Professor Emerita  
A. Gillis, Ph.D.

The Rankin School of Nursing offers qualified high school graduates, transfer students, post-degree students, and registered nurses, a program of study leading to the Bachelor of Science in Nursing.

**New Curriculum**  
The Rankin School of Nursing offers a modern curriculum in the Bachelor of Science in Nursing program that supports best practice pedagogies and practice experience. This curriculum has an emphasis on concepts across the health-illness continuum, the life span, and health practice settings. Concepts are integrated horizontally and vertically across the curriculum and are the foci of courses. Competencies provide a guiding framework to describe a progression of learning about concepts and nursing practice from a basic, to an intermediary, to a final advanced level that culminates in knowledge, skills and attributes expected of an entry-level nursing graduate.

There are three options for completion of the B.Sc. in Nursing in the new curriculum:

a) The four-year option is completed over four academic years (Sep-Apr) and includes 8 semesters of study. This option primarily targets students entering from high school. During semesters 1 (Sep-Dec) and 2 (Jan-Apr), students in the four-year option will complete a required 30 credits of arts and science. During semesters 3 through 8, the student will be primarily immersed in nursing courses, with the exception of semesters 6 and 7, when students have the option to take six credits of either nursing or non-nursing electives. The four-year option gives students the choice to seek employment during summer breaks and provides flexibility to participate in extracurricular university activities scheduled throughout the academic calendar year (i.e., service learning opportunities, athletics, student union, etc.).

b) The accelerated two-year option primarily targets students who have completed the university-level entrance requirements for nursing. Students in this option begin in January and complete six continuous semesters over 24 months. Students are immersed in nursing courses during semesters 3 through 8, with the option to take six credits of either nursing or non-nursing electives during semesters 6 and 7. Graduation is at the December ceremony.

c) The LPN to B.Sc. in Nursing Pathway is a bridging program designed for licensed practical nurses to earn credit for their education and experience. Students who are successful in this program will join the accelerated option in semester 4 in May.

**Progression Requirements**

a) Students must successfully complete all courses in semesters 1 and 2 before progressing to semester 3. An overall average of 65 is required in the mandatory non-nursing courses: BIOL 115, BIOL 251, BIOL 252, ENGL 111 and STAT 101.

b) In all subsequent semester, students must complete all mandatory nursing courses in a semester in order to progress to the next semester of the program. Progression in the program requires a minimum grade of 65 in each nursing course (including electives). An overall average of 65 in a semester is required to progress into the next semester.

c) Students must be prepared to participate in nursing practice rotations in sites other than their location of residence.

d) Students will be expected to participate in nursing practice rotations scheduled at various times including evenings, nights, and weekends.

e) Students who fail two courses (the same non-nursing or nursing course twice, or two a combination of a different non-nursing or nursing courses including a nursing practice failure) will result in suspension from the program for a minimum of 2 semesters. Students are permitted to reapply to the program. Re-admission to the program is not guaranteed. Re-admission for the next academic year will be at the discretion of the Dean of Science in consultation with the Director of the School of Nursing and course availability. If the student is re-admitted, subsequent failure in any course (including non-nursing and nursing courses) will result in dismissal from the program. B.Sc.Nursing students who have been dismissed twice will not be allowed to reapply for admission.

f) Performance in nursing clinical courses will be evaluated based on a combination of assignments, the development of plans of care and an evaluation of clinical practice performance. A grade of pass/fail will be awarded for the clinical practice portion of the course. Students must successfully complete the clinical practice in order to receive credit for the course.

g) Students are required to make up missed nursing practice time. Extended absences for nursing practice are evaluated by the Assistant Director, School of Nursing.

h) Current certification in standard first aid and HCP (CPR) is required for entrance; see 1.3 g. Students in the nursing program are responsible for re-certification as necessary.

i) All students must be screened through the child abuse registry of Nova Scotia. Documentation is required; see 1.3 g. Students are required to disclose to the Assistant Director, School of Nursing, any criminal record, including child abuse, that has occurred subsequent to admission.
Professional Conduct
In all nursing practice situations students are expected to be safe, ethical practitioners. They must perform in accordance with the legal, ethical, moral and professional standards set out in the profession’s Code of Ethics for Registered Nurses (2008), the Entry-Level Competencies for Registered Nurses (CRNNS, 2013), the Standards of Practice for Registered Nurses (CRNNS, 2017), becoming a Registered Nurse in Nova Scotia: Requisite Skills & Abilities (2009) and the SIFX nursing graduate learning outcomes. Student nurses are expected to act in a manner comparable to the average prudent student nurse. Behaviour that endangers public health or safety may warrant nursing practice alert or failure, which may result in dismissal from the program. Prospective students are advised that the CRNNS, the licensure body for nurses, requires disclosure of criminal records prior to consideration for registration. Those considered a risk to others may not be considered for registration by the CRNNS. The SIFX School of Nursing requires disclosure of criminal records and reserves the right to deny entry to the program based on criminal record. Failure to provide requested documentation will prevent entry to, or dismissal from, the program. The results of students’ criminal records checks and child abuse registry screens are assessed on an individual basis. In the event of a problematic result, a student may not be permitted to enter or continue in the nursing program. New graduates must be registered in the same province as their educational program prior to registering elsewhere.

Costs
In addition to the university fees listed in section 2.1, expenses include room and board for off-campus placements during consolidated experiences: fees for field trips, practice experiences, uniforms, nursing books, stethoscopes, first aid and HCP (CPR) certification and re-certification; the RN examination fees; other external exam fees including preparatory resources for NCLEX and licencing; and travel costs to and from practice areas while in the program.

B.Sc. in Nursing
Four-year program
Semester 1: BIOL 151; CHEM 151; ENGL 111; PSYC 155; STAT 101;
Semester 2: BIOL 115, 152; HNU 135; RELS 117 or PHIL 135; 3 credits
humanities or social science
Semester 3: NURS 206, 207, 208, 209
Semester 4: NURS 231, 232, 233, 234
Semester 5: NURS 306, 307, 308, 309
Semester 6: NURS 332, 333, 334, 3 credits NURS or open elective
Semester 7: NURS 406, 408, 409, 3 credits NURS or open elective
Semester 8: NURS 440

Accelerated option
Semester 3: NURS 206, 207, 208, 209
Semester 4: NURS 231, 232, 233, 234
Semester 5: NURS 306, 307, 308, 309
Semester 6: NURS 332, 333, 334, 3 credits NURS or open elective
Semester 7: NURS 406, 408, 409, 3 credits NURS or open elective
Semester 8: NURS 440

LPN to BSc. Nursing Pathway
Semester 4: NURS 231, 233, 234
Semester 5: NURS 306, 308, 309
Semester 6: NURS 332, 333, 334, 3 credits NURS or open elective
Semester 7: NURS 406, 408, 409, 3 credits NURS or open elective
Semester 8: NURS 440

B.Sc. in Nursing with Advanced Major
The electives offered during semesters 6 and 7 provide an opportunity for students to complete the advanced major program. Students may choose to do an advanced major study and practice in a focused area of health starting in semester 6 (specialty nursing elective) and completed by the end of semester 7 (second specialty nursing elective and exploratory practice course).

B.Sc. in Nursing with Honours
The electives offered during semesters 6 and 7 provide an opportunity for students to complete a honours degree. Students may choose to do a honours thesis in a focused area of health that is related to either their supervisor’s research or a research project of their own interest. The research would commence in semester 6 (research-related elective or independent study) and be completed by the end of semester 7 (exploratory practice course used to complete research).

206 Foundations of the Discipline & Profession of Nursing
Students learn about nursing as a profession, the role of the professional nurse and the evolution of nursing. Exploration of professional identity, comportment, and moral, altruistic, legal, ethical, and regulatory standards and principles are addressed. Concepts of collective collaboration, leadership and evidenced-informed practice and their core competencies are introduced. Introduction to learning plans and portfolio development are also included. Prerequisite: Successful completion of all first-year courses. Three credits.

207 Introduction to Human Functioning, Homeostasis and Nursing Therapeutics
Students learn about select human body structures and functions and adaptive responses that support health. Students gain foundational requisite skills that promote health, prevent illness, manage disease processes, restore optimal function, and alleviate suffering for persons across the lifespan. The course is divided into three modules: homeostasis; pharmacology; and communication and nursing informatics. Three-hour supervised lab practice is a required component for all course modules and a clinical application. Prerequisite: Successful completion of all first-year courses. Six credits.

208 Foundations of Health and Health Systems
Students gain a broad understanding of health and wellness and how they are created in society, with emphasis on the determinants of health and social justice. A focus is on the Canadian health care system and concepts of person-centered care, primary health care, cultural competence, critical thinking, and population health promotion including person-centered teaching and learning. The role of theory and evidence, including best practice guidelines to support the care of healthy individuals, populations, and communities is introduced. 20 hours community practice application. Prerequisite: Successful completion of all first-year courses. Three credits.

209 Introduction to Health Assessment and Clinical Nursing Practice
Caring and the nursing process are introduced, with a focus on health history and development of plans of care. Students gain basic psychomotor skills to assess normal body structures and functions and to conduct a comprehensive physical exam. Students apply professional and ethical practice, communication and relationship building skills, and evidence and best practice guidelines and critical thinking in the care of select healthy persons across the life course through a required three-hour supervised lab practice per week and clinical applications. Prerequisite: Successful completion of all first-year courses. Three credits.

231 Fundamentals of Research and Collective Collaborative Practice
Students learn the fundamentals of research and the application of evidence in nursing and health care. The research process and research methodologies are examined, with an emphasis on critically reading and interpreting research evidence, selecting best practice guidelines, and making evidence-informed decisions. Collaborative approaches to research and knowledge translation strategies are introduced. Students also learn the role of the nurse within collaborative teams and are introduced to the concepts of leadership, management, models of care, health team member roles, and care coordination. Prerequisites: Successful completion of all semester three courses. Three credits.

232 Alterations in Health and Nursing Therapeutics I
Students are introduced to pathophysiology and disease processes. The focus is on select human structures and functions that support health and well-being including fluid and electrolyte balance, acid-base balance, thermoregulation, oxygenation, perfusion, and comfort/pain. Reproductive health and sexuality are introduced. This course builds on pharmacological applications of select medication routes, calculations, and medication safety. Complementary therapeutics to manage pain is emphasized. More advanced communication skills are a focus with emphasis on communication challenges. Three-hour supervised lab practice is a required component for the course and clinical applications. Prerequisites: Successful completion of all semester three courses. Three credits.

233 Care of Families in Transition: Childbearing and Childrearing Years
Students are introduced to the care of families in transition during the childbearing and childrearing years. Emphasis is on theories, concepts and relational practice related to family, maternity, and pediatric nursing practice. Understanding ethical dilemmas and legal issues and the application of cultural competence and safety and evidence-based practice for care of families at various transition points is a focus. The course is divided into three modules: family nursing and family-centered care; maternal-newborn nursing; and nursing of children and adolescents. Prerequisites: Successful completion of all semester three courses. Six credits.

234 Integrating Nursing Roles & Practices II: Care of Childbearing & Childrearing Families
This integrated practice experience focuses on the care of families during the childbearing and childrearing years. Principles of primary health care and the nursing process are applied. Students integrate psychomotor skills and techniques and
mental health assessments. Students also apply professional and ethical practice, communication, relationship building skills, evidence-based practice and best practice guidelines, and critical thinking and judgment to work effectively with families, groups, and various health care teams/members. Includes clinical applications. Prerequisites: Successful completion of all semester three courses. Three credits.

306 Advanced Nursing Leadership, Management and Evidence-Informed Practice
Students learn the leadership and management roles of the nurse within collaborative teams. Concepts of power dynamics, management, human resource management, principles of assignment and delegation, conflict resolution, and program planning and evaluation are emphasized. Leadership is explored within the complexities of today’s public policy systems and profession based systems and organizations. Strategies to critique and facilitate the use of evidence including research and practice guidelines for evidence-informed nursing and collaborative practice are examined. Prerequisites: Successful completion of all semester four courses. Three credits.

307 Alterations in Health & Nursing Therapeutics II
Students build on concepts of pathophysiology and disease and injury processes gained from NURS 232. The focus is on select human structures and functions that support physical and mental health and well-being including intracranial regulation, neurological, and sensory perception. Attention is given to pathophysiology and biological processes of cancer. Pharmacological applications and nursing therapeutics, including complementary therapies, related to major acute physical and mental health conditions for persons and families across the lifespan are a focus. Three-hour weekly supervised lab practice is a required component for the course. Clinical applications. Prerequisites: Successful completion of all semester four courses. Three credits.

308 Care of Persons Experiencing Acute, Episodic & Life Threatening Mental and Physical Illness across the Life Span
Students learn about acute, episodic, and life threatening mental and physical illness for stable and unstable persons across the lifespan. Attention is specifically given to select cognitive, mood and affect, social functioning disorders, and psychiatric emergencies as well as select cardiac, circulatory and hematologic function, digestive and gastrointestinal, endocrine and metabolic, respiratory and gas exchange, and reproductive disorders. Understanding ethical dilemmas and legal issues and the application of cultural competence and safety and evidence informed practice is a focus. The course is divided into three modules: mental health illness; physical health illness; and illness during pregnancy and childhood. Prerequisites: Successful completion of all semester four courses. Six credits.

309 Integrating Nursing Roles & Practices III: Care of Persons Experiencing Acute, Episodic, and Life Threatening Physical and Mental Health Challenges
This integrated practice experience focuses on the care of stable and unstable persons experiencing acute, episodic, and life-threatening physical health challenges or injuries and mental health issues. Principles of primary health care and the nursing process are applied. Students have opportunities to strengthen previous skills as well as integrate new psychomotor skills and techniques including professional and ethical practice, communication, evidence-based practice and best practice guidelines, and critical thinking and judgment. Includes clinical applications. Prerequisites: Successful completion of all semester four courses. Three credits.

332 Advanced Nursing Therapeutics for Care of Persons Experiencing Complex Multi-System Health Challenges
Students apply advanced critical thinking and judgment and apply the nursing process in care of persons experiencing complex multi-system physical and mental health problems across the life span. Emphasis is on the interaction among multiple developmental, biophysical, psychosocial, spiritual, and sexual functions and structures for persons experiencing complex co-morbidities and chronic illness. Students build their understanding of health assessment, health education, self-management, support, and restoration and apply advanced nursing therapeutics including pharmacological and complementary therapies. Three-hour weekly supervised lab practice is a required component for the course and a clinical application. Prerequisites: Successful completion of all semester five courses. Three credits.

333 Care of Persons Experiencing Acute, Episodic & Life-Threatening Illness across the Life Span: Physical Health II
Students build their competence in the care of persons experiencing acute, episodic and life-threatening illness with emphasis on the aging population. Students apply theories related to select common current and emerging acute, episodic and life-threatening illness. Concentration is given to biophysical concepts for select genital-urinary, immune and lymphatic, integumentary, muscular-skeletal, and neurological and sensory disorders. Students advance their application of evidence and best practice guidelines. Prerequisites: Successful completion of all semester five courses. Six credits.

334 Integrating Nursing Roles & Practices IV: Care of Persons Experiencing Complex Co-Morbidities and Chronic Health Challenges
During this integrated practice experience, students focus on the care of persons experiencing complex multi-system physical and mental health challenges (co-morbidities and chronic illness) and caring for multiple persons. Principles of primary health care and the nursing process are applied. Opportunities to strengthen previous theoretical application, critical thinking and judgment, evidence-informed practice, communication skills and therapeutic skills through the care of persons and families experiencing complex co-morbidities and chronic physical and mental illness and in the care of multiple persons. Includes clinical applications. Prerequisites: Successful completion of all semester five courses. Three credits.

406 Preparing for Professional Role Transition
Students critically examine local and global contemporary issues in nursing, nursing education and delivery of health care. Students also critique theories that guide nursing practice, knowledge development approaches in nursing, and health information and communication technologies. Special emphasis is on transitioning from student to beginning practitioner role and on professional career development that includes values clarification, professional image, professional socialization, licensing and regulation, and inter-professional practice. Prerequisites: Successful completion of all semester six courses. Three credits.

408 Advanced Population & Public Health
Students critically examine population and public health issues, with a particular focus on select local and global communicable diseases, chronic diseases, injuries, population emergencies and disasters, and millennium development goals. Understanding how nurses work inter-disciplinarily and inter-sectorally to prevent and address complex and current local and global population health issues is a focus. Emphasis is also on various roles of the inter-disciplinary team to influence determinants of health and systems change. Course open to non-nursing students with permission of the Assistant Director of the Rankin School of Nursing. Prerequisites: Successful completion of all semester six courses. Three credits.

409 Exploratory Nursing Practice
Students select a focused area of nursing from a variety of practice, policy, or research settings in order to integrate and refine competencies in professional and ethical practice, theoretical and critical thinking, leadership and inter-professional collaboration, application of evidence-informed practice, and psychomotor skills. Students pursuing a concentration in nursing practice are placed in practice settings related to their concentrated area of study. Includes clinical applications. Prerequisites: Successful completion of all semester six courses. Six credits.

440 Transition to Nursing Practice: Consolidation
During this final practice experience, students consolidate nursing knowledge and entry-to-practice competencies. The focus is the transition from the student to baccalaureate graduate registered nurse role through a mentored experience. Students assume responsibility for learning and increasingly complex assignments as they near the end of their baccalaureate education. Application of relevant evidence and best practice guidelines is required. Includes 480 hours of combined simulation and clinical practice experience. Prerequisites: Successful completion of all semester seven courses. Fifteen credits.

Curriculum prior to 2016
The program, prior to 2016, is four academic years in length with two additional sessions for a total of 126 credits and the part time post RN option. The program also offers a Co-op non-credit opportunity for third year students. Currently licensed LPN students (diploma received post 2008) may receive credit for NURS 126/127 and three credits elective. Applicants will be assessed on an individual basis.

Nursing is a unique health profession: both an art and a science. It is the professional practice of caring. Nursing is an essential service which provides health care to individuals, families, groups and communities.

The nursing curriculum prior to 2016 is a blend of biological and social sciences, humanities, and professional nursing courses. The emphasis in the program is on understanding the personal, family, group, and community dimensions of health and illness. The curriculum combines academic and professional theory with nursing practice, fostering scholarly inquiry, creativity, critical thinking, moral reasoning, self-directedness and a commitment to lifelong learning. Personal growth is encouraged through reflection and introspection, positive interpersonal relationships, critical
inquiry and a sensitive response to human values in a climate of academic and professional excellence.

School Requirements

a) All first-year nursing courses must be successfully completed prior to registration in second-year nursing courses. Subsequently, all second-year courses must be successfully completed prior to registration in third-year nursing courses.

b) NURS 310, 305, 315, 345, 355, 330 or 336 and 493 must be successfully completed prior to progression to fourth-year nursing courses.

c) Students must be prepared to participate in nursing practice rotations in sites other than their location of residence.

d) Students will be expected to participate in nursing practice rotations scheduled at various times including evenings, nights, and weekends.

e) Students who fail a nursing course with a lab or clinical component are not permitted to progress in the program and are not permitted to take any other nursing course with a lab or clinical component. Students wishing to resume taking nursing courses must contact the Assistant Director, School of Nursing, prior to May 30.

f) Students are required to make up missed nursing practice time. Extended absences for nursing practice are evaluated by the Assistant Director, School of Nursing.

g) When a student fails due to a nursing practice failure (clinical failure) in one course only, the student will be removed from the B.Sc. Nursing program following the failure. Re-admission for the next academic year will be at the discretion of the School of Nursing Committee on Clinical Reintegration. Students re-admitted following a nursing practice failure will return with a nursing practice alert status. Re-admitted students who receive a subsequent nursing practice alert or nursing practice failure will be removed from the B.Sc. Nursing program and are ineligible for re-admission.

h) Students who fail two core nursing courses (the same course twice, or two different courses including when the course failure is due to a nursing practice failure), are removed from the program and are ineligible for re-admission to the program. Core nursing courses are: NURS 105, 115, 126, 127, 205, 235, 245, 248, 275, 251, 305, 310, 315, 345, 355, 405, 416, 455, 493 and 491.

i) Current certification in standard first aid and HCP (CPR) is required for entrance into the program; see 1.3. Students in the nursing program are responsible for re-certification as necessary.

j) Students must be screened through the child abuse registry of Nova Scotia during the fall semester of first year. Documentation is required; see 1.3.

k) No nursing student will be permitted to transfer to the original accelerated option if they have received a course failure or a nursing practice alert.

Professional Conduct

In all nursing practice situations students are expected to be safe, ethical practitioners. They must perform in accordance with the legal, ethical, moral and professional standards set out in the profession’s Code of Ethics for Registered Nurses (2008), the Entry-Level Competencies for Registered Nurses (CRNNS, 2013), the Standards of Practice for Registered Nurses (CRNNS, 2017), becoming a Registered Nurse in Nova Scotia: Requisite Skills & Abilities (2009) and the StFX nursing graduate learning outcomes. Student nurses are expected to act in a manner comparable to the average responsible student nurse. Behaviour that endangers public health or safety may warrant nursing practice alert or failure, which may result in dismissal from the program. Prospective students are advised that the College of Registered Nurses of Nova Scotia (CRNNS), the licensure body for nurses, requires disclosure of criminal records prior to consideration for registration. Those considered a risk to others may not be considered for registration by the CRNNS. The StFX School of Nursing requires disclosure of criminal records and reserves the right to deny entry to the program based on criminal record. Failure to provide requested documentation will prevent entry to, or dismissal from, the program. The results of students’ criminal records checks and child abuse registry screens are assessed on an individual basis. In the event of a problematic result, a student may not be permitted to enter or continue in the nursing program. New graduates must be registered in the same province as their educational program prior to registering elsewhere.

Costs

In addition to the university fees listed in section 2.1, expenses include room and board for off-campus placements during the additional session and other consolidated experiences: fees for field trips, practice experiences, uniforms, nursing books, stethoscopes, first aid and HCP (CPR) certification and re-certification; the RN examination fees; other external exam fees including preparatory resources for NCLEX and licensing; and travel costs to and from practice areas while in the program.

B.Sc. Nursing

The normal sequence of courses for the remaining two years of the four-year option is listed below. See chapter 7 for program requirements.

Year 4  NURS 405, 416, 455, 491; 6 credits open electives; 6 credits arts/science electives (on campus electives must be completed first semester due to scheduling of consolidated nursing practice).

B.Sc. Nursing with Advanced Major

The normal sequence of courses is the same as above, except:

Year 4  NURS 405, 416, 455, 491, 499; 6 credits open electives; 3 credits arts/science elective

B.Sc. Nursing with Honours

The normal sequence of courses is the same as above, except:

Year 3  STAT 101 replaces arts/science electives

Year 4  NURS 405, 416, 455, 491, 496, 498; 3 credits NURS elective; 3 credits arts open elective; 3 credits arts/science elective

Courses for program prior to 2016

364 Social Justice and Health

Examines the relationship between injustice and health outcomes nationally and globally. Core social justice ideas are analyzed, including the cycle of oppression, discrimination between equality and equity, and achievement of human rights as an ethical imperative. Modern and historical contexts are explored in key justice related areas: corporatization of health care; policy-created poverty; worldwide water crisis; links between planetary health and human health; and global conflict as a key driver of injustice. Learning includes analysis of selected award winning films. Cross listed with WMGS 364. Three credits.

365 Gender and Health

This course examines theoretical concepts relevant to gender and health. The broad determinants of health, sexuality, reproductive health and fertility, common diseases, substance abuse, violence and culture are examined from a gender perspective. Strategies for promoting holistic health and preventing disease will be examined. Cross-listed as WMGS 365. Three credits.

Note: Fourth-year courses focus on trends and developments in the health field, the role of the professional nurse, and the application of research to the practice of nursing.

405 Nursing of Adults III

A theory and practice course designed to provide the senior nursing student with opportunities to render comprehensive care for adults who are experiencing or who are at risk for, selected complex health problems. Students participate in the selection of nursing practice experiences that enable them to apply knowledge and critical thinking in the application of the nursing process in acute care, community, and home settings. Clinical component. Three credits.

416 Nursing of Adults IV

A theory and practice course, which provide students with opportunities to render comprehensive care to individuals experiencing common health problems. Students will examine current research; develop leadership and management skills; plan, implement, and evaluate an independent experience of their choice in any setting or country that meets requirements; and participate in a consolidated nursing practice experience. Prerequisite: NURS 405. Clinical component. Six credits in second semester.

433 Introduction to Policy for Health-Interdisciplinary Strategies

Designed to create an interdisciplinary learning experience for nursing, human nutrition and human kinetics students, this seminar course is an introduction to public policy change for health. The objective is to develop a basic understanding of healthy public policy development, analysis, and change from interdisciplinary and social justice perspectives. Issues such as healthy public policy, social determinants of health, social justice, health equity, and interdisciplinary/cross-sectoral and citizen lead policy action are explored. This course would be beneficial for students pursuing professions in the health care field. Credit will be granted for only one of NURS 433, NURS 495, HCN 495, HNU 496. Restricted to third and fourth-year students in human kinetics, human nutrition and nursing. Cross-listed as HNU 433 and HKN 433. Three credits.

455 Community Health Nursing II

This course builds on the theory and practice content in NURS 205 and critically examines community health nursing practice in Canada. This clinical practice component provides opportunity for students to work with an agency/organization using a variety of health care provision models in partnership with individuals,
families, communities, populations and health care providers in areas of health promotion and illness prevention. Clinical component. Three credits.

486 International Health and Development
This course is designed to introduce students to a holistic understanding of health within the context of international development. The relationship between health and development and the impact of development programs on health will be examined. Health concepts and issues will be examined within a social, political, economic and cultural framework. Models and case studies will focus mainly on countries of the south but examples will also be drawn from the Canadian context. May be used as an open elective. Three credits.

491 Trends in Health Care
A senior nursing course which examines the evolution of health care, and the development of, and challenges to, nursing education and practice. While focusing on the Canadian health care system, students will consider the international scene, particularly health conditions and needs in the developing world. The course is designed to facilitate independent inquiry and research. Three credits.

492 Directed Study
In consultation with the department, students may undertake a directed study in an approved area of interest. See section 3.5. Three or six credits.

493 Leadership and Research in Nursing
Examines nursing theories, management models, and leadership concepts. Qualitative research methodologies are reviewed, with emphasis on their usefulness in exploring specific nursing problems. Three credits.

495 Selected Topics
Three credits.

496 Senior Honours Seminar
A full-year seminar devoted to the theoretical, methodological, and presentation issues involved in preparing an honours thesis. No credit.

498 Honours Thesis
The honours thesis provides an opportunity for students to document the steps performed in carrying out an empirical research investigation. To satisfy department requirements for the B.Sc.Nursing with Honours, an acceptable thesis based on the research project must be submitted before the conclusion of classes for the academic year. Three credits.

499 Advanced Major Study & Practice
This course for advanced major students requires application and testing of nursing knowledge as well as knowledge from related disciplines in a clinical setting of the student’s choice (within the limits of available resources). The student selects a faculty advisor, as well as agency staff for consultation and supervision as appropriate. Prerequisite: permission of the department chair. See section 3.5. Three credits.

DISTANCE NURSING PROGRAM OPTION
Michelle Boucher, B.Sc.N., RN, Program Director

B.Sc. in Nursing for Registered Nurses
Registered nurses who are graduates of nursing diploma programs may complete the requirements by distance education on a part-time basis. See chapter 7 for program requirements. All courses are offered through the distance-delivery format. Most distance nursing and science courses are restricted to post-RN students. Distance science courses may be taken by students outside the post-RN program with permission of the Dean of Science. Science labs and tutorials are incorporated into the course content. The required courses are:

- BIOL 105, 115, 251, 252

Nursing electives: 9 credits

Please note: NURS 115 and 135 are prerequisites for all other NURS courses.

For information on this limited-enrolment program, write Distance Nursing, Continuing and Distance Education, StFX University, Antigonish, NS, B2G 2W5 or phone 902-867-5190 or 1-800-565-4371

Certificate in Gerontological Nursing
A 12-credit certificate program in nursing gerontology is offered by distance education to graduates of nursing diploma programs. Applicants must have a minimum two years RN experience. The required courses are NURS 115, 245, 425, 488.

For information on this limited enrolment program, write Distance Nursing, Continuing Education, StFX University, Antigonish, NS, B2G 2W5 or phone 902-867-5190 or 1-800-565-4371.

Certificate in Continuing Care
A 12-credit course certificate program in continuing care is offered by distance education to graduates of nursing diploma programs. The required courses are NURS 115, 135, 205, 425.

For information on this limited-enrolment program, write Distance Nursing, Continuing Education, StFX University, Antigonish, NS, B2G 2W5 or phone 902-867-5190 or 1-800-565-4371.

Note: Students must complete NURS 115 and NURS 135 before enrolling in any other distance nursing course.

115 Health Teaching and Learning
In contrast to health promotion and illness prevention, health promotion is a broad and holistic concept. This course explores the concept of health promotion; the nurse’s role in health promotion; the teaching-learning process; population health; social action and justice; the socio-cultural, economic, and political factors that influence health and behaviour. Three credits.

135 Contemporary Issues in Nursing
The foundation for all subsequent nursing courses, this class explores the evolution of nursing as a profession, including its theoretical and philosophical bases. Topics include Orem’s self-care theory; legal and ethical issues; health care reform; the image of professional nursing; changing health care priorities. Three credits.

201 Community Mental Health Nursing I
This required theoretical course provides a comprehensive introduction to community mental health nursing. The course focuses on changes in mental health nursing and the shift away from the acute care setting to the community. Emphasis is placed on prevention and health promotion in improving mental health outcomes. This course explores the foundations of mental health nursing practice and prepares the student for further study in mental health. Three credits. Practice component. Three credits.

202 Community Mental Health Nursing II
Examines the theory of and concepts in mental illness, treatment regimens, and nursing interventions. Students will apply mental health nursing principles to specific clinical disorders, building on the foundations of practice explored in NURS 201. Prerequisite: NURS 201. Three credits.

205 Community Health Nursing
Explores community health nursing practice from a Canadian perspective and the role of the community health nurse in the context of a changing health care system. Topics include population health; community assessment; epidemiology; and communicable disease control. Three credits. Offered in on-line delivery format.

237 Nursing Concepts in the Care of Women, Children and Families
This course encompasses a contemporary overview of the health of women, children and families during the childbearing and childrearing years from a wellness-centred care approach will be used in exploring these concepts. Prerequisites: NURS 115, 135. Three credits.

245 Aging and the Older Adult
This course covers the process of growing older with reference to theories on universal aging. Students will learn to improve the function, quality of life, and self-care abilities of the elderly well, to assist them in maintaining independence. Topics include aging-related changes; the role of the family and other aggregates; how elderly adults define and promote their health; the use of community resources. Three credits.

248 Basic Concepts of Pathophysiology
This course provides the student with an understanding of the basic concepts of pathophysiology, and builds upon a foundational knowledge of anatomy and physiology to meet the challenges presented in the study of disease process mechanisms. Credit will be granted for only one of NURS 249 or NURS 473. Prerequisites: BIOL 251, 252; NURS 115, 135. Three credits. Offered in on-line delivery format.

300 Research Methods
Introduces students to research methods used in nursing science. Topics include conducting and appraising research; concepts of research design, implementation, analysis, and interpretation; descriptive and inferential statistics; quantitative and qualitative research design; research ethics and bias. Six credits.

330 Legal and Ethical Issues in Nursing
Examines the moral and ethical implications of various practices in the field of health care as they affect human life and the basic dignity of the person. Also treats the moral, ethical, legal and theological issues raised by recent developments in the life sciences. Six credits.
405 Nursing of Adults I
A theory- and practice-based course exploring chronic health issues related to
violence, immune system dysfunction, cancer, and other selected conditions. In
a primary, secondary or tertiary setting, students will deliver comprehensive medical or
surgical nursing care to adults at risk for or experiencing a complex health problem.
Three credits. Offered on-line delivery format.

415 Nursing of Adults II
A theoretical and practice-based course exploring chronic health issues related
to diseases of the nervous, endocrine, and sensory systems, among others. In
a primary, secondary or tertiary setting, students will deliver comprehensive medical or
surgical nursing care to adults at risk for or experiencing a complex health problem.
Leadership practice component. Three credits.

425 Comprehensive Health Assessment
This theory and practice course focuses on a systematic assessment of the well
adult. Students will incorporate health history and physical examination of body
systems in identifying self-care requisites for a diverse population. Three credits.

483 Hospice Palliative Care Nursing
Provides an overview of theories, current practices, and relevant issues in the field
of palliative care, with a focus on the nurse's role. In line with the philosophy of
nursing at STFX, students will explore concepts of self-care and health promotion as
they relate to quality of life issues. Restricted to third- and fourth-year B.Sc.Nursing
students and post-RN students. Three credits. Offered in on-line delivery format.

488 Challenges in Aging
Using nursing and sociological perspectives on aging, students will explore holistic
care of the older client, including current gerontological issues and trends, and their
implications for nursing. This course may be used as an open or NURS elective
by third- or fourth-year B.Sc.Nursing students. Three credits. Offered in on-line
delivery format.

490 Forensic Nursing
Forensic nursing refers to the application of nursing science and knowledge to
legal proceedings. This course will examine the application of nursing science to
the investigation and treatment of trauma, death, violent or criminal activity, and
traumatic accidents within the clinical or community institution. Patient populations
to be considered include: victims of sexual assault; elder, child and spousal abuse;
unexplained or accidental death; trauma and assault; as well as the perpetrators
of these and other criminal activity. This course may be used as an open or NURS
elective by third- or fourth-year B.Sc.Nursing students. Six credits. Offered in on-line
delivery format.

494 Leadership and Management in Nursing
Examines nursing leadership theories and management models, and their
relationship to client care. The course explores the changing roles and expectations
for registered nurses as leaders in the health care system. Three credits.

497 Nursing Informatics
Teaches the knowledge and skills necessary to ensure that computers have a
positive impact on the nursing environment and delivery of patient care. Students
learn computer concepts and terms, and examine ways computers can enhance
nursing practice, education, administration, and research. Trends and issues
related to the use of computers in nursing are explored. Three credits. Offered in
on-line delivery format.

499 Independent Study and Practice
This nursing elective is designed to give registered nurses credit for a hospital-based
course or program. Courses are evaluated for credit on an individual basis by the
distance nursing education committee. Three credits.

9.29 PHILOSOPHY
D. Al-Maini, Ph.D.
S. Baldner, Ph.D.
C. Byrne, Ph.D.
L. Groarke, Ph.D.
W. Sweet, D.Ph., FRSC

What is the purpose of our existence? How do we discover the principles which
ought to guide our actions? Can we prove that God exists? Philosophy is the
reasoned study of these and other questions of fundamental importance. The
study of philosophy also introduces students to the main currents of intellectual
history, provides a basis for critically understanding their own ideas, and develops
analytical reasoning skills.

Students planning the major, advanced major, honours or honours with
subsidary degree in this field are required to consult the department chair about their
program of study. Degree requirements are outlined below and at the department's
webpage at https://sites.sfx.ca/philosophy/index.html.

Major Program
Of the 36 credits of philosophy required for the major, a minimum of 12 credits must
be in the history of philosophy, with at least 6 credits from the ancient or medieval
periods and at least 6 credits from the modern or contemporary periods. A minimum
of 12 credits in the major must be at the 300/400 level.

Advanced Major Program
Of the 36 credits of philosophy required for the advanced major, a minimum of 12
credits must be in the history of philosophy, with at least 6 credits from the ancient
or medieval periods and at least 6 credits from the modern or contemporary periods.
A minimum of 18 credits in the major must be at the 300/400 level, including 6 credits
of 400-level senior seminar coursework. Advanced major students are also required
to complete a senior research paper. In the case of a joint advanced major in which
philosophy is subject B, the senior research paper is completed only in subject A.

Honours Program
Of the 60 credits of philosophy required for the honours program, a minimum of
18 credits must be in the history of philosophy, with at least 6 credits from the ancient
or medieval periods and at least 6 credits from the modern or contemporary periods.
For students considering graduate study in philosophy, 6 credits in logic
(PHIL 251, PHIL 342) are strongly recommended. A minimum of 33 credits in the
honours courses must be at the 300/400 level, including 6 credits of 400-level
senior seminar coursework and the honours thesis.

Honours with Subsidiary Program
When philosophy is the honours subject: Of the 48 credits of philosophy required for
the honours program, a minimum of 18 credits must be in the history of philosophy,
with at least 6 credits from the ancient or medieval periods and at least 6 credits
from the modern or contemporary periods. A minimum of 27 credits in the honours
courses must be at the 300/400 level, including 6 credits of 400-level senior seminar
coursework and the honours thesis.

When philosophy is the subsidiary subject: Of the 24 credits of philosophy
required for the subsidiary, a minimum of 12 credits must be in the history of
philosophy, with at least 6 credits from the ancient or medieval periods and at least
6 credits from the modern or contemporary periods. A minimum of 12 credits in the
subsidiary must be at the 300/400 level, including 6 credits of 400-level senior
seminar coursework, six credits in logic (PHIL 251, 342 recommended).

When religious studies is the honours or the subsidiary subject with philosophy,
PHIL 245 will normally be included in the course pattern.

Humanities Colloquium
The humanities colloquium is an optional and interdisciplinary way of studying
three first-year courses, usually ENGL 100, HIST 101 and 102, and PHIL 100. See
section 4.4 for further information.

Ethics, Politics, and Law
The departments of philosophy and political science offer a concentration in
ethics, politics, and law to students doing a joint degree in these two departments.
Students following this concentration will take courses in ethics, critical thinking,
the philosophy of law, and two of the four sub-fields of political science, namely
Canadian politics, political philosophy, comparative politics, and international
relations. Joint degrees in philosophy and political science can be done as an
honours degree in one with a subsidiary in the other, a joint advanced major, or a
joint major. This concentration will be of particular interest to students interested in a
pre-law program. Interested students may consult the chairs of the two departments
for additional advice on course selection.

The following courses must be included in the degree pattern: PHIL 251, 331,
372; one of PHIL 201, 202, 371; 15 credits from PSCI 321, 335, 341, 342, 343,
344, 353.

Note: PHIL 100 is normally a prerequisite for advanced courses; exceptions
are PHIL 213, 251, 331 and 335.

100 Introductory Philosophy
An introduction to the study of philosophy that looks at major thinkers in the history
of western philosophy as well as the fundamental and enduring questions they
raised. Among the philosophers considered are Socrates, Plato, Aristotle, Aquinas,
Descartes, and Hume. The questions raised by these thinkers include: What is it
to think rationally and critically? Can we demonstrate the existence and nature of
God? Can we discover any ethical principles that should guide our actions? What
are the limits of human knowledge? Six credits.

135 Healthcare Ethics: Theories, Values, & Practice
This course introduces students to ethical reasoning about problems in healthcare.
It does so by exploring four fundamental philosophical theories (Virtue Ethics;
Contractualism & Rights; Duty-Based Ethics; and Consequentialism), presenting the corresponding values in healthcare workers, and showing how these principles and values can be applied to specific cases. Restricted to students in the B.Sc. Nursing program.

201 Ancient & Medieval Political Philosophy
This course will examine the political philosophies of Plato, Aristotle, Augustine, and Aquinas through a careful reading of primary texts. The relevance of these philosophies will be evaluated critically with a view to their contemporary relevance. Credit will be granted for only one of PHIL 201 or PSCI 200. Cross-listed as PSCI 201. Prerequisite: PHIL 100 or permission of the instructor. Three credits.

202 Modern Political Philosophy
A critical text analysis of modern philosophers such as Machiavelli, Hobbes, Locke, Rousseau, Kant, Mill, and Marx, with emphasis of their political philosophy. This course will stress the continuing relevance of these thinkers to current policies and the search for a just society. Credit will be granted for only one of PHIL 202 and PSCI 200. Cross-listed as PSCI 202. Prerequisite: PHIL 100 or permission of instructor. Three credits.

213 Philosophy of Science
Examines the methodology of the natural and social sciences, including the logic of scientific discovery and experimental testing, the confirmation of hypotheses, and the nature of scientific explanation. Credit will be granted for only one of PHIL 213 or PHIL 210. Three credits.

231 Human Nature I: Consciousness & Epistemology
A philosophical investigation of what it means to be human. Topics include: relation of mind and body; the problem of soul and body; immortality; free will; consciousness; and human knowledge. Credit will be granted for only one of PHIL 231 and PHIL 230. Prerequisite: PHIL 100 or permission of instructor. Three credits.

232 Human Nature II: The Emotions
A philosophical investigation of what it means to be human. Topics include: consciousness; human emotions and their relation to moral virtues; freedom and emotions; the basis for morality in human nature. Credit will be granted for only one of PHIL 232 and PHIL 230. Prerequisite: PHIL 100 or permission of instructor. Three credits. Next offered 2019-2020.

245 Philosophy of Religion
Explores the philosophy of religion, including different concepts of God with emphasis on the Judeo-Christian tradition; arguments for the existence of God; classical and modern challenges to belief in God. Issues such as ‘life after death’, miracles, religious experience, and the concept of prayer may also be discussed. Cross-listed as RELS 246. Credit will be granted for only one of PHIL 245 or PHIL 240. Prerequisite: PHIL 100 or RELS 100 or 111/112 or permission of the instructor. Three credits.

251 Critical Thinking
What is an argument? How do arguments work? What makes some arguments better than others? This course will equip students to recognize and analyze arguments as they occur in a variety of contexts such as media editorials, speeches, textbooks, argumentative essays, and philosophical texts. To accomplish this, we will study the components of good arguments and techniques for criticizing and constructing arguments. Students will also be introduced to propositional logic. Prerequisite: normally at least one semester of successful university study. Three credits.

281 Aesthetics
Is beauty in the eye of the beholder? Is it necessary or possible to define art? What is the nature of aesthetic experience? This course will examine several classical and modern theories of art and beauty selected from such writers as Plato, Aristotle, Hume, Kant, Hegel, Maritain, Dewey, Goodman, Danto, Foucault. It will also draw on a variety of examples of art, including literature, visual arts, music, poetry, theatre, architecture, and artistic handiwork. Prerequisite: PHIL 100. Three credits. Not offered 2018-2019.

331 Introduction to Ethics
This course introduces students to several major ethical theories, including utilitarianism, virtue-based ethics, natural law theory and deontology. It addresses such questions as: Is there an objective moral standard? Is there a common good? Do we have duties to others? What does morality have to do with personal happiness? Prerequisite: PHIL 100 or third-year standing or permission of the department chair. Three credits.

332 Contemporary Moral and Social Issues
Building on PHIL 331, this course examines contemporary moral and social issues such as freedom of speech and censorship; equality and affirmative action; legalization of non-medical drug use; the duty to alleviate suffering; assisted suicide and euthanasia; justifications for punishment and capital punishment. Prerequisite: PHIL 331. Three credits. Not offered 2018-2019.

333 Environmental Ethics
This course examines the ethical relationship between humans and the natural environment. It begins with the theoretical principles that help determine human conduct within the natural world. Once these beliefs about nature have been examined, it assesses different normative models that might govern our behaviour regarding the environment. Prerequisite: PHIL 331. Three credits.

335 Ethics in Health and Medicine
Introduces students to ethics as it bears on health and medicine. After a brief survey of ethical principles and values, the course addresses a number of contemporary issues such as: the ethical responsibilities of professionals and professional integrity; autonomy and consent; dying and euthanasia; abortion and infanticide; research involving human subjects; allocation of medical resources; confidentiality and privacy; reproductive technologies and rights. Credit will be granted for only one of PHIL 335, PHIL 135 or PHIL 336. Prerequisite: junior standing, or PHIL 100, or permission of the instructor. Three credits.

342 Logic
A course in formal logic. Presupposing a familiarity with propositional logic, it focuses on first order predicate logic (with identity) and metalogic. Topics to be covered include translating sentences from English into symbolic notation, the semantics of predicate logic, deductions, soundness and completeness. Prerequisite: PHIL 251. Three credits. Not offered 2018-2019.

351 Socrates and Plato
Topics include the nature of Socratic dialectic, Socrates’ response to the pre-Socratic philosophers, and Plato’s contributions to ethics, political philosophy, metaphysics, and epistemology. Prerequisite: PHIL 100. Three credits.

352 Aristotle
Topics include Aristotle’s contributions to metaphysics, natural philosophy, and epistemology; his response to Plato and the pre-Socratic philosophers; and the development of Greek philosophy in the subsequent Stoic, Epicurean, and Neo-Platonic schools. Prerequisite: PHIL 100. Three credits.

361 Early Medieval Philosophy
A study of the Christian and Neo-Platonic influence on philosophy from the 4th- to the 12th-centuries. Principal thinkers: Augustine, Boethius, Anselm, and Abelard. Principal problems: faith and reason; knowledge; evil; providence; free will; immortality of the soul; universals; ethical principles. The course ends with an introduction to important medieval Islamic and Jewish thinkers: Avicenna, Avembris, Maimonides. Prerequisite: PHIL 100. Three credits. Not offered 2018-2019.

362 Philosophy in the High Middle Ages
A study of the influence of Christian theology and Aristotelian philosophy on thinkers of the 13th- and 14th-centuries. Principal figures: Bonaventure, Thomas Aquinas, John Duns Scotus, William of Ockham. Principal problems: faith and reason; knowledge; evil; providence; free will; immortality of the soul; universals; and ethical principles. Prerequisite: PHIL 100. Three credits. Not offered 2018-2019.

365 The Rationalists
A review of the intellectual developments of the Renaissance relevant to philosophy is followed by a study of Descartes and his rationalistic successors, such as Spinoza and Leibniz. Prerequisite: PHIL 100 or permission of the instructor. Three credits.

366 The Empiricists
British philosophy of the late 17th and 18th century is traced through a study of the writings of Locke, Berkeley, and Hume. Works by Kant may also be studied. Prerequisite: PHIL 100. Three credits.

367 Philosophy from Kant to Hegel
In the 19th century, German philosophy found expression in the idealist movement. Major figures such as Kant, Fichte, Schelling, and Hegel were united in the belief that reality, and the categories we use to understand it, had a common origin and development. Out of this belief came new conceptions of science, history, theology, and politics. Prerequisite: PHIL 100 or permission of the instructor. Three credits. Not offered 2018-2019.

371 Social and Political Philosophy
Examines fundamental issues in social and political philosophy through a discussion of such questions as: What would an ideal society be like? Should there be limits on human freedom? Do human beings have rights that everyone should respect? Is it ever morally acceptable to disobey or rebel against the state? Texts will be selected from the classical, medieval, modern, and contemporary periods, but topics will focus on issues of current interest. Prerequisite: PHIL 100. Three credits. Not offered 2018-2019.

372 Philosophy of Law
Examines fundamental issues in legal philosophy through a discussion of such questions as: What is the nature and function of law? What is the relation between
law and morality? What is the character of legal reasoning and judicial decision-making? What are the justifications and aims of punishment? Texts will be selected from the classical, medieval, modern, and contemporary periods, including works on liberal, libertarian, Marxist, and feminist thought. Prerequisite: PHIL 100. Three credits. Not offered 2018-2019.

381 Existentialism and Phenomenology
Examines 19th- and early 20th-century philosophical ideas in continental Europe. A look at the philosophical antecedents of existentialism and phenomenology will be followed by a discussion of the writings of some of the major figures in these movements: Kierkegaard, Sartre, Beauvoir, Marcel, Merleau-Ponty, Husserl, Arendt, and Heidegger. Prerequisite: PHIL 100 or permission of the instructor. Three credits. Not offered 2018-2019.

391 Mind, Language and Logic
Presents some of the major currents of philosophy in the English-speaking world in the 20th century, up to 1950. The course includes a brief account of 19th-century empiricism, pragmatism, and idealism, before turning to ‘common sense analysis’ (e.g., G.E. Moore), early discussions of logical positivism and the place of metaphysics, ethics, and aesthetics (e.g., Bertrand Russell, A.N. Whitehead, Ludwig Wittgenstein, A.J. Ayer, and Karl Popper), and the beginnings of ‘ordinary language’ philosophy. Prerequisite: PHIL 100 or permission of the instructor; junior standing strongly recommended. Three credits. Not offered 2018-2019.

451 Seminar in Ethics, Political Philosophy, and the Philosophy of Law I
A seminar course that focuses on questions of ethics, political philosophy, and the philosophy of law. Topics to be addressed may include: the state and society, rights and duties, justice and equality, freedom and punishment, the moral basis of political obligation, and the concept of law. Prerequisite: junior standing in any program or permission of the instructor. Three credits.

452 Seminar in Ethics, Political Philosophy, and the Philosophy of Law II
A seminar course that focuses on questions of ethics, political philosophy, and the philosophy of law, not discussed in PHIL 451. Content varies from year to year. The course will include both classical and contemporary authors. Prerequisite: junior standing in any program or permission of the instructor. Three credits.

461 Seminar in Metaphysics and Epistemology I
A seminar course that focuses on issues in classical and contemporary epistemology and metaphysics. Topics to be considered may include: an investigation of the ultimate structure of reality as a whole; the nature of material things; the existence of the immaterial; the meaning of being; what can and cannot be known of reality; whether there is a First Cause. Cross-listed as PHIL 391 in 2017-2018. Prerequisite: junior standing in any program or permission of the instructor. Three credits. Not offered 2018-2019.

462 Seminar in Metaphysics and Epistemology II
A seminar course that focuses on issues in metaphysics and epistemology not discussed in PHIL 461. Content varies from year to year. The course will include both classical and contemporary authors. Prerequisite: junior standing in any program or permission of the instructor. Three credits. Not offered 2018-2019.

489 Honours Thesis
Each student works under the supervision of a professor who guides the selection of a thesis topic, the use of resources, the methodological component, and the quality of analysis. Restricted to honours students. Three credits over full year.
102  Physics for the Life and Health Sciences II
An algebra-based introduction to physics focusing on periodic motion, waves, and electricity. Topics include a review of mechanics based on periodic motion; wave motion and standing waves; electric charge, field, potential, and circuits; the electromagnetic spectrum; optics; and thermodynamics. Applications to biology, human physiology, and medical technology will be emphasized. Recommended for students in the life or health sciences. Previous physics experience would be an asset but is not required. May only count as a science A course for advanced major and honours students in physics with permission of the Chair. Credit will be granted for only one of PHYS 102, 100, or 120. Three credits and lab.

121  Physics for the Physical Sciences and Engineering I
A calculus-based introduction to physics focusing on mechanics. Topics include Newton’s Laws; static equilibrium; kinematics and dynamics in 1 and 2 dimensions; momentum and energy conservation; work; and rotational dynamics. Recommended for those considering further study in any of the physical sciences, engineering, mathematics, and computer science. MATH 106 or 121 should be taken concurrently. Credit will be granted for only one of PHYS 121, 101, 100, or 120. Three credits and lab.

122  Physics for the Physical Sciences and Engineering II
A calculus-based introduction to physics focusing on electricity and magnetism. Topics include simple harmonic motion; electric charge, force, field, and potential; Gauss’s Law; simple electric circuits; magnetism, magnetic forces and fields; electromagnetic induction and Faraday’s Law. Recommended for those considering further study in any of the physical sciences, engineering, mathematics, and computer science. MATH 107 or 122 should be taken concurrently. Credit will be granted for only one of PHYS 122, 100, or 120. Prerequisite: PHYS 121; or PHYS 101 with permission of instructor. Three credits and lab.

171  Introduction to Astronomy I
This course provides an introduction to astronomy for students who have no background in mathematics or science. Topics include observing the night sky with and without optical aid, the development of astronomy and related sciences, time and calendars, the evolution of the solar system, sun, planets, comets, and meteors. Observing sessions will be arranged. This course is intended for non-science students, but may be taken by science students as an elective. PHYS 271 is recommended for science students. Credit will be granted for only one of PHYS 171 or PHYS 271. Three credits.

172  Introduction to Astronomy II
This course provides an introduction to astronomy for students who have no background in mathematics or science. Topics include stellar systems, galaxies, quasars, black holes, dark matter, dark energy, cosmology, cosmogony and life in the universe. Observing sessions will be arranged. This course is intended for non-science students, but may be taken by science students as an elective. PHYS 272 is recommended for science students. Credit will be granted for only one of PHYS 172 or PHYS 272. Three credits.

201  Modern Physics: Introduction to Relativity and Quantum Physics
Topics include Einstein’s special relativity; wave description of matter; early atomic quantum theory; introduction to nuclear and particle physics; Schrödinger’s quantum mechanics. Prerequisite: PHYS 122 or PHYS 120; MATH 107(112) or ENGR 122/ MATH 122. Three credits and lab.

221  Basic Electric Circuits Theory
Topics include introductory concepts; resistive networks; response to linear circuits with energy storage; exponential excitation functions; steady-state AC circuits; analysis; network analysis; systems. Cross-listed as ENGR 237. Prerequisites: PHYS 122(120); MATH 107(112) or ENGR 122/MATH 122. Three credits.

223  Digital Electronics
This hands-on, practical course introduces digital electronics with applications to computer hardware and micro-computer peripherals. Topics include the families of digital electronic technology; combinational and sequential logic; digital device characteristics; micro-computer interfacing; data acquisition; instrument control; data transmission. Labs provide an opportunity to design and test practical digital devices. Cross-listed as ENGR 238. Prerequisite: PHYS 122(120). Three credits and lab.

241  Mathematical Physics: Oscillations and Waves
An introduction to complex numbers, treatment of experimental uncertainties, ordinary differential equations, partial differential operators, partial differential equations and Fourier series for dealing with the physics of oscillating systems and waves. Simple, damped, forced, and coupled oscillators are treated in detail. The one-dimensional wave equation is derived and solved. Fourier series are introduced in order to satisfy the initial conditions. Prerequisites: PHYS 122(120); MATH 107(112) or ENGR 122/MATH 122. Three credits.

242  Classical Dynamics I
The course covers conservative systems and potential energy; non-inertial frames; multi-particle systems; calculus of variations; Lagrangian mechanics; the connection between symmetries and conservation laws; central force problems; orbital mechanics; coupled oscillators and normal modes; Hamilton’s equations of motion. Prerequisites: PHYS 122(120); MATH 107(112) or ENGR 122/MATH 122. Three credits.

246  Circuit Analysis
Covers advanced circuit analysis techniques, starting with sinusoidal excitation. Topics include grounding and harmonics; symmetrical components and dealing with unbalanced networks; real and reactive power flow; balanced three-phase circuits for power distribution; phasors and complex impedance. Mutual inductance and magnetically coupled coils are used to introduce transformer behaviour and performance. Cross-listed as ENGR 246. Prerequisites: ENGR 144 or CSCI 125; ENGR 237 or PHYS 221. Three credits and three-hour lab.

271  Astronomy: The Solar System
This course provides a quantitative and more detailed treatment of the topics covered in PHYS 171. These topics include the evolution of the solar system, sun, planets, comets, meteoroids, and solar wind. Observing sessions will be arranged. Credit will be granted for only one of PHYS 271 or PHYS 171. Prerequisites: PHYS 101(100) or 121(120); MATH 107(112) or 127; PHYS 122 recommended. Three credits. Not offered 2018-2019.

272  Astronomy: The Stellar System
This course provides a quantitative and more detailed treatment of the topics covered in PHYS 172. These topics include stellar evolution, supernovae, quasars, pulsars, neutron stars, black holes, the universe, our galaxy, and cosmology. Observing sessions will be arranged. Credit will be granted for only one of PHYS 272 or PHYS 172. Prerequisites: PHYS 101(100) or 121(120); MATH 107(112) or 127; PHYS 122 recommended. Three credits. Offered 2016-2019 and in alternate years.

278  Introduction to Atmospheric Physics
This course aims at developing an understanding of the physical processes that influence our climate. It is suitable for science students interested by atmospheric sciences, climate and air quality issues. Topics include introduction to radiation, atmospheric composition, planetary atmospheres, introduction to molecular spectroscopy and photochemistry, radiation balance - natural variability and anthropogenic effects, greenhouse effect, ozone depletion, clouds, methods of sounding atmospheric constituents, instrumentation, introduction to climate modeling. Cross-listed as ESCI 278. Prerequisites: MATH 107(112) or 127 or 122, CHEM 100 or 120, and one of PHYS 100, 101/102, 120, 121/122. Three credits. Not offered 2018-2019.

298  Selected Topics
The topic for 2018-2019 is Medical Imaging. Medical imaging is instrumental to how doctors and other health professionals diagnose, analyze, and intervene in a number of medical situations, from brain injuries to pregnancy. It is a dynamic field that continuously informs medical knowledge and advances. This course will explore the physical principles of medical imaging systems to understand the factors that affect diagnostic ability. The course will also compare different imaging technologies and evaluate their strengths and weaknesses in in disease diagnostic and other applications. Three credits.

299  Selected Topics
The topic for 2018-2019 is Particle Physics in the Universe. This course answers our biggest questions by looking at the universe’s smallest objects. Designed for a general audience, students in this course will become acquainted with the basic building blocks of the universe and the forces through which these building blocks interact. This course will also explore how principles of particle physics have led to the development of technologies we use every day and how research in particle physics may shape the future of humankind. Credit will be granted for only one of PHYS 299 or PHYS 303. Three credits.

302  Modern Physics: Properties of Matter
This course considers the properties of matter in its various states of greater and lesser order. Topics include classical thermodynamic treatment of phase transitions; an introduction to fluid mechanics; crystallographic order in crystals; elasticity; magnetic order; electrons in metals; and electrical resistance. Prerequisites: PHYS 201, 241. Three credits and lab. Not offered 2018-2019.

303  Modern Physics: Subatomic Physics and Cosmology
Topics include nuclei; elementary particles; concepts of general relativity; cosmology; quantum theory; introduction to nuclear and particle physics; Schrödinger’s quantum mechanics. Prerequisite: PHYS 122. Three credits. Offered 2018-2019 and in alternate years.
444 Statistical Mechanics
This advanced course explores thermodynamics and its relationship to statistical mechanics. Topics include review of the thermodynamic postulates and conditions for equilibrium; extensive and intensive quantities; entropy and energetic formulations; Euler equation and Gibbs-Duhem relation; Legendre-transformed representations; response functions and Maxwell relations; stability; first-order phase transitions; van der Waals fluid; critical point and second-order phase transitions; Ising model of magnetic systems; connection to statistical mechanics through numerical models. Prerequisite: PHYS 344. Three credits and lab.

474 Computational Physics
This course covers computational modeling of a variety of systems relevant to physics, physical chemistry, and engineering. Topics will include: deterministic and stochastic methods; drawing connections among different phenomena from underlying similarities revealed through the modeling process; implementing simulations and analyzing the results; numerical integration of neural networks and spin glasses. Prerequisites: PHYS 241; ENGR 221/MATH 221 or MATH 367, CSCI 161 or ENGR 144. Three credits and lab.

475 Atomic and Molecular Physics
Covers the development of atomic physics; one-electron and multi-electron atoms; fine and hyperfine structure; radiation and radiative transitions; the Pauli principle and atomic shell structure; atomic spectroscopy. Also covers a selection of current areas of research in the field such as lasers, laser cooling, and quantum computing. Prerequisite: PHYS 343. Three credits and lab.

415 Special Topics in Physics
This course will introduce one or more current topics in physics research. The topic for 2018-2019 is General Relativity. This course will cover the basics of General Relativity (GR); fundamentals of differential geometry, the metric, geodesics, the Einstein equation, experimental tests of GR, black holes, cosmic expansion, gravitational waves, warped space-time. Prerequisites: PHYS 241 or MATH/ENGR 221 or MATH 367; MATH 267 or MATH/ENGR 222. PHYS 325 is strongly recommended. Three credits. Offered 2018-2019 and in alternate years.

344 Thermal Physics
This course introduces the statistical nature of physical systems from an energetic perspective. Topics covered: laws of thermodynamics; ideal gases and Einstein solids; entropy and its relation with temperature, pressure, and chemical potential; engines and refrigerators; Helmholtz and Gibbs free energy; chemical thermodynamics; Boltzmann statistics; partition functions; Maxwell distribution; Gibbs factors and quantum statistics; Fermi-Dirac and Bose-Einstein distributions; degenerate electron gases; blackbody radiation and Planck’s distribution; Debye theory of solids. Prerequisites: PHYS 242; CSCI 161 or ENGR 144. Three credits and lab. Not offered 2018-2019.

399 Selected Topics
The topic for 2018-2019 is General Relativity. This course will cover the basics of General Relativity (GR); fundamentals of differential geometry, the metric, geodesics, the Einstein equation, experimental tests of GR, black holes, cosmic expansion, gravitational waves, warped space-time. Prerequisites: PHYS 241 or MATH/ENGR 221 or MATH 367; MATH 267 or MATH/ENGR 222. Three credits.

451 Special Topics in Physics
This course will introduce one or more current topics in physics research. The topics will vary from year to year depending upon the availability of faculty and their interests. Three credits.

422 Electromagnetic Theory II
This course, a continuation of PHYS 322, covers magnetic fields in magnetic and non-magnetic materials, electromagnetic induction, the electric and magnetic fields of moving electric charges; Maxwell’s equations; and the propagation and radiation of electromagnetic waves in various media. Prerequisites: PHYS 322; ENGR 221/MATH 221 or MATH 367; MATH 361. Three credits. Not offered 2018-2019.

425 Lasers and Modern Optics
An introduction to the theory, operation, and applications of lasers. Topics include the principles of optical coherence; optical resonators; operating principles and the most important laser types; holography; wave mixing; harmonic generation; the optical Kerr effect; stimulated Raman scattering and fiber optics. Prerequisites: PHYS 201, 325, 343. Three credits and lab.

443 Quantum Mechanics II
Topics include function space analysis; state vectors; pure and non-pure states described by density operators; unitary and antiunitary transformations, symmetries and group theory in quantum mechanics; Schrödinger, Heisenberg, and interaction pictures; angular momentum coupling, tensor operators, the Wigner-Eckart theorem; time-dependent perturbation theory, variational approach; scattering theory with applications to modern physics. Prerequisite: PHYS 343. Three credits. offered 2018-2019 and in alternate years.

444 Statistical Mechanics
This advanced course explores thermodynamics and its relationship to statistical mechanics. Topics include review of the thermodynamic postulates and conditions for equilibrium; extensive and intensive quantities; entropic and energetic formulations; Euler equation and Gibbs-Duhem relation; Legendre-transformed representations; response functions and Maxwell relations; stability; first-order phase transitions; van der Waals fluid; critical point and second-order phase transitions; Ising model of magnetic systems; connection to statistical mechanics through numerical models. Prerequisite: PHYS 344. Three credits and lab.

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This course covers computational modeling of a variety of systems relevant to physics, physical chemistry, and engineering. Topics will include: deterministic and stochastic methods; drawing connections among different phenomena from underlying similarities revealed through the modeling process; implementing simulations and analyzing the results; numerical integration of neural networks and spin glasses. Prerequisites: PHYS 241; ENGR 221/MATH 221 or MATH 367, CSCI 161 or ENGR 144. Three credits and lab.

475 Atomic and Molecular Physics
Covers the development of atomic physics; one-electron and multi-electron atoms; fine and hyperfine structure; radiation and radiative transitions; the Pauli principle and atomic shell structure; atomic spectroscopy. Also covers a selection of current areas of research in the field such as lasers, laser cooling, and quantum computing. Prerequisite: PHYS 343. Three credits and lab.

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443 Quantum Mechanics II
Topics include function space analysis; state vectors; pure and non-pure states described by density operators; unitary and antiunitary transformations, symmetries and group theory in quantum mechanics; Schrödinger, Heisenberg, and interaction pictures; angular momentum coupling, tensor operators, the Wigner-Eckart theorem; time-dependent perturbation theory, variational approach; scattering theory with applications to modern physics. Prerequisite: PHYS 343. Three credits. offered 2018-2019 and in alternate years.
as part of their program. Students will normally concentrate in two areas within the discipline, and have at least 15 credits at the 300 level or above, including PSCI 399 and two three-credit seminars. Joint advanced major candidates must complete all of the above requirements, including the senior paper if political science is the primary subject (major 1).

Honours Program
Candidates for the degree with honours in political science require credit for PSCI 101/102 (100); 399, 490; a minimum of 6 credits from the following: 201, 202, 211, 212, 221, 222, 241, 242, 250; two three-credit seminars; a thesis; and 27 other PSCI credits. Non-Canadian students may, with permission of the department, substitute another 6 credits for PSCI 221/222 or 241/242. Students will normally have at least 24 credits at the 300 level or above, including PSCI 399, 490 and two seminars.

Honours with a Subsidiary Subject
See section 4.1 for program requirements.

Concentration in Ethics, Politics, and Law
The Departments of Philosophy and Political Science offer a concentration in ethics, politics, and law to students doing a joint degree in these two departments. Students following this concentration will take courses in ethics, critical thinking, the philosophy of law, and two of the four sub-fields of political science, namely Canadian politics, political philosophy, comparative politics, and international relations. Joint degrees in philosophy and political science can be done as an honours degree in one with a subsidiary in the other, a joint advanced major, or a joint major. This concentration will be of particular interest to students interested in a pre-law program. Interested students may consult the chairs of the two departments for additional advice on course selection.

The following courses must be included in the degree pattern: PHIL 251, 331, 372; one of PHIL 201, 202, 371; 15 credits from PSCI 321, 335, 341, 342, 343, 344, 353.

Note: Not all courses are offered every year. Most 300-level courses are offered in alternate years. To confirm course offerings students should check the SFxS timetable prior to registration.

101 Introduction to Power and Politics
This course provides a basic introduction to the study of politics by exploring key concepts, ideas and debates that are important for understanding political life. Topics covered include the nature of politics, varieties and dimensions of political power, political authority and the state. Students will be introduced to both traditional and contemporary political ideologies. Credit will be granted for only one of PSCI 101 or PSCI 100. Three credits.

102 Introduction to Comparative and Global Politics
International relations and national politics shape political life today. This course examines various forms of government and compares political systems and processes, electoral systems, and public policies. It introduces students to the international state system and relations among states, covering topics such as co-operation and conflict, alliances and international organizations, war and peace, the global economy and contemporary global issues. Credit will be granted for only one of PSCI 102 or PSCI 100. Three credits.

201 Ancient & Medieval Political Thoughts
A critical textual analysis of ancient and medieval thinkers such as Socrates, Plato, Aristotle, Aquinas and Augustine, with emphasis on their political thought. This course will stress the continuing relevance of these thinkers to current politics and the search for the just society. Credit will be granted for only one of PSCI 201 or PSCI 200. Cross-listed as PHIL 201. Three credits.

202 Modern Political Thought
A critical textual analysis of modern thinkers such as Machiavelli, Hobbes, Locke, Rousseau, Kant, Mill, and Marx, with emphasis on their political thought. This course will stress the continuing relevance of these thinkers to current politics and the search for the just society. Credit will be granted for only one of PSCI 200 or PSCI 202. Cross-listed as PHIL 202. Three credits.

211 Comparative Politics I
This course provides an introduction to comparative politics and/or regional politics as a field of study, and prepares students for upper level courses in the field. It examines the evolution and diversity of governments in countries whose history, political institutions, political culture, political processes and political outcomes differ from Canada’s. These countries may include Russia, China, Brazil, Japan, Iran, India or Nigeria, among others. Credit will be granted for only one of PSCI 212 or PSCI 210. Prerequisite: PSCI 211 recommended. Three credits.

212 Comparative Politics II
This course provides an introduction to comparative politics and/or regional politics as a field of study, and prepares students for upper level courses in the field. It
295 Religion and Politics
An examination of the impact of religion on politics and politics on religion. Students will consider the relationship between religion and politics in the Middle East, Northern Ireland, India and Pakistan, Eastern Europe and North America. Case studies will demonstrate interactions between the state and Christianity, Islam, Hinduism, and Judaism, as well as the influence of religion on citizenship, education, the party system, and social issues. Cross-listed as RELS 295. Three credits.

301 Liberalism and Its Critics

302 Marx and the Marxists
A study of the socialist and/or communist critique of industrial capitalism, encompassing ethical, historical, economic, and revolutionary perspectives. The course examines the works of Karl Marx, and their adoption by revolutionaries and critics of liberalism. Prerequisite: PSCI 200 or PSCI/PHIL 201 and 202 recommended. Three credits.

303 Contemporary Political Arguments
Critical study of the major ideas and issues in contemporary political theory, focused on assessing and engaging central moral debates in domestic and global politics. Emphasis will be placed on applying political theories and concepts to examine real-world cases. Main themes: political authority and obligation, democracy, multiculturalism, human rights, global justice, war and intervention, environment, gender and power. Prerequisite: PSCI 200 or PSCI/PHIL 201 and 202 recommended. Three credits.

311 The European Union
This course examines European integration since World War II, with emphasis on the European Community (EC) and European Union (EU), their institutions and policy processes, and the consequences of European unity for the political process in European societies. Prerequisite: PSCI 211, 212 recommended. Three credits.

312 Art and Politics
This course introduces students to what modern artists have to say about politics and what governments do and say about art. It provides some of the historical and theoretical tools needed to analyze the political role of art in our time. Students will examine literary works, paintings, music, and architecture, and discuss specific policies on art. Cross-listed as ART 312. Three credits.

313 West European Politics
This course surveys governmental institutions and political processes in major Western European states like the United Kingdom, France, Germany, Italy, and Sweden. Among these cases we will compare systematically general historical patterns of social, economic, and religious conflict; structures of citizen representation in interest groups and political parties; electoral systems; constitutional relationships between executive, legislature, and judiciary; outlines of economic and foreign policies; and current problems of national identity. Credit will be granted for only one of PSCI 313 or PSCI 310. Three credits.

314 Topics in European Politics
This course examines themes and issues relevant to European politics and societies, ranging from political institutional arrangements, state-society relations, and the role of civil society and social capital to public policy, immigration, church-state relations, security, the EU Eastern enlargement, and the EU Neighborhood Policy. By examining different European countries, Europe as a whole and the European Union, students are encouraged to develop their own project to understand politics in that part of the world. Credit will be granted for only one of PSCI 314 or PSCI 310. Three credits.

315 Democratization around the World
This course investigates the problems facing countries from different parts of the world that have sought to move from non-democratic political systems to democracy. Students will learn the social, cultural and economic conditions necessary for the process of democratization; analyze the institutional structures and constitutional designs most conducive to the transition from authoritarianism to democracy; and consider the consequences of democratization for development. Prerequisite: PSCI 211 or 212 recommended. Three credits.

316 Dictatorships
This course introduces students to the nature and varieties of dictatorships in our time by examining their causes of emergence, what sustains them, and why they (sometimes) fall. This comparative politics course covers cases of dictatorial rule in countries such as China, Cuba, Egypt, North Korea, Russia, and Rwanda. Students will examine the political institutions and the public policies (e.g. economic, cultural, human rights) of dictatorships. Three credits.

321 Federalism
This course examines the theory and practice of federalism, with a focus on Canadian federalism. Topics include theories of federalism, comparative federal systems, inter-governmental relations, fiscal arrangements, federal-provincial diplomacy, and constitutional reform. Prerequisite: PSCI 221, 222 recommended. Three credits.

322 Atlantic Canada
A course on modern government and politics in the four Atlantic provinces. Regional development and dependence are the themes within which students will explore federal-provincial relations, fiscal and administrative changes, development policies, political culture, and party systems. Prerequisite: PSCI 221, 222 recommended. Three credits.

323 Parties and Elections
This course is concerned with parties and elections in Canada. Topics include party and electoral systems; intra-party politics and political personnel; party financing; representation and policy development; the political marketing, campaigns and voting behaviour. Prerequisite: PSCI 211, 212 recommended. Three credits.

324 Provincial Politics
A comparative study of the differing political cultures, institutions, behaviour, and public policies of the Canadian provinces. Students will seek explanations for the similarities and differences in the social and economic structures and political histories of the provinces. Prerequisite: PSCI 221 and 222 recommended. Three credits.

325 Indigenous Politics in Canada
An introductory course to Indigenous politics and governance, this course will cover the history of Aboriginal-Crown relations, the political mobilization of Aboriginal Peoples and the constitutional entrenchment of their rights, key court decisions and political struggles, and the governance challenges of the contemporary era. Topics to be covered include the treaty process, the Indian Act, Aboriginal and non-Aboriginal perspectives, citizenship and sovereignty, land claims and modern treaties, and forms of self-government. Prerequisite: PSCI 101/102(100); 221 and 222 recommended. Three credits.

331 Comparative Nationalism
An analysis of the historical origins of nationalism and of its central concepts and justifications. Both Western and non-Western nationalism (focusing on four or more cases) will be examined in a comparative context. Evidence for the recent decline of the nation state will be explored. Credit will be granted for only one of PSCI 331 or PSCI 330. Prerequisite: PSCI 211, 212, or 250 or 251/252 recommended. Three credits.

335 Human Rights and International Justice
Human rights and international justice are important components of politics. This course examines the theoretical and practical concerns shaping the study and promotion of human rights today. Using a variety of material and case studies, we examine the debate over whether rights are universal; the institutions and organizations enforcing human rights; and the role states play in protecting human rights. A strong component of this class is state responses to massive human rights violations. Prerequisite: PSCI 211 or 212 or 250 or 251/252 recommended. Three credits.

343 Law and Politics
This course explores the role of the courts in politics, particularly in Canada. Possible Topics include recent constitutional developments; the impact of the Charter of Rights; the judicialization of politics; philosophy of law; and strategic litigation. Prerequisite: PSCI 221, 222 recommended. Three credits.

344 Citizenship and Identity
This course examines various aspects of Canadian citizenship and identity. Topics include citizenship theory, the evolution of the Canadian citizenship regime, processes of citizenization, majority and minority nationalism, Aboriginal citizenship and multiculturalism. Prerequisite: PSCI 221, 222, or 220 recommended. Three credits.

345 Women and Politics
An introduction to the study of women and politics, this course has three parts: feminist political thought and the women’s movement; political participation and representation; and public policy. Topics include feminist political thought in the Western political tradition; the evolution and politics of the women’s movement; political parties and legislatures; women and work; and women and the welfare state. Prerequisite: PSCI 101/102 (100) or WMGS 100. Cross-listed as WMGS 345. Three credits.

346 The Politics of Resource Management
This course examines the power relations arising from attempts to exploit and
manage natural resources. The commodities in question range from wildlife and fish to agriculture, forests, and minerals. Topics will include: preservation and conservation strategies; crown rights and systems; co-management regimes; environmental assessment techniques; commodity-marketing schemes and sustainable-development policies. Three credits.

347 Politics of the Environment
Environmental factors have increasingly become important components of political decisions. This class examines how environmental issues arise and the different ways they are framed, argued, and dealt with politically in that context. It will also explore the theoretical assumptions, questions and ethical frameworks that have been developed to guide and analyze environmental policy-making. Prerequisites: PSCI 247, 248. Three credits.

351 Canadian Foreign Policy
This course is designed as a general historical survey of Canadian external interests, external policy-making processes, and contemporary themes and issues. Prerequisite: PSCI 250 or 251/252 recommended. Three credits.

352 American Foreign Policy
This course examines the major foreign policy interests in the United States from the late 19th century to the present. Emphasis is placed on the ideologies and personalities of key decision-makers, the effect of the domestic socio-economic structure on policy decisions, and America's position in the international system. Prerequisite: PSCI 250 or 251/252 recommended. Three credits.

353 International Organizations
A study of the development and role of international organizations in global politics, examining the achievements and limits of institutionalized multilateral cooperation among states. Institutions examined include the UN, NATO, the WTO, the IMF, and the World Bank. Prerequisite: PSCI 250 or 251/252 recommended. Three credits.

354 Global Political Economy
This course examines the politics of international economic relations. Topics include transnational corporations and the globalization of production, the multilateral trade system and regionalism, the global monetary and financial system, and economic development in the global South. Cross-listed as DEV 354. Prerequisite: PSCI 250 or 251/252 recommended. Three credits.

355 Global Issues
This course examines the state’s supremacy and its capacity to manage such global issues as: the continuing problem of poverty in the developed world; the challenges of establishing democracy and global governance; global environmental issues such as climate change and intergenerational justice; international concerns with human and animal rights; sexist oppression; indigenous struggles, and the rise of trans-national social activist groups. Cross-listed as DEV 355. Prerequisite: PSCI 250 or 251/252 recommended. Three credits.

356 Understanding the Arab-Israeli Conflict
This course explores the origins and causes of the Israeli-Arab conflict and the conditions for peace. It examines the precursors and underlying causes of the conflict and the changing nature of violence and warfare from conventional or state threats to asymmetric or non-state threats. It also addresses both the theoretical approaches to conflict management and termination and their practice, including successes as well as failures between Israel and the Palestinians and the Arab states. Prerequisite: PSCI 250 or 251/252 recommended. Three credits.

357 Model United Nations
Introduction to the structures, activities, and operations of the UN, the protocols and procedures of UN deliberations, and contemporary international issues and agendas faced by the UN and its member states. The course is built around student preparation for, and participation in, simulated UN deliberations at the Five-day annual MNUN Conference in New York scheduled for March. Conference attendance is mandatory; there are additional travel-related costs; and funding raising is required. Credit will be granted for only one of PSCI 357 or PSCI 392 offered in 2014-2015, 2015-2016. Prerequisite: PSCI 101/102(100); 251/252(250) recommended. Three credits.

362 Contemporary China
This course examines the domestic politics and foreign policy of a dynamic, rising power. From its birth in 1949, the People’s Republic of China will be examined with emphasis on the changing roles of the Communist Party, the central bureaucracy, local governments, the military, the emerging business class and the overseas Chinese community. Prerequisite: PSCI 250 or 251/252 recommended. Three credits.

363 International Relations of East Asia
An examination of contemporary international relations and foreign policy of major regional actors in East Asia including China, Japan, North and South Korea, and the US. Topics include the political economy of East Asian regionalism, institution-building, the regional security complex, the rise of China, and the ongoing nuclear crisis in the Korean Peninsula. Prerequisite: PSCI 250 or 251/252 recommended. Three credits.

371 Political Economy of Development
Countries in the developing world face a distinct set of political challenges, particularly as they relate to fostering economic growth and providing effective public services. This course will explore the political determinants of development as well as the effect of economic conditions on political outcomes. Key issues include the origins of state weakness, the relationship between political institutions and economic growth, the causes of corruption, and the effect of diversity on governance outcomes. Credit will be granted for only one of PSCI 371 and PSCI 370. Cross-listed as DEV 371. Prerequisite: PSCI 101/102 or DEV 201/202; PSCI 211 and 212 recommended. Three credits.

372 Iran and the Muslim World
A critical study of Iranian politics since the 1979 Revolution with particular focus on the role of Shiite Islam and Iranian culture in shaping the Iranian state, its internal dynamics, and its political influence in Lebanon and Iraq. This course will also consider Iranian relations with the West and Israel. Students will be introduced to the basic tenets of Islam. Prerequisite: PSCI 211, 212 recommended. Three credits.

373 Irish Politics and Society
This course emphasizes the major factors that contributed to the making of modern Ireland. The topics to be covered include: the role of the Great Famine in altering both the social structure of Ireland and claims to Irish identity, the Irish diaspora and Irish emigrants to Atlantic Canada, social and political changes in the Republic of Ireland from independence to the ‘Celtic Tiger’ phenomenon and continuity and change in the conflict in Northern Ireland. Cross-listed as SOCI 373. Three credits.

379 African Politics
This course provides an introduction to politics in Africa. Topics include: colonial and Cold War legacies; state formation, democratization and identity politics; political economy of African development; environmental issues; poverty reduction and the politics of development assistance; conflict, political violence and fragility; humanitarian intervention and post-conflict peace-building; regional organizations; BRICS and Africa; and African foreign policies. Case studies from various regions in the continent will be discussed. Credit will be granted for only one of PSCI 379 and PSCI 380. Prerequisite: PSCI 211, 212 recommended. Three credits.

389 Selected Topics
The topic for 2018-2019 is Political Marketing and Communications in Canada. This course explores increased centralized government message control in the digital age in Canada. It considers how political actors “brand” parties and governments and craft communications strategies, what consequences arise from such centralized and sanitized communications, and how ideological and partisan political calculations are prioritized in managing and packaging government communications. The course also reflects on how Canadian democracy may be protected or enhanced as these processes continue to unfold. Prerequisites: PSCI 221 and 222 recommended. Three credits.

391 Democratization and Development in Latin America
This course examines issues related to the challenges of development and democracy in the region. It provides historical background as well as discussions of theoretical approaches and specific public policies. Credit will be granted for only one of PSCI 391 or PSCI 390. Prerequisites: PSCI 211, 212 or 215 recommended. Three credits.

392 Selected Topics
The topic for 2018-2019 is Causes of War and Conditions for Peace. This course examines the causes of war and conditions for peace. In addition to exploring various strategies and tactics pertaining to how war has been—and is presently—conducted, the course will also explore conflict mitigation and peacemaking strategies. Topics examined include competing accounts and explanations of the nature of war and its causes, non-state violence and counterinsurgency, civil wars, just war and international law, and peacemaking. Credit will be granted for only one of PSCI 392 and PSCI 394 offered in 2016-2017 or 2017-2018. Prerequisite: PSCI 250 or 251/252 recommended. Three credits.

394 Selected Topics
The topic for 2018-2019 is Global Justice. This course critically explores theories of global justice that fall in both the statist or nationalist camp and the cosmopolitan camp, along with rights-based approaches that address global issues including poverty, democracy, sexist oppression, animal rights, climate change and intergenerational justice, and indigenous struggles. Prerequisite: PSCI 200 or 201 and 202 recommended. Three credits.
395 Mexican Politics
This course looks at Mexico’s distinct political tradition. It presents and discusses Mexico’s main political actors (political parties, groups, social movements) and institutions (democratic, republican, federal, presidential), and examines the political challenges of democratization and liberalization. Prerequisite: PSCI 215 recommended. Three credits.

399 Research Methods and Statistics
Covers research methods and controversies in the field of political science today. Students learn to use statistics and computers in political science research, broadening their employment opportunities and introducing them to postgraduate research methods. Mathematical or computer skills not required. Three credits.

401 Political Theory (Seminar)
This seminar will critically analyze selected political thinkers, themes and/or controversies in political theory, and their current relevance to the discipline of Political Science and politics. Prerequisite: PSCI 200 or 201/202 recommended. Three credits.

421 Canadian Politics (Seminar)
This seminar deals with the analysis of power in Canada, through the study of selected institutions, policy fields and cases. Prerequisites: PSCI 220 or 221/222 or 240 recommended. Three credits.

451 International Relations (Seminar)
This seminar examines advanced theories of International Relations and contemporary issues in global politics. Prerequisite: PSCI 250 or 251/252 or permission of instructor. Three credits.

452 Comparative Politics (Seminar)
This seminar discusses major issues in comparative politics and examines the advanced theories, methods, and concepts in the field. Prerequisite: PSCI 211 or 212 recommended. Three credits.

490 Thesis
Restricted to students in the BA Honours program. Six credits.

499 Directed Study
See section 3.5. Six credits.

9.32 PSYCHOLOGY
E. Austen, Ph.D.
L. Berrigan, Ph.D.
K. Blair, Ph.D.
K. Brebner, Ph.D.
T. Callaghan, Ph.D.
P. Hauf, Ph.D.
E. Koch, Ph.D.
C. Lomore, Ph.D.
K. MacLean, Ph.D.
P. McCormick, Ph.D.
J. McKenna, Ph.D.
K. Thompson, Ph.D.
M. Watt, Ph.D.
A. Weaver, Ph.D.
E. Wright, Ph.D.

Professor Emeritus
G.P. Brooks, Ph.D.
K.C. den Heyer, Ph.D.
R.W. Johnson, Ph.D.

Senior Research Professors
A. Bigelow, Ph.D.
J. Edwards, Ph.D.

BA and B.Sc. Major Program
Candidates must follow the degree regulations in chapters 4 and 7 and complete:

a) PSYC 100;
b) 6 credits at the 400 level;
c) PSYC 391, 491 (non-credit) and PSYC 490, the honours thesis; and
d) a total of 60 PSYC credits.

Psychology as a Subsidiary Subject
If psychology is selected as a subsidiary subject by an honours student in the BA program, 24 PSYC credits are required. These credits must include PSYC 301, 302.

B.Sc. Programs
Candidates must follow the degree regulations in chapter 7 and should note the following:

a) PSYC courses are considered science courses only when they are taken as part of a major or honours subject in the B.Sc. program;
b) B.Sc. major program must include BIOL 111, 112; MATH 106 or 126, 107 or 127, and 12 additional credits in science courses (excluding PSYC);
c) B.Sc. honours degree program must include BIOL 111, 112; CHEM 100; MATH 106 or 126, 107 or 127; and 6 additional credits in science courses (excluding PSYC);
d) For the B.Sc. honours program, the 18 credits of electives approved by the department normally consist of courses in PSYC or in other science subjects.

B.Sc. with Joint Honours
Students enrolled in joint honours programs in which psychology is one of the two honours subjects must take PSYC 230.

Concentration in Forensic Psychology
Students enrolled in the Bachelor of Arts may apply in their sophomore year to concentrate their psychology degree in forensic psychology. In the second year, applicants must take PSYC 291, 292 and 6 additional credits from the following: PSYC 210, 220, 225, 230. Candidates must complete PSYC 356, 357, 376, 378, 379, 381, 382 and one of the following: PSYC 364, 365, 367, 368.

Applications are submitted to the Co-ordinator of the Forensic Psychology program (please see co-ordinator for additional information on the program).

Note: PSYC 100 is a prerequisite for all other courses except PSYC 292 and 394.

100 Introduction to Psychology
A survey of the major topics of psychology and an introduction to the methodology of psychological research. Students are normally expected to be involved with on-going research in the department by participating in experiments during the course of the academic year. Credit will be granted for only one of PSYC 100 and PSYC 155. Six credits.

155 Introduction to Psychology for Nurses
A survey of the major topics of psychology applicable to the health professions, with a focus on age-related changes from conception to adolescence. Special emphasis will be placed on using critical thinking to evaluate scientific research, biological psychology, physical, cognitive and social development, health, stress, and coping, and the diagnosis and treatment of psychological disorders. Credit will be granted for only one of PSYC 155, PSYC 100 or PSYC 354. Restricted to students in the B.Sc.Nursing program. Three credits.

210 Learning
A review of research on animal and human learning, and a consideration of the major issues that have shaped the study of learning. Topics include general principles of learning; classical conditioning; operant conditioning; radical behaviourism and its limitations; biological constraints on learning and social-cognitive learning. Recommended for students considering graduate work in clinical psychology. Prerequisite: PSYC 100. Lab component. Six credits.

220 Cognitive Psychology
This course deals with the basic cognitive processes: perception, attention, memory, language, thinking, and problem-solving. Prerequisite: PSYC 100. Lab component. Six credits.

225 Sensation and Perception
An examination of how the physical structure of sensory systems and the psychological interpretation of sensory information influence what is perceived. Major sensory systems will be covered. Theoretical and empirical work will be explored. Prerequisite: PSYC 100. Lab component. Six credits.

230 Brain and Behaviour
An introduction to behaviourial neuroscience, including analysis of the anatomical, physiological, and biochemical mechanisms underlying behaviour. Recommended for students considering graduate work in clinical psychology. Prerequisite: PSYC 100. Lab component. Six credits.
240 Social Psychology
This course covers relationships among individuals and the effect of those relationships on behaviour and personality. Topics may include: aggression, altruism, conformity, attributions, and attitudes. Lab component. Prerequisite: PSYC 100. Six credits.

260 Developmental Psychology
The study of major environmental and maturational influences and their relationship to the growing person. Credit will be granted for only one of PSYC 260 or PSYC 354. Lab component. Prerequisite: PSYC 100. Six credits.

291 Research Methods in Psychology
An introduction to methods used to conduct psychological research. Topics include identifying research questions, theory development, experimental, correlational, and observational research designs, ethics, measurement, sampling, survey development, and APA style research proposals. Quantitative methods will be emphasized. Lab component. Credit will be granted for only one of PSYC 291 and PSYC 290. Three credits.

292 Introductory Statistics for Psychological Research
An introduction to the statistical methods used to conduct psychological research. Topics include descriptive statistics, hypothesis testing, effect size, power, and inferential statistics including Z-test, t-tests, correlation and regression, basic analysis of variance, and non-parametric procedures such as chi-square. Students will learn to use statistical software. Lab component. Credit will be granted for only one of PSYC 292, PSYC 290, STAT 101. Prerequisite: PSYC 291. Three credits.

301 History & Theory of Psychology I: From Ancient Times to the Rise of Experimental Psychology
An examination of psychology's evolution, including the theoretical issues that underlie past and present debates about the discipline's subject matter and methodology. Approaches to historiography within the history of the sciences will also be discussed. Credit will be granted for only one of PSYC 301 or PSYC 300. Prerequisites: 6 credits of PSYC at the 200 level. Three credits.

302 History & Theory of Psychology II: From the Beginnings of Experimental Psychology to Current Psychological Science
An examination of psychology's evolution, including the theoretical issues that underlie past and present debates about the discipline's subject matter and methodology. Approaches to historiography within the history of the sciences will also be discussed. Credit will be granted for only one of PSYC 302 or PSYC 300. Prerequisites: 6 credits of PSYC at the 200 level. Three credits.

313 Health Psychology
This course provides an introduction to key issues in Health Psychology. In adopting a bio-psycho-social approach, the course will examine the ways in which biological, psychological, and social factors interact to affect health. Credit will be granted for only one of PSYC 313 or PSYC 310. Prerequisites: 6 credits of PSYC at the 200 level. Three credits.

315 Positive Psychology
Positive psychology is the scientific study of human strengths and optimal human functioning. The history of, and precursors to, positive psychology will be reviewed. Research and theory related to topics including character strengths, resilience, flow, mindfulness, optimism, gratitude, positive psychology in the workplace, and altruism will be discussed. Techniques and exercises designed to enhance each aspect of optimal functioning will be explored. The format of the course will be both experiential and research-based. Credit will be granted for only one of PSYC 315 and PSYC 386 offered in 2016-2017. Prerequisite: 12 credit PSYC. Three credits.

327 The Psychology of Pain
Contrary to popular belief, the experience of pain is not necessarily linked to bodily injury or detection of intense energy. Pain can be caused by various factors, including: tissue injury, visibility of wound or noxious stimulus, attentional state, expectation, mood, previous pain experience, conditioned responses, etc. This course provides a basic understanding of pain perception and of the physical and psychological means of modulating pain. Credit will be granted for only one of PSYC 327 or PSYC 325. Prerequisites: 6 credits of PSYC at the 200 level. Three credits. Not offered 2018-2019.

328 Neural Mechanisms of Pain and Analgesia
This course examines the neurophysiological mechanisms of pain perception and related analgesic treatments. It provides a basic understanding of the neural activities underlying pain perception and the mechanisms that underlie pain-related neuroplasticity and various means of modulating pain. Credit will be granted for only one of PSYC 328 or PSYC 325. Prerequisites: 6 credits of PSYC at the 200 level. Three credits.

341 The Self
This course explores contemporary perspectives and research on the self as it relates to social behaviour. The nature and function of the self and the ways in which the self is both influenced by and influences other people will be examined from a social-psychological perspective. Topics will include: knowledge of the self, self-motivation, self-esteem, self-regulation, self-prediction, the self in the context of relationships with others, and the influence of culture on views of the self. Prerequisite: 6 credits of PSYC at the 200 level. Three credits.

347 Communication and Language
This course explores the social psychology of language and communication. Topics include basic concepts in language, language attitudes; language variation; bilingualism and multiculturalism; language and culture; discourse analysis; the relationship between language and social identity. This seminar will consist largely of student presentations. Credit will be granted for only one of PSYC 347 and PSYC 345. Prerequisites: 6 credits of PSYC at the 200 level. Three credits. Not offered 2018-2019.

353 Psychology of Personality
The purpose of this course is to explore the diverse body of contemporary research and theory on personality psychology. Although the course will also present some sense of history of personality psychology, the focus will be on the most recent empirical research. The course may involve small group research projects and/or an APA-style research proposal. Credit will be granted for only one of PSYC 353 or PSYC 350. Prerequisites: 6 credits of PSYC at the 200 level. Three credits.

355 Lifespan Developmental Psychology for the Health Sciences II (Adulthood & Aging)
Lifespan development is an exploration of the biological, cognitive, and psychosocial changes that occur across different periods of life. This course will provide a basic understanding of human development from early adulthood until death. Age-related changes in behaviour, thinking, emotions, personalities, and social relationships will be explored in relation to maturational processes, individual differences, and cultural expectations. Credit will be granted for only one of PSYC 355 and PSYC 387 offered in 2017-2018. Prerequisites: PSYC 260 or PSYC 354. Three credits.

356 Forensic Practicum I
Students in this concentration will be required to complete two practica in approved forensic-related settings; one practicum in each year of the program. The minimum number of hours per practicum will be 40 hours. Students will be encouraged to explore options and opportunities for doing a placement in their home communities. Restricted to BA students in the forensic concentration. Three credits.

357 Forensic Practicum II
Students in this concentration will be required to complete two practica in approved forensic-related settings; one practicum in each year of the program. The minimum number of hours per practicum will be 40 hours. Students will be encouraged to explore options and opportunities for doing a placement in their home communities. Restricted to BA students in the forensic concentration. Three credits.

362 Applications of Psychology to the Health Sciences
This is a lecture and seminar course in which contemporary applications of psychology to the health sciences will be considered. The psychological issues related to the design and implementation of technologies to improve the well-being and functioning of individuals with disabilities will be covered. Credit will be granted for only one of PSYC 362 or PSYC 375. Prerequisites: 6 credits of PSYC at the 200 level. Three credits. Not offered 2018-2019.

363 Applications of Psychology to Society
This is a lecture course in which applications of psychology to society will be considered. This course provides students with an in-depth understanding of the tools of persuasion (e.g., consistency, reciprocity, liking, social proof, persuasive language, non-verbal cues), how to use these tools in an ethical manner, and apply them to solving everyday life and real-world problems. Credit will be granted for only one of PSYC 363 or PSYC 375. Prerequisites: 6 credits of PSYC at the 200 level. Three credits.

364 Psychology of Gender
This course will review theories and research regarding gender in psychological development, social roles, and personality. Topics to be covered will include the history of research in gender; issues to consider in conducting gender research; gender role development and the socialization of gender; gender as a social variable in education and the workplace. Credit will be granted for only one of PSYC 364 or PSYC 360. Cross-listed as WMGS 343. Prerequisite: 6 credits of PSYC at the 200 level. Three credits.
365 Developmental Social Psychology of Gender
This course will review theories and research that integrate developmental and social perspectives on gender. Topics will focus on gender as a social construct and include gender role development, gender role socialization in the family and gender development in cross-cultural perspective. Credit will be granted for only one of PSYC 365 or PSYC 360. Cross-listed as WMGS 344. Prerequisite: 6 credits of PSYC at the 200 level. Three credits.

366 Basics of Psychopharmacology
This course surveys basic neuropharmacology and the actions of psychoactive drugs used to treat psychological disorders. It covers basic principles of neuropharmacology, distribution and elimination of drugs, drug-receptor interactions, neuroanatomy, neurochemistry and neurophysiology. This course is designed to provide an introduction to the pharmacological treatment of psychological disorders and to provide a foundation for advanced study in behavioural neuroscience, neuropsychopharmacology and related areas. Credit will be granted for only one of PSYC 367 or PSYC 377. Prerequisite: 6 credits of PSYC at the 200 level; PSYC 230 recommended but not required. Three credits.

368 Pharmacology of Drugs of Abuse
This course covers various topics in the study of drug addiction, including pharmacological and pathophysiological effects of recreational drug use. Topics such as mechanisms of action, tolerance, long-term effects, side effects, and toxicity will also be included. The primary emphasis is on biological aspects of addiction, with only minor attention given to social aspects. The pharmacological properties of both legal and illegal addictive drugs will be examined. Credit will be granted for only one of PSYC 368 or PSYC 377. Prerequisite: 6 credits of PSYC at the 200 level. PSYC 230 recommended but not required. Three credits. Not offered 2018-2019.

372 Cultural Psychology
The focus of this course is on how culture influences human behaviour and mind. The evolution of culture is considered as we dissect the debate surrounding claims that culture exists outside of the human species. Contemporary research and theory in human development and socialization, self-identity and cultural constructs of collectivism and individualism, acculturation and multi-culturalism, building relationships with others, conceptions of health and healing, and the impact of culture on the basic psychological processes will be covered. Prerequisites: 6 credits of PSYC at the 200 level. Three credits.

373 Human Neuropsychology
Neuropsychology is the study of how damage to the brain causes changes in thoughts and behaviours. Cognitive changes associated with specific diseases/conditions will be the focus of the course (e.g., Alzheimer’s disease, multiple sclerosis, Parkinson’s disease, stroke, etc.). Examples of cognitive and behavioural symptoms will be presented via videos, audio recordings, and performance on neuropsychological tests. The assessment of cognitive processes will be introduced and relevant structural and functional neuroanatomy will be reviewed. Cross-listed as BIOL 374. Prerequisite: 12 credits PSYC; PSYC 230 recommended but not required. Three credits.

374 Human Development Across Cultures
This course examines the development of the individual from a cultural perspective. Development is considered to involve a process of co-construction of the individual and culture. The impact of cultural practices, traditions, and parental beliefs on the developing child are considered, along with the interplay between those cultural forces and the biological foundations that influence the course of development. Cognitive, social, emotional development will be studied, along with a consideration of applied issues that emerge from investigations of the impact of cultural environments on child development. Prerequisites: 6 credits of PSYC at the 200 level. Three credits.

376 Abnormal Psychology
This course deals with current perspectives and research on the various psychological disorders. Courses in learning, brain and behaviour, developmental psychology, and personality form a useful background for this course. Credit will be granted for only one of PSYC 376 or PSYC 370. Prerequisites: 6 credits of PSYC at the 200 level. Three credits.

378 Human Sexuality
This course provides a broad introduction to research and theory in human sexuality. It includes examination of fundamental topics such as the nature of human sexuality and contemporary issues. Specific topics include historical perspective, theories of sexuality, sex research, sexual anatomy, sexual variation, sexual response, gender, sexual dysfunction and sex therapy. Cross-listed as WMGS 378. Prerequisites: 6 credits of PSYC at the 200 level. Three credits.
432 Advanced Topics in Behavioural Neuroscience II: Contemporary Issues
This is a seminar course in which current topics in the field of behavioural neuroscience are considered. Credit will be granted for only one of PSYC 432 or PSYC 430. Restricted to advanced major and honours students. Cross-listed as BIOL 454. Prerequisite: PSYC 230 or permission of the chair. Three credits. Not offered 2018-2019.

441 Advanced Social Psychology
An examination of selected topics in experimental social psychology. The specific topics in this course will vary depending on the instructor. Topics include self-compassion, sexuality, and relationships. Credit will be granted for only one of PSYC 441 or PSYC 440. Restricted to advanced major and honours students. Prerequisite: PSYC 240 or 350 or 353 or permission of the chair. Lab component. Three credits.

442 Advanced Social and Personality Psychology
An examination of selected topics in experimental social psychology and consideration of the overlap between social psychology and personality psychology. The specific topics will vary depending on the instructor. Topics include self-esteem, interpersonal rejection, and prejudice and stereotyping. Credit will be granted for only one of PSYC 442 or PSYC 440. Restricted to advanced major and honours students. Prerequisite: PSYC 240 or 350 or 353 or permission of the department chair. Lab component. Three credits.

460 Advanced Topics in Developmental Psychology: Social & Emotional Development
This course will examine from an empirical standpoint specialized topics in developmental psychology with a focus on social/emotional development. Topics can include the development of emotional understanding, the development of typical and atypical attachment relationships, attachment across the life span, parent-child interaction, and peer relationships. Credit will be granted for only one of PSYC 461 or PSYC 460. Restricted to honours and advanced major students. Prerequisite: PSYC 260 or PSYC 354 or permission of the department chair. Lab component. Three credits.

461 Advanced Developmental Psychology: Social & Emotional Development
This course will examine from an empirical standpoint specialized topics in developmental psychology with a focus on social/emotional development. Topics can include the development of intentional self-awareness, understanding self and others, language, and memory. Credit will be granted for only one of PSYC 461 or PSYC 460. Restricted to honours and advanced major students. Prerequisite: PSYC 260 or permission of the chair. Restricted to honours and advanced major students. Prerequisite: PSYC 260 or PSYC 354 or permission of the department chair. Lab component. Three credits.

462 Advanced Developmental Psychology: Perceptual & Cognitive Development
This course will examine from an empirical standpoint specialized topics in developmental psychology with a focus on perceptual and cognitive development. Topics can include the development of intentionality, understanding self and others, language, and memory. Credit will be granted for only one of PSYC 461 or PSYC 460. Restricted to honours and advanced major students. Prerequisite: PSYC 260 or permission of the chair. Restricted to honours and advanced major students. Prerequisite: PSYC 260 or PSYC 354 or permission of the department chair. Lab component. Three credits.

490 Honours Thesis
Prerequisites: PSYC 394, completed or concurrent; honours standing in psychology. Six credits.

491 Senior Seminar
The purpose of this non-credit course is to assist students in carrying out thesis or senior paper research, choosing a career, and gaining admission to graduate or professional school. Students will present their thesis proposal orally in the fall term and their completed research in the spring. Attendance at colloquia and guest lectures relevant to psychology is mandatory. Prerequisite: senior standing in an advanced major or honours program in psychology. No credit.

499 Directed Study I and II
These are reading or laboratory courses in which the student pursues an individual program of study under the direction of a faculty member. See section 3.5. Three credits each.

9.33 PUBLIC POLICY AND GOVERNANCE
D. Brown, Ph.D., Coordinator
The program will introduce students to the broad spectrum of public affairs and leadership in Canada and abroad. Students will develop the ability to critically assess the institutions and processes associated with government and governance, as well as to analyze the processes and outcomes in the design, implementation, and assessment of public policy at all levels of social organization. Students will engage with historical and contemporary issues and topics in public policy and develop a critical account of their development, implementation, and implications. They will also consider alternative policies and their potential impact, as well as the broader implications of policies as part of governance models and their structural logic. Students will become proficient in a core set of skills and interdisciplinary knowledge with immediate application to the broad public sector as well as private organizations dealing with government and policy matters.

101 Modern Challenges for Public Policy & Governance
This course introduces students to the field of public policy and governance by immersion in a key set of contemporary challenges for Canada and the world. It is available to all students but is also intended as the gateway course for those planning to take more PGOV courses. Students will be taught foundational concepts and explore key current issues. Three credits.

201 Public Policy
The course consists of an overview of public policy: what it is and how it is studied. Students will examine the social forces and ideas behind public policy debates as well as the nature of policy outcomes through history, in Canadian and global settings. A further understanding of policy process and outcomes is achieved by undertaking case studies of a range of policy fields such as economics, health, aboriginal studies and issues, and environmental studies and issues. Credit will be granted for one of PGOV 201 or PSCI 342. Prerequisite: PGOV 101 plus 24 credits, or permission of the instructor. Three credits.

301 Comparative Public Policy
The course provides an intermediate examination of the ways in which public policy is formulated and implemented in Canada and other democratic systems. Policies and governance across different levels and forms of government will be covered in order to give students a detailed account of the evolution and diversity of policy formation and implementation. Credit will be granted for one of PGOV 301 or PSCI 341. Prerequisite: 6 credits PGOV. Three credits.

302 Public Management
This course provides an intermediate examination of the structure and practice of government and governance, whether it be local, indigenous, provincial, national or international entities. It seeks to answer how political communities organize themselves for governing, how governing organizations are best managed, how leaders deal with such persistent issues as political power and bureaucracy, accountability, participation and citizen rights, and financial and other resources. Prerequisite: 6 credits PGOV. Three credits.

303 Research Principles and Practices
A foundational course in the theory and practice of policy research. The course covers the history and development of policy research methods and introduces qualitative and quantitative methods applied to policy design, implementation and evaluation. Students will apply concepts and methods to research projects on contemporary problems in Canada and in the global community in such fields as economic, health, aboriginal, environment and international security. Prerequisites: 6 credits PGOV. Three credits.
**401 Strategic Governance**  
Visiting leaders and scholars as well as program faculty will engage with students on topics pertaining to governance and policy, with an emphasis on leadership, problem-solving and long-term thinking with real-world examples. Students will make the link between academic learning and experiential learning by engaging with professionals working in policy and governance fields. Course methods will include lectures, guest speakers, cases, presentation, and simulations. Prerequisites: 12 credits at the 300 level in PGOV core or designated courses. Three credits.

**402 Senior Seminar**  
This course is a required senior seminar for honours with subsidiary students and recommended for majors in PGOV who wish to engage with the academic literature on major contemporary public policy and governance issues. Students will review and debate recently published literature in the field and complete several assignments, both oral and written, in relation to these readings. Credit will be granted for one of PGOV 402 or PSCI 422. Prerequisite: 12 credits at the 300 level in PGOV core or designated courses. Three credits.

**451 Internship**  
This course provides students with the opportunity to practice the concepts and ideas expanded upon in the classroom in a real-world setting. Students will spend the equivalent of one term, usually the summer between the junior and senior year, gaining hands-on experience in a work or volunteer setting. Students will be required to reflect and report on their internship experience and its relevance to the evolving knowledge of a policy sector or governance setting, as well as to learn from fellow students in post-internship seminars. Restricted to PGOV students. Prerequisites: PGOV 301, 302, 303. Three credits.

**490 Honours Thesis**  
Under the supervision of a professor each student completes a research project, from conception to completion, over the course of the year. Students are responsible for choosing a topic, the use of resources, the methodological soundness, and literary quality of the final product. Restricted to honours students. Six credits.

**PUBLIC POLICY AND GOVERNANCE DESIGNATED COURSES**  
Department prerequisites will apply.

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<th>Course Code</th>
<th>Course Name</th>
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<td>ANTH 332</td>
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<td>ANTH 425</td>
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<td>AQUA 201</td>
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<td>BSAD 221</td>
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<td>BSAD 358</td>
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<td>BSAD 367</td>
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</table>
Religious studies teaches the cultural literacy that is critical in a globalized world. Students are introduced to historic and contemporary expressions of world culture through the study of our world’s religions, the historic basis of human society. Religious studies examines relationships between religion, the individual, and society. The department offers a broad spectrum of courses relating to all major religious traditions. Contemporary life issues are also examined as they relate to world religions. Students can take religious studies courses as electives or pairs, or to complete a minor, major, joint major, or honours program. The courses are intended, however, for a broad range of undergraduate students who wish to examine the religious answers to the major questions about human existence. See chapter 4 for regulations.

The following streams are available in the department of Religious studies:

### Mindful Living
- 294 Selected Topics: Mindfulness: How to Cope with Hard Things
- 315 Authentic Power and Gender
- 328 Mind, Self and Society
- 394 Selected Topics: Authentic Relationship
- 395 Selfless Leadership: Be the Change I
- 397 Selfless Leadership: Be the Change II

### Buddhist Studies
- 111 World Religions I: Compassionate Global Citizenship
- 235 Hinduism and Buddhism
- 294 Selected Topics: Mindfulness: How to Cope with Hard Things
- 310 Religion in Modern India
- 315 Authentic Power and Gender
- 327 Buddhist Thought: The Way of the Bodhisattva
- 328 Mind, Self and Society
- 414 Ancient Indian Myth and Ritual

### Celtic Religions
- 111 World Religions I: Compassionate Global Citizenship
- 219 Celtic Paganism
- 229 Celtic Christianity
- 298 Selected Topics: Fantastic Beasts and Where to Find Them in World Religions

### Christian Studies
- 112 World Religions II: Compassionate Global Citizenship
- 212 Christianity
- 200 Introduction to Religious Ethics
- 210 The Bible and Film
- 117 Ethical Principles for Health Care Providers
- 221 Religion and the Environmental Crisis
- 229 Celtic Christianity
- 246 Philosophy of Religion
- 298 Selected Topics: Fantastic Beasts and Where to Find Them in World Religions
- 311 New Testament
- 312 Old Testament/Hebrew Bible
- 317 Paul and His Interpreters
- 325 Early Christian Women

### Hindu Studies
- 111 World Religions I: Compassionate Global Citizenship
- 221 Religion and the Environmental Crisis
- 235 Hinduism and Buddhism
- 298 Selected Topics: Fantastic Beasts and Where to Find Them in World Religions
- 310 Religion in Modern India
- 315 Authentic Power and Gender
- 326 Hindu Deities
- 414 Ancient Indian Myth and Ritual

### Islamic Studies
- 112 World Religions II: Compassionate Global Citizenship
- 224 Islam
- 295 Religion and Politics
- 297 Selected Topics: Beginning Arabic (2017-2018)
- 333 Religion, Violence and Peace
- 374 Modern and Contemporary Islam
- 375 Islam in Canada

### Jewish Studies
- 112 World Religions II: Compassionate Global Citizenship
- 210 The Bible and Film
- 214 Judaism
- 246 Philosophy of Religion
- 295 Religion and Politics
- 297 Selected Topics: Fantastic Beasts and Where to Find Them in World Religions (2017-2018)
- 312 Old Testament/Hebrew Bible
- 316 Women in Early Judaism
- 333 Religion, Violence and Peace
- 342 Prophets and Prophecy
- 352 History of Early Judaism
- 404 The Dead Sea Scrolls
- 426 Jewish World of Jesus

### 111 World Religions I: Compassionate Global Citizenship

This course provides a survey of indigenous and eastern religious traditions. Students are introduced to the sacred texts and narratives, myths, symbols and rituals of Indigenous religions, Hinduism, Buddhism, Taoism and Confucianism. Through exploring the history, philosophy and sociology of these cultures, students will gain insight into key elements of global diversity. The course is designed to foster skills for compassionate global citizenship. Themes considered may include health, ecology, or social justice and peace movements. Credit will be granted for only one of RELS 111, RELS 110(111/112), RELS 120. Three credits.

### 112 World Religions II: Compassionate Global Citizenship

This course provides a survey of Judaism, Christianity, Islam and new religious movements. Students are introduced to the sacred texts, myths, symbols, rituals, history, philosophy and sociology of cults and new religious movements, Judaism, Christianity and Islam. This course fosters compassionate global citizenship by preparing students for a comprehensive understanding of multicultural diversity. Themes such as health, ecology, or social justice and peace movements may be covered. Credit will be granted for only one of RELS 112, RELS 110(111/112), RELS 120. Three credits.

### 117 Ethical Principles for Health Care Providers

This course is designed to provide the foundations for promoting moral development and ethical competences among health care professionals as informed by diverse religious and cultural traditions. Students will be introduced to the moral and ethical principles underlying debates concerning advancements in medical technologies.
Special emphasis will be placed on the moral behaviours and skills demonstrated by exemplary health care providers in health care settings. Three credits.

120 Religion, Spirituality, and Health
This is an introductory course which provides a thematic focus on spirituality, healing and well-being in selected Eastern and Western religious traditions. Each unit of study will include an introduction to the tradition; explore spiritual paths pursued by its practitioners; examine characteristics of illness, healing and well-being in the tradition; and explore one or more specific contemporary health concerns and healing practices which arise from within each religious tradition. Credit will be granted for only one of RELS 120, RELS 100 or RELS 110(111/112). Six credits.

200 Introduction to Religious Ethics
An introduction to religious ethics, this course examines Christian and other religious traditions and their approaches to social justice, ecology, pluralism, healthcare, and non-violence. Six credits.

210 The Bible and Film
This course examines the impact of the Bible on film, and introduces major biblical themes in films with, and films without, explicit religious content. Students will learn how biblical knowledge can enrich our understanding of modern culture and important human issues, such as creation, redemption, election, messiah-ship, charisma, and tradition. Three credits. Offered every year.

212 Christianity
This course is a comprehensive investigation of the history, teachings, and cultural influence of Christianity from its beginnings as an attempted renewal of Judaism in the first century of the common era to its current role as an international influence on world affairs. We will examine representative texts and thinkers, comparing the differences among the various denominations of Christianity (Eastern Orthodox, Roman Catholic, Protestant). Students will also learn about the past and contemporary relationships between Christianity and other religions, especially Judaism and Islam. Credit will be granted for only one of RELS 212 and RELS 100. Three credits.

214 Judaism
This course introduces the historical development of Judaism from its origin to the 21st century. Special attention is given to factors that shaped this development: geographical, political, economic, social, and theological. Three credits.

215 Sociology of Religion
An introduction to the sociological study of religion. Topics include social factors that influence religion at individual and communal levels; religion as agent of social cohesion and social conflict; religion and power structures; the impact of pluralism and globalization on religion today. Cross-listed as SOCI 227. Three credits. Offered every year.

219 Celtic Paganism
This course examines the religious practices and beliefs of the ancient Celtic peoples that we can glean from archaeology, reports of Greek and Roman commentators, place-name evidence, and the mythology in medieval Irish and Welsh narrative tradition. Other topics include syncretism, the adaptation of pagan festivals into Christian holidays, the persistence of elements of paganism into the Christian era, witchcraft in Scotland and Ireland in the context of the European phenomenon and neo-paganism today. Cross-listed as CELT 220. Three credits.

221 Religion and the Environmental Crisis
Perhaps the greatest challenge of our time is the ecological crisis. This threat has provoked widespread reflection upon humanity’s relationship to its environment. Such reflection however is not new. This relationship was already being explored millennia ago, in humanity’s most ancient religious texts. This course investigates the historical interaction of religion and ecology, and considers how religion might yet constitute either a hindrance or an aid in navigating the present ecological crisis. Credit will be granted for only one of RELS 221 and RELS 356. Three credits.

225 Cults and Alternative Religions
A study of cults in the context of 20th-century North American society, beginning with defining cults in relation to sects and churches. Topics include neo-paganism; Hare Krishna; the theosophical tradition; the Unification Church; tragic endings to cults such as the Branch Davidians and Heaven’s Gate; why people join cults; and the religio-cultural significance of cults today. Three credits.

229 Celtic Christianity
This course is an exploration of the development of Christianity amongst the Celtic peoples. A major facet will be the medieval hagiographic tradition and saints’ cults from the fourth to the twelfth centuries. Other topics include monasticism, peregrini, the Hiberno-Scottish mission to the continent, conflict with Roman Catholicism, material culture, the modern use of the term “Celtic Christianity”. Cross-listed as CELT 230. Three credits.

235 Hinduism and Buddhism
This course introduces the paths to enlightenment identified by members of the Hindu and Buddhist traditions of India and Tibet. We will introduce the philosophy, mythology and ritual traditions of both Hinduism and Buddhism. Three credits.

246 Philosophy of Religion
Explores the philosophy of religion, including different concepts of God with emphasis on the Judeo-Christian tradition; arguments for the existence of God; classical and modern challenges to belief in God. Issues such as ‘life after death’, miracles, religious experience, and the concept of prayer may also be discussed. Credit will be granted for only one of RELS 246 or PHIL 240. Cross-listed as PHIL 245. Three credits.

254 Islam
This course surveys the Islamic religious tradition taking account of its historical context from pre-origins till the present. Students will become conversant with basic Islamic beliefs, texts, and ritual and other practices across a spectrum of schools of thought. In addition, the course introduces critical questions in the study of Islam. Credit will be granted for only one of RELS 254 or RELS 370. Three credits.

261 Islam and Film
Students will gain a critical understanding of film as an artifact of culture and a powerful medium of religious and cultural expression in Muslim contexts. Students encounter themes such as religion and politics, marriage and family, youth, society, sexuality, ritual and devotion, Islamic law, community, and ethics, and engage critically in their cinematic representations. The course is based primarily on foreign films with English subtitles and provides a foundation for further study of Islamic traditions. Three credits.

291 Selected Topics
The topic for 2018-2019 is Beginning Arabic. Arabic is written and understood as an official language in more than 35 countries, including at least 400 million people living in majority Arabic-speaking countries. This course introduces students to formal written Arabic and the spoken dialects of Syria and Egypt. Students will become proficient at reading, writing, and understanding basic Arabic and will be able to carry on simple conversation. In addition to language, the course includes expressions of culture, both religious and non-religious. Three credits.

292 Selected Topics
The topic for 2018-2019 is Fantastic Beasts and Where to Find Them in World Religions. Much contemporary fantasy draws upon ancient and medieval myths about beasts and monsters of various sorts. In this course, we will consider the religious origins of the fantastic, and how it continues to resonate in our contemporary world. Credit will be granted for only one of RELS 292 and RELS 298 offered 2017-2018. Three credits.

294 Selected Topics
The topic for 2018-2019 is The Mindfulness: How to Cope with Hard Things. This course teaches how to have a thought, how to have an emotion and how to cope with hard things. It introduces and offers experiential knowledge of several popular “Mindfulness” practices. It also asks: how can we be mindful if we don’t understand the nature of mind? It introduces traditional contexts of Buddhist psychology, philosophy and ethics to promote reflection and increase the skillfulness with which we relate to the minds of ourselves and others. Three credits.

295 Religion and Politics
An examination of the impact of religion on politics and politics on religion. Students will consider the relationship between religion and politics in the Middle East, Northern Ireland, India and Pakistan, Eastern Europe and North America. Case studies will demonstrate interactions between the state and Christianity, Islam, Hinduism, and Judaism, as well as the influence of religion on citizenship, education, the party system, and social issues. Cross-listed as PSCI 295. Three credits.

297 Selected Topics
The topic for 2018-2019 is The Body: An Owner’s Manual. The course teaches how to have a body? We will support each other in finding “what is the right answer for you”? We will examine varied perceptions of the body in the history, cosmology, ethics, philosophy, sociology and art of Hinduism, Buddhism, first nation’s traditions, and Chinese traditions. With the help of guests, we will create our personal “owner’s manual” for the body and examine such questions as sexual safety, nutrition and financial health. Three credits.

298 Selected Topics
The topic for 2018-2019 is Women in Muslim Film. This course examines how films produced in Muslim-majority countries function as a vehicle for social change, challenging the status quo and pushing the boundaries of accepted norms regarding the rights of women. The course consists of relevant readings and critical viewing of films written and directed by women in Muslim-majority countries or films with
a strong female role written and directed by men. Countries include Iran, Saudi Arabia, Egypt, Palestine, Turkey, Canada, and possibly more. Cross-listed as WMGS 298. Three credits.

300 Health Care Ethics
This course examines the role of ethical theory in the development of bio-medical ethics. Topics will be analyzed from the perspective of the health care professional as well as the patient, and will include end-of-life care, genetics, reproductive technologies, and medical research. Cross-listed as NURS 330. Open to third- and fourth-year students in any programs. Six credits.

310 Religion in Modern India
This course will explore continuity and change in modern Indian religion. After an introduction to contemporary Indian secular democracy, we will explore traditional Indian religion as a living phenomenon and review basic elements of traditional Hinduism. As well, examine the contribution of various change-makers to the evolution of Indian religious tradition and traditional Indian responses to the challenges created by Buddhism, Islam, British colonization, the partition of India, and Indian secular democracy itself. Prerequisite: any 100-level RELS course or permission of the instructor. Six credits.

311 New Testament
This course provides an introduction to the academic study of the history and literature of the early Christian movement. The aim of this course is to provide a solid understanding of the New Testament through close study of texts, historical analysis, and evaluation of evidence and arguments. We will explore several early Christian groups, their disputes, arguments, positions, theologies, and understandings, through close reading of texts and appreciation of historical contexts. Credit will be granted for only one of RELS 311 and RELS 255 and RELS 265. Three credits.

312 Old Testament/Hebrew Bible
This course examines the foundational texts of both Judaism and Christianity, notably the prophetic, historical, and wisdom literature included in the Old Testament. Each biblical book will be placed in its historical, theological, and literary context, by situating it in the relevant archeological data, historical background, and contemporary scholarship. Credit will be granted for only one of RELS 312 and RELS 253. Three credits.

315 Authentic Power and Gender
This course presents “authentic power” as understood in Hindu and Buddhist traditions. Here, “authentic power” is that which creates, supports, maintains and sustains life. It is understood as an expression of inter-dependent masculine and feminine “principles” both within and outside the individual self. That which seeks to manipulate, control, dominate, oppress or defend territory is here understood to be based in fear: it is an expression of cowardice and, as such, merits our compassion. Cross-listed as WMGS 397. Three credits.

316 Women in Early Judaism
The course investigates the depiction and experience of women from the earliest biblical narratives to the separation of Christianity from Judaism. Students analyze responses to women and ideas about women in Biblical and other early Jewish writings, in comparison to women in the rest of the Ancient Near East, in conversation with feminist interpreters of the Bible and early Judaism, we will note the relevance of this material for contemporary gender issues. Cross-listed as WMGS 316. Three credits.

317 Paul and His Interpreters
This course provides an introduction to the academic study of the history and literature of the early Christian movement. The aim of this course is to provide a solid understanding of the New Testament through close study of texts, historical analysis, and evaluation of evidence and arguments. We will explore several early Christian groups, their disputes, arguments, positions, theologies, and understandings, through close reading of texts and appreciation of historical contexts. Credit will be granted for only one of RELS 317 and RELS 275. Three credits.

325 Early Christian Women
This course investigates women’s participation in early Christian groups from the time of Jesus’ ministry to the 6th century. Christian women’s lives will be compared to those of women in Jewish and Greco-Roman societies. Students will analyze New Testament and other early Christian writings, read feminist scholarship, and examine such issues as women’s leadership and violence against women. Cross-listed as WMGS 325. Three credits.

326 Hindu Deities
This course presents the stories of goddesses and gods in the Hindu pantheon. It explores elements of ancient and classical Hindu thought associated with these stories of these deities. It identifies related elements in classical schools of Hindu philosophies such as Samkhya and Vedanta, and gives voice to the poets of the medieval Hindu devotional tradition. Together we will explore concepts of self, other, the world, devotion, the divine and freedom in Hindu religious thought. Three credits.

327 Buddhist Thought: the Way of the Bodhisattva
This course presents the Buddhist ideal of the Way of the Bodhisattva, one who vows to continue to re-incarnate, lifetime after lifetime, in order to serve all beings until such time as all beings are freed from suffering. It examines early Buddhist teachings that anticipate the development of this ideal, including the Theravada Buddhist focus on the strength of discipline of the mind and body, before detailing the Mahayana Buddhist development of this ideal and its expansion in the narrative and practice of Vajrayana or Tibetan Buddhist tradition. It will include study of Buddhist philosophy regarding the gradual states of realization of enlightenment. Three credits.

328 Mind, Self and Society
A “Mindfulness Immersion” experience, this summer course offers three weeks of intensive online learning in preparation for a one-week experience of Buddhist monastic practice to take place at Gampo Abbey in Cape Breton, Nova Scotia. Study will include the historical development of Buddhism, and in particular of Tibetan Buddhism, along with the examination of ethical and philosophic underpinnings of Buddhist monastic practice. A variety of mindfulness/contemplative techniques will be experienced during our time as part of the Buddhist monastic community. Prerequisite: permission of the instructor; enrolment is limited. The 3-week theory component of the course is offered online only. Three credits. Offered Summer 2018 and Summer 2019.

331 Social Activists Inspired by the Bible
In this course students trace the biblical origins of ideas that have inspired global leaders to engage issues of social justice in the world. The activists typically include Moses Coady, Martin Luther King Jr., Mother Teresa, Abraham Joshua Heschel, Oscar Romero, Charlotte Keys, SueZann Bosler, Helen Prejean, Jim Zwerg, Jim Corbett, John Dear, Shane Claiborne, Daniel Berrigan, Roy Bourgeois, Robin Harper, William Wilberforce, Desmond Tutu, Tommy Douglas, Dorothy Day, and Dietrich Bonhoeffer. Three credits.

333 Religion, Violence and Peace
Contrary to an old belief, in our time religion is increasingly associated with violence rather than peace. This course explains why this is the case and — whether there is an inherently violent element in religion that has passed unnoticed until now. The investigation takes us through Greek, Roman, Jewish, Christian and Islamic religions to find the religious underpinnings to concepts of sacrifice, scapegoating, lynching, and global violence. Credit will be granted for only one of RELS 333 and RELS 335. Three credits.

334 Black/African Diaspora: Culture, Religion and Society
This course critically examines structural and sociocultural factors that operate and/or reproduce powerlessness among Black people in the Diaspora. Attention will be given to Black/African culture, experience and contributions, especially in Canada, the United States, and the Caribbean. Attention will also be given to the intersection of religion and cultural expressions in the African Diaspora. The importance of religion in the Black Diaspora’s experience of both oppression and liberation will be a key component of our analytic framework. Credit will be granted for only one of RELS 334 and RELS 398 offered in 2016-2017. Cross-listed as SOCI 337. Three credits.

342 Prophets and Prophecy
This course surveys the role and teaching of the biblical prophets in their ancient setting, and their impact on modern life and thought. Credit will be granted for only one of RELS 342 and RELS 253 and RELS 312. Three credits.

352 History of Early Judaism
This course explores the history of ancient Judaism from the Babylonian captivity in 586 BCE to the fall of Jerusalem in 70 CE. Students will examine the geography, culture, and historical milieu of the Apocrypha, Dead Sea Scrolls, Jesus, and the earliest rabbinic writings, and discuss the major persons and events in ancient Judea. Cross-listed as HIST 357. Three credits.

353 Iconography of Christian Art: The Life of Christ
Iconography is the identification and interpretation of images. This course is an introduction to the iconography of Christian art, with an emphasis on images of the Life and Passion of Christ. The course will examine how images develop over history, and how they may be understood in light of historical events, changes in theological thought, and in the artist’s own spirituality. Cross-listed as ART 356. Three credits.
354  Iconography of Christian Art: The Saints
This course is an introduction to the iconography of Christian art, with an emphasis on images of Mary and the saints. The course will examine how images develop over history, and how they may be understood in light of historical events, changes in theological thought, and in the artist’s own spirituality. Discussion will include how such images were used as objects of personal devotion but also for the conveying of important theological and social values. Cross-listed as ART 357. Three credits.

363  Christianity in the Roman World
Examines the development of Christianity from its beginnings in the 1st century to its acceptance as the official religion of the Roman Empire in the 4th century. Students will learn about early Christian beliefs and practices, and explore the challenges faced by the first Christians. Topics include community organization, persecution, martyrdom, Gnosticism, and women in the church. Three credits.

365  Spirituality in Medieval Christianity
This course will focus on the spirituality of the formative years in the development of Christian thought, beginning with the legalization of Christianity in 313 CE and ending with the Reformation. Students will see how some of the most searching and intelligent men and women in both the Western and Eastern churches have wrestled with the question of how it is possible to know God. Three credits.

374  Modern and Contemporary Islam
This course examines issues and debates in modern and contemporary Islamic discourse from a broad spectrum of perspectives. The course introduces students to a plurality of voices, both Sunni and Shi’ite, on many controversial issues facing Muslims today, including, but not limited to the nature of the Qur’an, methods of interpretation, Muhammad, the role of women, Islam and the West, violence, terrorism, and human rights. The course uses secondary sources and primary sources in translation. Three credits.

375  Islam in Canada
Focusing primarily on the Canadian context, this course explores the variety of Muslim identities in North American society. After a brief historical survey of Islam and Muslims in North America, including immigrant and African-American Islam, the course examines the diverse perspectives of North American Muslim and non-Muslim scholars on questions and debates around integration, identity, authority, youth, education, gender, shariah in Canada (Muslim religious arbitration in civil law), media representation, discrimination, and surveillance post-9/11. Cross-listed as SOCI 374. Offered in online format. Three credits.

394  Selected Topics
The topic for 2018-2019 is Authentic Relationship. If authentic relationship is not about power, dominance and control, then what is it? This course explores the questions: what is love? what is “sacred relationship”? “Authentic relationship” is about connecting, with ourselves, with others and our world. Using models of relationship in the history, literature, philosophy and art of Hindu and Buddhist traditions, we will explore various perspectives on life-giving love. It is an error to confuse kindness with weakness or aggression with strength. Three credits.

395  Selected Topics
The topic for 2018-2019 is Selfless Leadership: Be the Change I. Success of the one at the expense of the many is failure. This course examines the leadership model of M.K. Gandhi. Gandhi’s paradigm of thinking inspired global leaders to de-colonise and remove social limitations based on race and gender. We examine, among others, Gandhi’s perceptions of truth and nonviolence as taught by Buddhism and Jainism. Together we will support each other to be the change we wish to see in the world. Credit will be granted for only one of RELS 395 and RELS 310. Three credits. Offered 2018-2019.

397  Selected Topics
The topic for 2018-2019 is Selfless Leadership: Be the Change II. Success of the one at the expense of the many is failure. We will trace the rise, development and methods of implementing colonialism, which continue to shape our world today. We then will continue to study, and actively model, Gandhi and other leaders who worked to de-colonise India and to remove limitations based on gender and caste. Together we will support each other to be the change we wish to see in the world. Credit will be granted for only one of RELS 397 and RELS 310. Three credits.

401  Religious Approaches to Sexuality
Human sexuality is explored from two main perspectives: first, the teachings and practices of various religious traditions; and second, contemporary developments in sexual and reproductive health and rights. Among the issues to be considered are sexuality and gender roles, contraception and abortion, marriage and family. Cross-listed as WMGS 411. Prerequisite: any 100-level RELS or WMGS course. Three credits.

402  Religious Approaches to Sexual Diversity
This course will focus on religious teachings and traditions on sexual diversity within the broader context of human rights associated with sexual orientation and sexual differences. In particular, we will look at the experiences of gay, lesbian, bisexual, intersexual and transgendered persons within religious communities. Cross-listed as WMGS 412. Prerequisite: any 100-level RELS or WMGS course. Three credits.

404  The Dead Sea Scrolls
This course surveys the Dead Sea Scrolls found in the Judean desert. The most important archaeological discovery of the 20th century, these scrolls have generated much controversy. We will examine the major texts from Qumran to assess their impact on our understanding of the Hebrew Bible and the New Testament, and the period of Judaism in which Christianity arose. We will place the scrolls in their various contexts: archaeological, historical, literary, religious, and social. Credit will be granted for only one of RELS 404 and RELS 318. Three credits.

414  Ancient Indian Myth and Ritual
Ancient Indian thought assumes that there is a fundamental wholeness to our lives and to our world which only appears at times to be fragmented. The myth, ritual and philosophy of ancient India are, in many respects, a contemplation on this basic wholeness and its composite elements. Exploration of ancient Indian thought with its ideas of humans and demons, ancestors and gods, and our place in the natural world in light of this reflection on “the parts and the whole” will be discussed. Prerequisite: any 100-level RELS course. Three credits.

416  History and Archaeology of Ancient Israel
This course explores the history of ancient Israel and Judah from their origin to the fall of Jerusalem in 586 BCE. Students will examine the geography, culture, and historical milieu that gave rise to the Old Testament and Hebrew Scriptures, and discuss the major persons and events in ancient Israel and Judah. Credit will be granted for only one of RELS 416 and RELS 351. Three credits.

426  The Jewish World of Jesus
This course examines the history and literature of the Jewish people from the period of the Maccabean Revolt in the 2nd century BCE to the Bar Kokhba Revolt in the 2nd century CE. The literary sources for the study of the Jewish world at the turn of the era include the Dead Sea Scrolls, the Bible, and the Mishnah. This course serves as an introduction to the religious and social environment of the historical Jesus. Credit will be granted for only one RELS 426 or RELS 440. Prerequisite: any 100-level RELS course. Three credits.

427  Jesus the Christ
Building upon RELS 426, this course begins with an examination of aspects of the life of the historical Jesus, including his teaching, ministry, and the events leading to his crucifixion. The four canonical Gospels and Letters of Paul will be analyzed as students probe the question of why Jesus came to be understood as the Messiah by his first Christians. Credit will be granted for only one RELS 427 or RELS 440. Prerequisite: RELS 426 or permission of the instructor. Three credits.

490  Honours Thesis
Each student works under the supervision of a chosen professor who guides the selection of a thesis topic, use of resources, methodological component, quality of analysis and execution, and literary calibre of the student’s work. Required for all honours students. Six credits.

499  Directed Study
Under the direction of a faculty member, students may pursue an individual program of study in an area of religious studies not available in the course offerings. For eligibility, see section 3.5. Three or six credits.

SERVICE LEARNING  see 9.24 Interdisciplinary Studies
9.35 SOCIOLOGY
R. Bantjes, Ph.D.
P. Cormack, Ph.D.
L. Harling Stalker, Ph.D.
D. Lynes, Ph.D.
D. MacDonald, MA
P. Mallory, Ph.D.
S. Marmura, Ph.D.
R. O'lestead, Ph.D.
J. Phyne, Ph.D.
D. Smythe, Ph.D.
N. Verberg, Ph.D.

Professor Emeritus
W. Jackson, Ph.D.

Professor Emeritus and Senior Research Professor
D. MacInnes, Ph.D.

The Department of Sociology offers honours and major programs. Second- and third-year sociology courses require SOCI 101, 102 as prerequisites. 400-level courses require at least twelve credits in sociology below the 400 level as a prerequisite, or the permission of the instructor. SOCI 101, 102 are included these credits.

BA Major in Sociology
Candidates must follow the degree requirements of the Faculty of Arts and complete 36 SOCI credits which include:

a) SOCI 101, 102;
b) SOCI 202 and at least 3 additional credits at the 200 level;
c) SOCI 301 and SOCI 302;
d) at least 12 additional SOCI credits at the 300 or 400 level.

BA Honours in Sociology
Candidates must follow the degree requirements of the Faculty of Arts and complete 60 SOCI credits which include:

a) SOCI 101, 102;
b) SOCI 202 and at least 3 additional credits at the 200 level;
c) SOCI 301 and SOCI 302 and at least 3 credits in methods: SOCI 300 or 307;
d) at least 6 additional SOCI credits at the 300 level;
e) SOCI 400 (thesis), SOCI 491, plus at least 6 credits at the 400 level;
SOCI 391 is highly recommended.

Honours with a Subsidiary Subject
If sociology is selected as a subsidiary subject by an honours student in the BA program, 24 SOCI credits are required, with at least 6 of those credits at the 300 level.

101 Introduction to Sociology I
This course introduces students to the origins and development of sociological thinking and research, beginning with the foundations of the discipline in the 19th century. Students are then introduced to the concepts and methods within sociology. The objective is to explore the extent and limits of our capacity to change the social world by reference to sociological research in both a Canadian and global context. Credit will be granted for only one of SOCI 101 and SOCI 100. Three credits.

102 Introduction to Sociology II
This course builds on the foundations of sociological theory, methods and historic considerations established in SOCI 101. Students will explore a range of topics dealing with various aspects of social inequality, culture, integration, and ideological conflict in both a Canadian and global context. Together with SOCI 101, this course provides the prerequisite for all other sociology courses. Credit will be granted for only one of SOCI 102 and SOCI 100. Prerequisite: SOCI 101. Three credits.

202 Research Principles and Practices
This course addresses how various philosophic assumptions shape the aims and practices of research in sociology. It provides students with empirical research design principles and an introduction to methods of collecting and recording data, assessing reliability and validity, and conducting data analysis. Different research strategies are introduced. The ethical implications of research will be discussed. Prerequisites: SOCI 101, 102. Three credits.

203 Gender
This course is about gender differences and gender inequality. The main objective of the course is not only to examine differences in women’s and men’s social positions, but also to stimulate critical and informed thinking about the sources of gender inequality in our society. More generally, the course aims to explore the many ways in which this society is organized around gender differences and divisions. Credit will be granted for only one of SOCI 203 and SOCI/WMGS 310. Cross-listed as WMGS 203. Prerequisites: SOCI 101, 102. Three credits.

212 Social Dissent
Social dissent has been a persistent, perhaps necessary, feature of modern (capitalist, bureaucratic, technocratic, patriarchal) societies. Students will explore ways in which dissent has been voiced and alternatives have been envisioned in the 20th century, including new organizational forms and tactics of dissent, and new technologies and international networks. Students may use the course as a basis for advanced social scientific research. Prerequisites: SOCI 101, 102. Three credits.

216 Canadian Society
This course presents an analysis of Canadian Society and its development from a sociological perspective. Particular attention is given to political/economic institutions, ideology, class structure, regionalism, cultural forms and national identities. Prerequisites: SOCI 101, 102. Three credits.

217 Race and Identities
This course discusses the interconnected realities of race, class, gender and sex from various sociological perspectives. Substantive topics will include the socially constructed nature of these concepts in places like media, and the experiences of classism, sexism and racism in the workplace, schools, and everyday life. Credit will be granted for only one of SOCI 217 or SOCI 215. Cross-listed as WMGS 217. Prerequisites: SOCI 101, 102. Three credits.

221 Marriage and Family Life
This course analyzes the marriage and family life from a sociological perspective. It provides an overview of social changes over the last century, such as the falling birth rate, the rise in cohabitation and the legalization of same-sex marriage. Topics include marriage and fertility trends, the rise of intensive parenting and the dual earner family, the normalization of separation and divorce, the social cost of family violence, and how technology is influencing parenting. Credit will be granted for only one of SOCI 221, SOCI 210, or WMGS 210. Cross-listed as WMGS 221. Prerequisites: SOCI 101, 102. Three credits.

227 Sociology of Religion
An introduction to the sociological study of religion. Topics include social factors that influence religion at individual and communal levels; religion as agent of social cohesion and social conflict; religion and power structures; the impact of pluralism and globalization on religion today. Cross-listed as RELS 215. Prerequisites: SOCI 101, 102. Three credits.

242 Technology and Society
This course is designed to introduce students to core sociological issues and debates pertaining to technology. Topics covered include the nature of technological artifacts and systems, technology and social change, the relationship between technological innovation and scientific knowledge, technology and inequality, the social shaping of technology, and the role of digital media in relation to new forms of cultural identity and social control. Credit will be granted for only one of SOCI 242 or SOCI 496 completed between 2012-2014. Prerequisites: SOCI 101, 102. Three credits.

243 Consumer Society
This course explores classical to contemporary theories of consumer society beginning with Marx's conception of the commodity as fetish. Themes discussed include conspicuous consumption, gender and consumption, social class, environment, identity, advertising and marketing. Prerequisites: SOCI 101, 102. Three credits.

244 Cultures and Societies
This course will focus on exploring how society shapes culture and culture shapes society. Drawing on local, national and global practices of culture and cultural objects, students will learn how meaning-making is critical to understanding everyday life. Credit will be granted for only one of SOCI 244 or SOCI 298 offered in 2015-2016. Prerequisites: SOCI 101, 102. Three credits. Not offered 2018-2019.

247 Environmental Social Science I: Problems and Paradigms
This course introduces students to the major environmental challenges of the 21st century from a social science perspective. Modern societies that have sought to conquer natural limits have now conjured up unanticipated “environmental” problems as well as action towards environmental solutions are shaped by ways of thinking, social contexts and institutional power relations. Cross-listed as PSCI 247. Prerequisites: SOCI 101, 102. Three credits.

248 Environmental Social Science II: Power and Change
A continuation of SOCI 247, this course addresses the same conceptual problems but
foci on understanding the societal and political response to environmental issues. Students will critically examine both proposed ecological futures, as well as means of environmental problem solving and societal change: state policy, intergovernmental treaties, environmental movements, and market solutions. Cross-listed as PSCI 248. Prerequisite: SOCI 247 or PSCI 247. Three credits.

251 Theories of Deviance and Social Control
This course offers students a theoretical foundation for understanding social processes of deviance and social control. Using various theoretical devices, students will critically examine the social category of deviance and its use in social institutions and daily social practices. Topics could include mental illness, drug and alcohol use, alternative sexualities, social violence and disability. Credit will be granted for only one of SOCI 251, SOCI 250 or SOCI 298 completed in 2016-2017. Prerequisites: SOCI 101, 102. Three credits.

252 Topics in Deviance and Social Control
This course draws upon the theoretical preparation provided in Sociology 251 to critically assess various topics in deviance and social control, and their power relations. Students will for instance, consider the complex relations of power and control associated with sex and sexuality, contemporary notions of fitness and health, white versus blue collar crime, as well as 'natural' disasters. Credit will be granted for only one of SOCI 252 or SOCI 250. Prerequisite: SOCI 251. Three credits.

254 Experiencing Social Class
This course explores social class as a lived experience - one in which everyday life both reveals and denies the structural advantages and disadvantages that perpetuate class differences. By way of ethnographic and theoretical literatures, students will study how stages of life and encounters with institutions (school, state, family, etc.) shape social class experiences. Prerequisites: SOCI 101, 102. Three credits.

297 Selected Topics
The topic in 2018-2019 is Social Policy. This course provides an overview of social policy in Canada. Students will examine the relationship between policy and practice, exploring both the impact of policies on social supports and services, and the influence of service deliverers and users on how policies are implemented. Topics covered include: what social policy is, who makes policy, how political behavior is shaped by policy environments, what policy instruments are, and what is involved in policy implementation and evaluation. Students will learn theories of public policy, policy-making models, the policy-making and practice process, and the role of citizen participation. Credits will be granted for only one of SOCI 297 and SOCI 360. Prerequisites: SOCI 101, 102. Three credits.

304 Feminist Theory
This course examines various directions feminists have taken in studying women's experiences and the construction of gender. Students will learn how these theoretical approaches have influenced feminist research and critical practice. The course will include early feminist thought as well as contemporary feminist theory. Cross-listed as WMGS 303. Prerequisite: WMGS 100. Three credits.

307 Qualitative Research Methods
The course introduces students to the qualitative research methods used by sociologists. The course introduces the philosophical, theoretical, and ethical aspects of qualitative research as well as qualitative approaches to data collection, data analysis, presentation of results, and methods of evaluating qualitative research. The various aspects of qualitative research are illustrated with classical and contemporary studies. Prerequisite: SOCI 202. Three credits.

311 Men and Masculinities
A critical review of the science of masculinity and recent theoretical developments on the social construction of men's lives and masculinities. Topics include male gender role socialization; the role social institutions play in shaping masculinities; masculinity politics, men's movement, and social change. Cross-listed as WMGS 311. Prerequisites: SOCI 101, 102. Three credits.

313 Conceptions of Disability
An introduction to the field of disability studies, this course examines the ways in which disabled people and disability issues are defined and treated in contemporary society. Social and political conceptions of disability are contrasted with medical and individualistic definitions of disability with the aim of developing a critique of taken-for-granted conceptions of normal bodies, minds, and senses. Community-based contributions and responses to disability knowledge are emphasized and common ideas and assumptions about disability are situated historically to illustrate changing relations to disability over time, and to the role of disability knowledge in social change. The experience of disability will be stressed. Prerequisites: SOCI 101, 102. Three credits.

322 The Antigonish Movement as Change and Development
Explores both social change and economic development through the history, philosophy, and practice of the Antigonish Movement as experienced at home and abroad. This movement will be used to examine political systems, labour relations, class conflict, education, co-operative strategies, religion, and ethnicity in the context of social transformation. Cross-listed as DEV 322. Prerequisites: SOCI 101, 102. Three credits. Not offered 2018-2019.

327 Canadian Families and Parenting
This course explores the impact of social, political, economic and cultural changes on families and parents. Topics include the diversity of family relations, work-life balance, family time, the ‘parenting expert industry’, ‘intensive parenting,’ the ‘boomerang generations’ and ‘grand’ relations. Across this range of topics, we consider how gender, race, sexuality, social class, and health influence families and parents. Cross-listed as WMGS 327. Prerequisites: SOCI 101, 102. Three credits.

328 Social Inequality
Students will explore the distribution of social, political and economic resources in Canadian society, and the unequal access to these resources based on social class, race, ethnicity, gender, age and region. Using a central theme based upon concepts of class and power, the course examines specific issues such as the socio-economic bases of social inequality, aspiration and the consequences of poverty. Prerequisites: SOCI 101, 102. Three credits.

331 Media Effects
This course considers a broad array of issues and controversies pertaining to the study of media effects. Topics covered include the development of propaganda theory, the social significance of advertising, and debates concerning the influence of media content on behavior and popular understandings of social reality. Attention is given to both traditional and holistic approaches to media effects in terms of the strengths and limitations of each. Credit will be granted for only one of SOCI 331 or SOCI 325. Prerequisites: SOCI 101, 102. Three credits.

332 Media Forms
"The medium is the message." — Marshall McLuhan. This course introduces students to various media technologies as shaping societies across time, with a focus on media forms rather than content. The course will discuss oral aboriginal culture
This course sets out to explore the variety of theoretical perspectives used by those in the cultural Sociology. Through the use of the books in the Anne series, films, television, and the author’s journals, students will learn how to think about and apply theorists such as Bourdieu, the Frankfurt School, and Barthes. Prerequisites: SOCI 101, 102. Three credits.

This course examines the major themes and empirical research issues in urban sociology in the 20th- and 21st-century. This includes the rise of the ‘urban’ as a social science phenomenon, the Canadian city in comparative and historical perspective, major theoretical debates in urban social science, the intersection of class, gender and racial forms of inequality in cities, the shifting nature of social and spatial relations, and urban planning, sustainability and globalization. Credit will be granted for only one of SOCI 380 or SOCI 396 completed from 2014-2016. Prerequisites: SOCI 101, 102. Three credits.

This seminar will assist honours students in their third-year and their thesis planning and provide an environment in which to learn with senior students working on their thesis. Students will choose an advisor with whom they will develop a proposal, collect materials, and consider methodological and ethical issues relevant to their research. Students are expected to attend colloquia, guest lectures and public talks relevant to the discipline. Highly recommended for and restricted to honours students. Three credits.

The topic for 2018-2019 is Family Policy in Canada. Students gain knowledge about federal and provincial social policies that influence family formation (e.g., pre- and perinatal health care, fertility assistance, adoption), care of infants, children and family members (family leave, child care, domestic worker programs, elder care), family dissolution (separation, divorce), and family trauma (violence prevention). Students learn to critically appraise policy, while examining how social policy intersects with cultural and structural aspects of gender, sexuality, Indigenous status, race and ethnicity, and socio-economic status. Prerequisites: SOCI 101, 102. Three credits.

Note: 400-level courses require at least 12 credits in sociology below the 400 level as a prerequisite, or the permission of the instructor. SOCI 101, 102 counts as six of these credits.

A required course for all senior honours students. Six credits.

Explores current theories of social difference and the personal, social, economic, and political effects of these differences in Canadian, western, and international contexts. Topics include oppression, resistance, identity politics, and discourse theory. Starting with the question, “What differences do some differences make?” Students will examine how issues of difference become relations of dominance. Prerequisite: SOCI 215. Cross-listed as WMGS 417. Prerequisite: 12 credits of SOCI. Three credits. Not offered 2018-2019.

This course attempts to locate personal biography in the context of social history. Students’ genealogies provide the starting point for explorations of family, social history, and personal identity. Students will apply sociological ideas to the historical periods that helped shape their personal and family histories. Prerequisite: 12 credits of SOCI. Three credits. Not offered 2018-2019.

Is friendship only personal and private, or does it have broader public, social, and political significance? This seminar addresses contemporary scholarship on the sociology of friendship as well as classic accounts of friendship by philosophers.
and social theorists. Through studying beliefs and practices of friendship we will address themes such as the self and personhood, gifts and exchange, trust and intimacy, sexuality and gender, social capital and networks, and the relation of friends to strangers and enemies. Prerequisite: 12 credits of SOCI. Three credits.

433 Advanced Problems in Environment and Society
The course allows students to pursue issues raised in SOCI 247 and 248 in greater depth. It also exposes them to new developments in social theory. Each year will have a different thematic focus which could include: the ways in which social conceptions of “natural” and “unnatural” have changed over time; the social implications of new biotechnologies; the global environmental movement; or ideals of an ecological future. Prerequisites: SOCI 247, 248 or PSCI 247, 248. Three credits. Not offered 2018-2019.

451 Topics in Social and Criminal Justice
This course examines current theoretical and research issues in crime and social justice. Using qualitative, quantitative, and historical methodologies, students will explore topics such as gender, class, minorities, and criminal justice; police-community relations; carceral and non-carceral forms of punishment; criminal and regulatory legal procedures. Prerequisite: 12 credits of SOCI. Three credits.

491 Senior Seminar
A forum in which students gain scholarly experience by presenting and discussing their research; and taking part in colloquia, guest lectures, and public talks relevant to sociology. Required for honours students in their senior year. No credit.

498 Selected Topics
Three credits.

499 Directed Study
Under the direction of a professor, students will work in an area of sociology not available in other course offerings. Students must consult with the faculty member by March 31 of the academic year in which they wish to take the course. See section 3.5. Three or six credits.

SPANISH see 9.26 Modern Languages

9.36 WOMEN'S AND GENDER STUDIES
N. Forrestell, Ph.D., Co-ordinator
Advising Faculty
Department
R. Chisholm, Ph.D. Sociology
R. Hurst, Ph.D. Women's and Gender Studies
K. MacLean Ph.D. Psychology
P. Mallory, Ph.D. Sociology
Z. Ozkok, Ph.D. Economics
C. Weaving, Ph.D. Human Kinetics

The academic field of women's and gender studies provides an interdisciplinary, multicultural and feminist analysis of women’s lives and history. It re-examines traditional ideas about women and their place in society and introduces theoretical frameworks for understanding questions about the roles, problems and accomplishments of women.

Through a combination of core courses and cross-listed courses offered by various university departments, students will critically examine topics such as women and politics; women in sport; the psychology of gender; women’s history; the relationship of gender, class and race; women’s literature; feminist theory; women and religion; women and medicine; women in management; and women and work. Service-learning projects may be incorporated into some women’s studies courses.

See chapter 4 for information on the degree patterns, declarations of major, advanced major and honours, advancement and graduation requirements.

Program Requirements
Students may choose a BA with Major or a BA with Joint Major in women’s and gender studies and a Faculty of Arts subject. See chapter 4. Arts and science students may fulfill requirements for a pair in women’s studies and gender.

Students interested in women’s and gender studies should consult with the co-ordinator as early as possible.

Major in Women's and Gender Studies
a) 12 credits of WMGS 100, 205 and 303; and,
b) 24 credits WMGS including cross-listed courses.

No more than 12 credits of cross-listed courses may be from a single department. None of the cross-listed courses may be in the student’s declared minor subject.

Joint Major in Women's and Gender Studies and a Faculty of Arts Discipline
a) 36 credits in WMGS (subject A) and 36 credits in another Faculty of Arts department (subject B). The program or department requirements for majors are applicable in both subjects. Students must complete the following:
   i) 12 credits of WMGS 100, 205 and 303; and,
   ii) 24 credits WMGS including cross-listed courses.

No more than 12 credits of cross-listed courses may be from a single department. None of the cross-listed courses may be in the student’s declared subject B.

b) Course Pattern: see section 4.1.3

Honours in Women's and Gender Studies with a Subsidiary
See section 4.1 for general regulations on degree requirements.
a) 48 credits in WMGS (subject A) and 24 credits subsidiary subject. For the 48 credits in WMGS students must complete the following:
   i) 18 credits of WMGS 100, 205, 303, 391 junior seminar (non-credit), 400
   ii) WMGS 232 or 346
   iii) WMGS 493 (thesis)
   iv) ANTH 304 – designated methods course
   v) 18 credits from WMGS core or cross-listed courses

No more than 12 credits of WMGS cross-listed courses may be in a single subject. Also, none of the WMGS cross-listed courses may be in the student’s subsidiary subject (subject B).

Subsidiary in Women's and Gender Studies
a) 24 credits in WMGS and 48-60 credits in the honours subject. Students are encouraged to include an additional six credits of WMGS cross-listed courses. No more than 6 credits of WMGS cross-listed courses may be from a single department. None of the cross-listed courses may be in the student’s declared honours subject.
   i) 12 credits of WMGS 100, 205 and 303
   ii) 12 credits WMGS including cross-listed courses.

Minor in Women's and Gender Studies
a) WMGS 100; and,
b) 18 credits in women’s and gender studies, which may include WMGS 205 and/or 303 in addition to cross-listed courses. No more than six credits of cross-listed courses may be from a single department. None of the cross-listed courses may be in the student’s declared major subject.

Pair
a) WMGS 100 (6 credits); and
b) 6 credits in women’s and gender studies, which may include WMGS 205 and/or 303 or cross-listed course(s).

Social Justice Colloquium
The Social Justice Colloquium is a first-year option for Bachelor of Arts students. Participants are enrolled in dedicated sections of anthropology, global history and women’s and gender studies. See section 4.5 for further information.

100 Introduction to Women's and Gender Studies
This course will offer an overview of women’s and gender studies from an interdisciplinary perspective. Students will study the development of feminist movements and will examine how concepts of race, class, sexuality and ability intersect in shaping colonialism, sexual and reproductive health, violence, family relations, paid and unpaid labour, political systems and poverty. The course will consider the relationship between the local and the global through discussion of such topics as popular culture, consumerism and environmentalism. Credit will be granted for only one of WMGS 100 or WMNS 200. Six credits.

203 Gender
This course is about gender differences and gender inequality. The main objective of the course is not only to examine differences in women’s and men’s social positions, but also to stimulate critical and informed thinking about the sources of gender inequality in our society. More generally, the course aims to explore the many ways in which this society is organized around gender differences and divisions. Credit will be granted for only one of WMGS 203 and SOCI/WMGS 310. Cross-listed as SOCI 203. Prerequisite: SOCI 101, 102. Three credits.

205 Gender, Sexuality and the Body
This course focuses on the ways that all bodies are sexualized and gendered in Western philosophical thought, biomedicine and science. Topics include Western binaries (man/woman, form/matter, mind/body), the sociocultural processes through which bodies are sexualized, the biological/medical sciences and objectivity, a
critique of the dual sex model from the perspective of transfeminist theory and bodily transformations and normalization (including cosmetic surgery, monstrosity and disability, and the feminist debate about female genital surgeries). Prerequisite: WMGS 100 or third- or fourth-year status with permission of instructor. Three credits.

217 Race and Identities
This course discusses the interconnected realities of race, class, gender and sex from various sociological perspectives. Substantive topics will include the socially constructed nature of these concepts in places like media, and the experiences of classism, sexism and racism in the workplace, schools, and everyday life. Credit will be granted for only one of WMGS 217 or WMGS 215. Cross-listed as SOCI 217. Three credits.

221 Sociology of Marriage and Family Life
This course analyzes the marriage and family life from a sociological perspective. It provides an overview of social changes over the past century, such as the falling birth rate, the rise in cohabitation and the legalization of same-sex marriage. Topics include marriage and fertility trends, the rise of intensive parenting and the dual earner family, the normalization of separation and divorce, the social cost of family violence, and how technology is influencing parenting. Credit will be granted for only one of WMGS 221 or WMGS 210. Cross-listed as SOCI 221. Three credits.

232 Gender and Popular Culture
This course will introduce a range of topics within the broad field of gender and popular culture as well as how to study and critique genres of popular culture. Beginning with the questions, “What is cultural studies?” and “Why is it important to study popular culture?” we move on to study a range of pop culture media, including music, television, film, video games and graphic novels/memoirs through this methodological and theoretical lens. Prerequisite: WMGS 100 or third- or fourth-year status with permission of instructor. Three credits.

254 Topics in 18th-Century Literature
The Whore's Story. This course explores the changing literary, social and cultural significance of the figure of the whore in a variety of 18th century works. Poetry, pornography, and pamphlets, as well as Hogarth’s engravings A Harlot’s Progress, Behn’s play, The Rover, and Cleland’s novel, Memoirs of a Woman of Pleasure (a.k.a. Fanny Hill) will be studied among other works. Graphic language and content may offend some students. Cross-listed as ENGL 254. Prerequisite: ENGL 100 or 111/112 or equivalent. Three credits.

298 Selected Topics
The topic for 2018-2019 is Women in Muslim Film. This course examines how films produced in Muslim-majority countries function as a vehicle for social change, challenging the status quo and pushing the boundaries of accepted norms regarding the rights of women. The course consists of relevant readings and critical viewing of films written and directed by women in Muslim-majority countries or films with a strong female role written and directed by men. Countries include Iran, Saudi Arabia, Egypt, Palestine, Turkey, Canada, and possibly more. Cross-listed as ENGL 298. Three credits.

299 Selected Topics in Women's and Gender Studies I
Three credits.

303 Feminist Theory
This course examines various directions feminists have taken in studying women's experiences and the construction of gender. Students will learn how these theoretical approaches have influenced feminist research and critical practice. The course will include early feminist thought as well as contemporary feminist theory. Cross-listed as SOCI 304. Prerequisite: WMGS 100. Three credits.

311 Men and Masculinities
A critical review of the science of masculinity and recent theoretical developments on the social construction of men's lives and masculinities. Topics include male gender role socialization; the role social institutions play in shaping masculinities; masculinity politics, men's movement, and social change. Cross-listed as SOCI 311. Three credits.

316 Women in Early Judaism
The course investigates the depiction and experience of women from the earliest biblical narratives to the separation of Christianity from Judaism. Students analyze responses to women and ideas about women in Biblical and other early Jewish writings, in comparison to women in the rest of the Ancient Near East, in conversation with feminist interpreters of the Bible and early Judaism, we will note the relevance of this material for contemporary gender issues. Cross-listed as RELS 316. Three credits. Not offered 2018-2019.

317 Canadian Women's and Gender History: From Colony to Nation
This course introduces students to major themes in the field of Canadian women’s and gender history. Covering the period from the late 16th century to the late 19th century, the course examines the historical development of women’s roles, experiences, identities and gender relations. Particular attention is given in this course to the impact of colonialism, and the intersection of gender, race, economic/ class status, and Indigenous/non-Indigenous status in shaping women’s work, family roles, sexuality, political engagement and activism. Credit will be granted for only one of WMGS 317 or WMGS 308. Cross-listed as HIST 317. Three credits. Not offered 2018-2019.

318 Canadian Women's and Gender History: Modernity
This course introduces students to major themes in the field of Canadian women’s and gender history. Covering the period from the late 19th century to the late 20th century, the course examines the historical development of women’s roles, experiences, identities and gender relations. Particular attention is given to the intersection of gender, race, economic/class status, and Indigenous/non-Indigenous status in shaping women’s work, family roles, sexuality, political engagement and activism. Credit will be granted for only one of WMGS 318 or WMGS 308. Cross-listed as HIST 318. Three credits. Not offered 2018-2019.

325 Early Christian Women
This course investigates women’s participation in early Christian groups from the time of Jesus’ ministry to the 6th century. Christian women’s lives will be compared to those of women in Jewish and Greco-Roman societies. Students will analyze New Testament and other early Christian writings, read feminist scholarship, and examine such issues as women’s leadership and violence against women. Cross-listed as RELS 325. Three credits.

326 Issues in the Anthropology of Kinship
This course explores current themes and debates about the constitution of families cross culturally. It will examine topics such as: cultural understandings of kinship; historical transformations of kinship systems; current reconfigurations of marriage; partnering strategies; new reproductive technologies; transnational adoption; intra-familial conflict; the role of kinship for individuals and in societies; and the influence of the state on kin patterns. Course material will include ethnographic examples from around the world. Cross-listed as ANTH 326. Prerequisite: ANTH 110 or ANTH 111/112, or WMGS 100 or 200 or permission of the instructor. Three credits. Not offered 2018-2019.

327 Feminist Anthropology
This course examines how past and present feminist anthropologists have used and problematized categories of difference and identity, such as gender, class, sexuality, race, ethnicity, ability, religion and nationality as they pursue anthropological research. Focusing primarily on socio-cultural anthropological research, but also addressing work by linguistic and biological (physical) anthropologists and archaeologists, the course will highlight the theoretical, methodological, and empirical contributions of feminist anthropologists to anthropology and to women and gender studies. Credit will be granted for only one of ANTH 323 and ANTH 324 and WMGS 324. Cross-listed as ANTH 323. Prerequisite: ANTH 110 or ANTH 111/112 or WMGS 100 or WMGS 200 or permission of the instructor. Three credits. Not offered 2018-2019.

328 Canadian Families and Parenting
This course explores the impact of social, political, economic and cultural changes on families and parents. Topics include the diversity of family relations, work-life balance, family time, the 'parenting expert industry', 'intensive parenting,' the 'boomerang generations' and 'grand' relations. Across this range of topics, we consider how gender, race, sexuality, social class, and health influence families and parents. Cross-listed as SOCI 327. Three credits.

329 Studies in Women Writers: Feminisms and Their Literature
An introduction to feminist theories within historical, cultural, and philosophical contexts, this course explores the relationship between feminist theories and literary texts that exemplify or extend them. Cross-listed as ENGL 329. Three credits. Not offered 2018-2019.

330 Studies in Women Writers: Genres, Cultures, and Contexts
This course explores modern and contemporary poetry written by women in English. Cross-listed as ENGL 330. Prerequisite: 9 credits ENGL. Three credits.

332 Gender in Sport and Physical Activity
Explores the role of women and men in sport/physical activity/recreation from a historical, philosophical, and sociocultural perspective. This course covers
333 The Medieval Body
This class explores late medieval conceptions of the physical body, which were always essential to identity in the Middle Ages. Medieval discussions of the practice of reading, clothing and fashion and even spiritual union with God, often involved debates and metaphors based upon the physical body. Through an exploration of primary and secondary texts along with seminar discussions, the class will explore the interconnectedness of late medieval ideas of corporeality, identity, spirituality and sexuality. Cross-listed as HIST 332. Three credits.

344 Developmental Social Psychology of Gender
This course will review theories and research regarding gender in psychological development, social roles, and personality. Topics to be covered include the history of research in gender; issues to consider in conducting gender research; gender role development and the socialization of gender; gender as a social variable in education and the workplace. Credit will be granted for only one of WMGS 343 or WMGS 360. Cross-listed as PSYC 364. Three credits. Not offered 2018-2019.

345 Women and Politics
An introduction to the study of women and politics, this course has three parts: feminist political thought and the women’s movement; political participation and representation; and public policy. Topics include feminist political thought in the Western political tradition; the evolution and politics of the women’s movement; political parties and legislatures; women and work; women and the welfare state. Cross-listed as PSCI 345. Prerequisite: PSCI 101/102 (100) or WMGS 100. Three credits.

346 Critical Race & Sexuality Studies in Canada
This seminar course offers students a survey of feminist approaches to contemporary critical race theory and sexuality studies in Canada, with a particular focus on the values of ‘multiculturalism’ and ‘tolerance.’ The course will consider the intersections of gender with such topics as colonialism, racism and immigration, whiteness, as well as homophobia and homonationalism. Credit will be granted for only one of WMGS 346 or WMGS 399. Cross-listed as PSYC 365. Prerequisite: 6 credits of PSYC at the 200 level. Three credits.

347 Gender and Health
This course examines theoretical concepts relevant to gender and health. The broad determinants of health, sexuality, reproductive health and fertility, common diseases, substance abuse, violence and culture are examined from a gender perspective. Strategies for promoting holistic health and preventing disease will be examined. Cross-listed as NURS 365. Three credits.

349 Selected Topics in Women's and Gender Studies I
Course content changes from year to year and may reflect faculty involvement in a specific area of research. Three credits.

350 Advanced Field Seminar
This course focuses on understanding inequality from an academic perspective, and seeks to do so through understanding grass-roots activism and movements for social change. This course is designed to combine feminist theories with feminist activist work, allowing students to learn from how feminism looks as gender challenges are enacted in homes, workplaces and political spaces. Students will examine research regarding social change through a feminist lens, and will gain field-based knowledge through placement with an organization, community group or service. Six credits.

351 Religious Approaches to Sexuality
Human sexuality is explored from two main perspectives: first, the teachings and practices of various religious traditions; and second, contemporary developments in sexual and reproductive health and rights. Among the issues to be considered are sexuality and gender roles, contraception and abortion, marriage and family. Cross-listed as RELS 401. Prerequisite: any 100-level RELS or WMGS course. Three credits. Not offered 2018-2019.

352 Power and Change
Power and change can be volatile processes. This course allows students to explore them from an anthropological point of view. In 2018-19, the focus will be on food and power. It will address questions such as: How do gender, class, race, culture or other categories of difference affect who cooks and who eats, as well as what they eat? How has food become central to “gastro-diplomacy”? What are the politics of different kinds of food, locally produced food, food aid? How is food managed
491 Selected Topics
The topic for 2018-2019 is The Coquette in 18th-century literature is a trope for modernism as well as a woman who transgresses social and gender boundaries. Using The History of Miss Betsy Thoughtless as our main focus, we will examine how the coquette is characterized variously as inconsequential, threatening, flighty, flirtatious, and in need of reform. A conspicuous consumer, she resists marriage, refuses to settle, and “chooses too much.” The coquette is damned or delightful depending on who judges her. Cross-listed as ENGL 491. Prerequisites: third year standing and 15 credits ENGL. Three credits.

493 Honours Thesis
A required course for students enrolled in the BA Honours with Subsidiary program. Students enrolled in this course will write a thesis about a question that is of interest to them and grounded in relevant scholarly research related to their chosen topic. Six credits.

Other courses may be considered WMGS cross-listed courses after consultation.
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<td>Dalhousie</td>
<td>English</td>
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<td>Ghouma, H.</td>
<td>Dalhousie</td>
<td>Business Administration</td>
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<td>Gougeon, L.</td>
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<td>Human Nutrition</td>
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<td>Hallet-Tapley, G.</td>
<td>Dalhousie</td>
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<td>Hanlon, J.</td>
<td>North Texas</td>
<td>Music</td>
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<td>Karunakaran, V.</td>
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<td>Biology</td>
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<td>Lam, M.</td>
<td>UBC</td>
<td>Human Kinetics</td>
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<td>Lee, D.</td>
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<td>Mathematics, Statistics &amp; Computer Science</td>
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<td>Lukeman, S.</td>
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<td>MacDougall, A.</td>
<td>Victoria</td>
<td>Climate and Environment</td>
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<td>MacIsaac, M.</td>
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<td>Lecturers</td>
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<td>Alex, J.</td>
<td>CA/ASCA</td>
<td>Business Administration</td>
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<td>Price, S.</td>
<td>MBA/St.Mary's</td>
<td>Business Administration</td>
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<td>Part-Time Faculty</td>
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<td>Boyd, C.</td>
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<td>Business Administration</td>
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<td>Brajd, J.</td>
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<td>Earth Sciences</td>
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<td>Brown-Georgallat, K.</td>
<td>NFS/NSCAD</td>
<td>Art</td>
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<td>Currie, E.</td>
<td>Litt/Glasgow</td>
<td>Philosophy</td>
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</tbody>
</table>
Cavanagh, M.  
Clark, S.  
Crouse, Z., M.Ed.(StFX)  
Dunnewold, H., P.Eng. (TUNS)  
Fecteau, J., MFA(UBC)  
Gibson, M., M.A.(Goldsmiths College, UK)  
Gillies, C., LL.B. (Dalhousie)  
Haley, F., M.H.SA(Dalhousie), P.D.T.  
Hatt, B., LL.M(York)  
Jan, S., BA(SF)X  
Kraglund-Gauthier, W., Ph.D.(South Australia)  
Lade, M., M.Ed.(Kiel)  
Lauff, R., M.Sc.(McMaster)  
Legere, R., MBA(St. Mary’s)  
Lin, Q., MMAD  
MacAskill, W., Ph.D.(Alberita)  
MacDonald, D., MA(Acadia)  
MacDonald, S., M.Ed.(MSVU)  
MacEachern, L., MBA (St. Mary’s)  
MacPherson, E., M.Ed.(StFX)  
Mattie, D., BIS(SF)X  
McNeil-Wilson, A., M.Ed.(MSVU)  
Melong, J., MBA(Laurentian)  
Nicholson, M., B.E.D.(TUNS)  
Olson, M., Ph.D.(Alberta)  
Patterson, G., M.Ed(Acadia)  
Pulsifer, M., M.Sc.(Acadia)  
Reid, L., M.Ed.P.D.I, C.D.E.  
Robertson, G., Ph.D(Dalhousie)  
Rogers, W., CSPWC, TWSA, SCA  
Ryan, R., M.Ed.(Memorial)  
Smythe, D., Ph.D.(Toronto)  
Sparks, B., MA(Carleton)  
St. James, P., M.Sc.(Chicago Medical School)  
Sutherland, T., M.Kin.(Calgary)  
Tetu, O.  
Vosseen, J., M.Sc.(UWO)  
Withrow, J., Ph.D.(South Carolina)  
Young, R., BD Vis.Com.(NSCAD), M.Ad.Ed.(StFX)  
\textbf{Human Kinetics}  
Delgado, I., MFA(Instituto Allende)  
\textbf{Human Kinetics}  
Dossa, S.A., Ph.D.(Toronto)  
\textbf{Education}  
Edwards, J.R., Ph.D.(McGill)  
\textbf{Engineering}  
El-Sheikh, S., Ph.D.(Queen’s)  
\textbf{Modern Languages}  
Fabiagnic, U., Doc. lile cycle (Montpellier III)  
\textbf{Mathematics, Statistics & Computer Science}  
Gallant, C.D., Ph.D.(Illinois)  
\textbf{Business Administration}  
Gallant, L., MBA(Queen’s)  
\textbf{Human Kinetics}  
Gallant, M., M.Sc.P.E.(Dalhousie)  
\textbf{Music}  
Genge, A., Ph.D.(State)  
\textbf{Economics}  
Gerrits, M., Ph.D.(Toronto)  
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Gillis, A., Ph.D.(Texas)  
\textbf{Human Nutrition}  
Gillis, D., Ph.D.(Nottingham)  
\textbf{Chemistry / Academic Vice-President 1995-99}  
Gillis, H.A., Ph.D.(Notre Dame)  
\textbf{Nursing}  
Gillis, M.L., M.Sc.(Boston), RN  
\textbf{Nursing}  
Graham, M., MN(Dalhousie), RN  
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Grant, C., Ph.D.(Purdue)  
\textbf{Education}  
Grant, J., Ed.D.(Toronto)  
\textbf{Art}  
Grant, Jr., M.A.(Notre Dame)  
\textbf{Grew, E., MNS(Harvard)  
Harrison, J.F., Ph.D.(Durham)  
\textbf{Psychology}  
Hayes, Z.L., Ph.D.(Waterloo)  
\textbf{History}  
Henke, P.G., Ph.D.(Georgia)  
\textbf{Academic Vice-President 1995-99}  
Hogan, M.P., Ph.D.(Toronto)  
\textbf{Politics}  
Holloway, S., Ph.D.(Ohio State)  
\textbf{Sociology and Anthropology}  
Hunter, D., Ph.D.(King’s, London)  
\textbf{History}  
Jackson, W., Ph.D.(Washington)  
\textbf{Politics}  
Jan, N., Ph.D.(Cambridge)  
\textbf{Physics}  
Jensen, E., MN(Dalhousie)  
\textbf{Nursing}  
Jewers, H., MN(Dalhousie)  
\textbf{Nursing}  
Johnson, R.W., Ph.D.(Manitoba)  
\textbf{Psychology / Academic Vice-President  & Provost 1999-2005}  
Klapstein, D., Ph.D.(Victoria)  
\textbf{Celtic Studies}  
Lander, D., Ph.D.(Nottingham)  
\textbf{Celtic Studies}  
Langley, J.T., M.Sc.(Nebraska)FCGA  
\textbf{Administrative Vice-President 1972-2002}  
Lienge, B.V., Ph.D.(Imperial)  
\textbf{Chemistry}  
Lynch, B.M., Ph.D.(Melbourne)  
\textbf{Education}  
MacAdam, A.J., MPE(Springfield)  
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MacDonald, Rev. R.B., SSL(Biblicum), STD(Urban)  
\textbf{Religious Studies}  
MacDonell, Sr. M., Ph.D.(Harvard)  
\textbf{Julian, Celtic Studies}  
MacEachern, A., Ph.D.(Iowa State)  
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MacFarlane, E., M.Ed.(StFX)  
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MacInnes, D., Ph.D.(McMaster)  
\textbf{Sociology and Anthropology}  
Machnis, M., M.Ed.(Alberta)  
\textbf{Education}  
MacIsaac, T., Ph.D.(Temple)  
\textbf{Education}  
MacKinnon, Rev. G.A., Ph.D.(Ottawa)  
\textbf{Theology / President 1978-90}  
MacKinnon, R.J., Ph.D.(Oklahoma State)  
\textbf{Information Systems}  
MacLeilian, M., MN(Dalhousie)  
\textbf{Nursing}  
\textbf{Education}  
MacNeil, P., Ph.D.(Wisconsin)  
\textbf{Adult Education}  
Mahody, M.J., M.Ed.(MSVU)  
\textbf{Education}  
Marshall, W.S., Ph.D.(UBC)  
\textbf{Engineering}  
McAuliff, E.J., Ph.D.(Toronto)  
\textbf{Chemistry}  
McDonnell, R., ME(TUNS)  
\textbf{Engineering}  
McFarland, J.M., DPE(Springfield)  
\textbf{Human Kinetics}  
McMullin, J., Ph.D.(Boston College)  
\textbf{Director of Counselling}  
Mensh, J.R., Ph.D.(Toronto)  
\textbf{Philosophy}  
Miller, A.G., Ph.D.(Queen’s)  
\textbf{Biography}  
Milton, P., Ph.D.(Notre Dame)  
\textbf{English}  
Morrisley, L., MNS(Cornell)  
\textbf{Human Nutrition}  
Meyer, M., Ph.D.(McGill)  
\textbf{Education}  
O’Brien, K., Ph.D.(Notre Dame)  
\textbf{English}  
O’Donnell, J.C., C.M., M.Mus.(King’s, London), Ph.D.(hon)StFX  
\textbf{Music}  
Olson, M., Ph.D.(Alberta)  
\textbf{Education}  
Paisley, R., Ph.D.(India)  
\textbf{Chemistry}  
Parsons, C.G., MA(Hons.),Edinburgh)  
\textbf{Celtic Studies}  
Pencer, E.L., Ph.D.(Waterloo)  
\textbf{Psychology}  
Phillips, P., Ph.D.(Toronto)  
\textbf{History}  
Pink, D., Ph.D.(UBC)  
\textbf{Physics}  
Pluta, L., Ph.D.(Queen’s)  
\textbf{Economics}  
Quigley, A., Ph.D.(Northern Illinois)  
\textbf{Adult Education}  
Quinn, J., Ph.D.(Wisconsin)  
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Quinn, W.R., Ph.D.(Queen’s), P.Eng.  
\textbf{Engineering}  
Rancy, C., Ph.D(Toulouse)  
\textbf{Modern Languages}  
Riley, S.E., D. Phil.(Oxford)  
\textbf{President, 1996-2014}  
Roach, I., MFA(Guanajuato)  
\textbf{Art}  
Schuegraf, E.J., Ph.D.(Alberta)  
\textbf{Mathematics, Statistics & Computer Science}
Seymour, N., Ph.D.(McGill) Biology
Shaw, J., Ph.D.(Arizona)RN Nursing
Smith, G., M.Mus.(Eastman) Music
Sony, S.D., MN(Dehi)RN Nursing
Sproule-Splakki, B., M.Sc.N.(Pennsylvania)RN Biology
Steinitz, M.O., Ph.D.Northwestern) Physics
Stouffer, A., Ph.D.(Claremont) History
Sullivan, A., Ph.D.(UBC) Human Nutrition
Sypererek, A., BFA(NSCAD) Art
Taylor, J.O., Ph.D.(Ottawa) English
Trites, G., BA(York), FCA(ICANS) Business Administration
Walsh, P., Ph.D.(Dublin) English
Wood, G., Ph.D.(Bologna,Italy) Modern Languages
Woodfine, W., Ph.D.(MIT) Economics
Young, R.K., Ph.D.(Toronto) Business Administration

Nurse Educators
Briand, K., MN, RN Nursing
Cabrera, D., MN(UNB), RN Nursing
Chisholm, M., B.Sc.N.(SFx), RN Nursing
Connolly, D., MN(Southern Queenslands), RN Nursing
Delorey, D., B.Sc.N.(Dalhousie), RN Nursing
Dobbin, A.M., M.Ed.(SFx), RN Nursing
Farrell, L., B.Sc.N.(SFx), RN Nursing
Fraser, Y., M.Ed.(SFx), RN Nursing
Kenny, K., M.Ed.(SFx), RN Nursing
LePage, F., MN(Southern Queenslands), RN Nursing
Livingston S., B.Sc.N(SF), RN Nursing
MacDonald L., B.Sc.N.(SFx), RN Nursing
MacDonald, A., B.Sc.N(SF), RN Nursing
MacKenzie, P., B.Sc.N.(SFx), RN Nursing
MacNeil, M., M.Ad.Ed.(SFx), RN Nursing
Mbogu, J., M.Ed.(SFx), RN Nursing
Panagopoulos, W., M.Ed.(SFx), RN Nursing
Wood, S., M.Ad.Ed.(SFx), RN Nursing

Lab Instructors
Azad, M., MA.Sc.(Dalhousie) Engineering
Boucher, S., B.Sc.(SFx) Chemistry
Buckland-Nicks, L., B.Sc.(Alberta) Biology
Budicky, P., B.Sc., MBA(Waterloo) Chemistry
Burbridge, M., M.Sc.(Victoria) Biology
Bursey, S., B.Sc.(Memorial) Chemistry
Cozzi, R., M.Sc.(Quebec) Biology
Fraser, H., B.Sc.(SFx) Chemistry
Fraser, J., B.Sc., B.Ed.(SFx) Chemistry
Hanlon, B., B.Sc.HNU(SF) Chemistry
Hazel, M., M.Sc.(McMaster) Biology
Hunter, K., B.Sc.(SFx) Biology
Kane, K., M.Sc.(Calgary) Human Kinetics
Keizer, P., B.Sc.(SFx) Mathematics, Statistics & Computer Science
Layes, J., BA(SF) Psychology
Lauff, R., M.Sc.(MacMaster) Psychology
LeGey, W., B.Sc.(SFx) Psychology
MacNeil, A., M.Ed.(SFx) Psychology
Maillet, D., B.Sc.
Marchand, C., B.Sc., B.Ed.(MSVU) Modern Languages
McIvor, R., BA(SF) Biology
Murphy, C., M.Sc.(McGill) Earth Sciences
Powell, J., M.Sc.(SFx) Physics
Rennie, C., M.Sc.(Queen's) Earth Sciences
Rogers, L., B.A.(SFx) Biology
Schuergraf, M., M.Sc.(York) Biology
Schumacher, M., M.Sc.(Waterloo) Human Kinetics
Spencer, G., M.Sc.KIN(Windsor) Earth Sciences
Vossen, J., M.Sc.(Western Ontario) Human Kinetics

Student Success Centre
Leeming, M., Ph.D.(Dalhousie) Interim Co-ordinator
ten Brinke, C., BA(CBU) Learning Skills Instructor

Professor Emeritus/a
Aalto, S., Ph.D.(Oregon State) Mathematics, Statistics & Computer Science
Brooks, G.P., Ph.D.(Queen’s, Belfast) Psychology
den Heyer, K.C., Ph.D.(Manitoba) Psychology

Senior Research Professors
Bigelow, A., Ph.D.(Simon Fraser) Psychology
Buckland-Nicks, J., Ph.D.(Alberta) Biology
Clancy, P., Ph.D.(Queen’s) Political Science
Dossa, S.A., Ph.D.(Toronto) Political Science
Edwards, J.R., Ph.D.(McGill) Psychology
Gillis, D., Ph.D.(Nottingham) Human Nutrition
Holloway, S., Ph.D.(Ohio State) Political Science
Lynch, B.M., Ph.D.(Melbourne) Chemistry
MacDonald, B., Ph.D.(CUA) Sociology and Anthropology
Macleod, D., Ph.D.(McMaster) Sociology and Anthropology
Marshall, W.S., Ph.D.(UBC) Biology
Meyer, M., Ph.D.(McGill) Education
Miller, A.G., Ph.D.(Queen’s) Biology
Phillips, P., Ph.D.(Toronto) History
Pink, D., Ph.D.(UBC) Physics
Quinn, W.R., Ph.D.(Queen’s), P.Eng. Engineering

Chaplains
MacPherson, F., G., Ph.D.(AST), M.Div.(Saint Paul) University Chaplain
MacPherson, S., M.Div.(Saint Mary’s) Associate Chaplain
Smith, Rev. Peter United
Channen, Rev. Susan, M.Div.

Library
TBA University Librarian
Cameron, S., MLIS(UWO) Librarian
MacKenzie, K. MA(Saint Mary’s) Archivist
Matheson, L., MLIS(McGill) Librarian
van den Hoogen, S., MLIS(Dalhousie) Librarian

Coady International Institute
Alma, E., MA(Royal Roads) Associate Director, Women and Indigenous Programming
Baden-Clay, A., BA(UNSW) Manager, Youth Programs
Bourgeois, R., Ph.D.(Toronto) Teaching Staff, International Centre for Women’s Leadership
Cash, C., Ph.D.(Waterloo) Program Staff
Chowdhury, N., M.Sc.(Jahangirnagar) Specialist, Women’s Leadership and Gender
Cunningham, G., MA(Guelph) Local to Global Innovation and Knowledge

den Heyer, M., Ph.D.(Dalhousie) Senior Research Professor
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Ghore, Y., MPA(Columbia) Senior Research Professor
Gladdik, O., M(AUWO) Senior Research Professor
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Schoggin, A., MA(Carleton) Associate Director, Education and Administration
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Stouffer, A., Ph.D.(Claremont) Sociology and Anthropology
Van den Brink, D., BA(CBU) Director, Education Programs
Wells, S., Ph.D.(Manitoba) Director, Education Programs
Webber, J., Ph.D.(Kwa-Zulu Natal) University Vice-President
GLOSSARY

Academic Calendar (also known as the Calendar)
The university’s official publication which outlines admission requirements, fees, grading systems, academic regulations, course offerings, and other information. Students admitted in a particular year are bound by the regulations described in the Academic Calendar for that year.

Academic Year
The regular academic year at StFX runs from September to April. The first term lasts from early September to mid-December and the second term, from early January to late April. See also spring and summer sessions.

Advanced Standing
Students may enter a higher level of courses in a subject when they have mastered the lower, usually introductory, level. This is normally permitted after completion of international baccalaureate (IB) or advanced placement (AP) courses. See section 1.3. A. Advanced standing does not reduce the number of credits required for a degree.

Audit
To take a course without receiving academic credit. A student may audit any course with the permission of the professor who teaches it. A student may attend and participate in the course and may, in agreement with the instructor, choose to receive feedback from submitted course work and/or exams, but will not receive a grade and will not be given credit for the course. The fee for a course taken for audit is normally one-half of the normal course fee. See 3.1.

Bachelor’s or Baccalaureate Degree
The degree usually awarded after three or four years of study and successful completion of course and program requirements. A bachelor’s degree may be awarded in arts (BA), science (B.Sc.), business administration (BBA), or education (B.Ed.); some may be earned with honours, with advanced major, or with major. See page 3 for more information on bachelor’s degrees at StFX.

Bursary
A monetary award based on financial need and reasonable academic standing.

Chair
The head of an academic department, for example, the chair of the Department of Celtic Studies.

Convocation
The graduation ceremony held every spring and fall at which degrees and diplomas are awarded.

Credit
The value assigned to a course. A course with three or more contact hours per week for the academic year has a value of six credits and is called a full course. A course taught for three hours a week for one term has a value of three credits. When students successfully complete a course, they are said to have credit for the course.

Dean
At StFX, there are four deans: The Dean of Arts, the Dean of Business, the Dean of Education and the Dean of Science.

Dean’s List
An academic honour granted to students who achieve high grades while enrolled in at least 24 credits. See 3.19.

Decile
The student decile ranking in a course (10 high, 1 low) recorded for courses with 15 or more registrants.

Diploma
An earned document which follows a program of study typically lasting two years or less.

Distinction
A designation awarded to students whose general average over their final three years of study is 80 or higher. Minimum averages each year may also apply. See 3.20.

Electives
Courses which are not specified in a degree program. Electives may be open, that is, chosen by the student, or approved. Approved electives require permission from either the chair of the department of the student’s major, or the chair of the department in which the student wishes to take a course. Arts/science electives do not include professional program courses such as aquatic resources, business administration, education, engineering, human kinetics, human nutrition or nursing.

Faculty
A grouping of departments which give academic instruction in related subjects. At StFX, there are four faculties: the Faculty of Arts, the Faculty of Business, the Faculty of Education and the Faculty of Science. The Faculty of Arts is comprised of subjects in the humanities and social sciences. The Faculty of Business includes courses in business administration. The Faculty of Education includes education courses at the undergraduate, graduate and doctoral level. The Faculty of Science contains the life, earth and physical sciences, as well as engineering, human kinetics, human nutrition, nursing and mathematics, statistics, and computer science. The combined Faculties of Arts and Science offer climate and environment and health programs. The term faculty is also used to describe members of the teaching staff of the university.

Full Time/Part Time
There are several definitions of full time/part time. Normally a student carries 30 credits for an academic year. Only students carrying at least 30 credits are considered for in-course scholarships. For the purpose of billing students, the business office considers a student carrying 24 or more credits to be full time. For the purpose of student loans 18 to 24 credits, or 60 percent to 80 percent of the normal load, may be considered full time by agencies which administer loan programs. For purposes of reporting to Statistics Canada full time is defined as 18 credits or more.

Grade Appeal
The process by which a student appeals his or her final grade for a course. See 3.13.

Graduate Degree
Master’s or doctoral (Ph.D.) degrees require completion of an undergraduate degree first.

Honours
A degree which requires not only depth and breadth of subject study, but also superior academic achievement.

Humanities
The study of human thought including art, Catholic studies, Celtic studies, classical studies, English, French, German, history, Mi’kmaq, music, philosophy, religious studies, Spanish.

Invigilator
A person who, in the absence of the professor, administers and oversees examinations.

Junior
A third-year student.

Levels
Course Level
Courses are numbered and referred to according to the normal year of study in which a student would complete them, as in 100-level (first year), 200-level (second year), 300-level (third year) and 400-level (fourth year) courses.

Student Level
A student’s level corresponds to the level of his/her degree program. The most common student levels at StFX are UG (Undergraduate), ED (Bachelor of Education) and GR (Graduate).

Year of Study
Most four-year degree programs require the completion of 120 credits, normally at 30 credits per year for four years. Students’ year of study is based on the number of credits they have earned towards their current degree. Students are “promoted” to the next year of study when they are within six of the required number of credits for that year. For example, a student who has earned 54 credits is considered to be a third year (junior) student.

Major
A student’s primary subject. StFX also offers joint majors, studying a combination of two subjects. While StFX does not have programs with double majors, there are opportunities for students to have the equivalent of double majors.

Mature Student
A candidate who has not fulfilled the normal admission requirements and has been out of school for at least three years.

Minor
The secondary subject or area of study, normally at least 24 credits in one subject.
Non-Degree Student
A student who is not registered in a degree program but is enrolled in courses either part time or full time.

Orientation
A program for new students providing an academic and social introduction to university life prior to the beginning of classes in September.

Pair
Twelve credits in one subject, with at least six credits at the 200-level or higher. As exceptions, language pairs in French, Celtic Studies and Classics may be composed of 12 credits at the 100-level. A student may complete only one pair from a department, and may not complete a pair in the major or minor subject. A pair may not be completed in any of the professional or applied program disciplines: AQUA, BSAD, ENGR, HKIN, HNU or NURS.

Passing Grade
The passing grade for all undergraduate courses is 50. Some programs have specific passing grade requirements. See chapter 3. For education, see chapter 4. For graduate studies, see chapter 8.

Pattern
The recommended or suggested series of courses a student takes in order to fulfill degree requirements.

Placement Test
Incoming students who wish to study modern languages must take placement tests to determine their eligibility for, and appropriate level of, study. See department guidelines, chapter 9.

Plagiarism
A form of cheating in which a student attempts to pass off as his or her work the words or ideas of another person or another writer. See 3.8.

Prerequisite
A course which must be completed before taking another course.

Program
An approved set of courses, requirements and study pattern, leading to a degree, diploma or certificate.

Rank
The student’s rank in his/her group and year of study. Ranking is not recorded for students enrolled in less than 24 credits or for those who withdraw during an academic year.

Registrar
The university officer responsible for managing academic information and processes and enforcing the regulations contained in the Academic Calendar as they pertain to students’ academic performance.

Registration
The process of formally enrolling in courses.

Repeated Course
When a student repeats a course, the original grade remains on the transcript and in the student’s average. However, the credits originally earned are removed from the student’s transcript.

Scholarship
A monetary award based on academic merit or excellence.

Senior
A fourth-year student.

Service Learning
Service learning is an innovative way to integrate experiential learning, academic study and community service. It is an opportunity for students to apply what they are learning in the classroom in a community setting. The goal is to blend service and learning so that the service reinforces, improves and strengthens learning. Service learning is possible in many academic disciplines and through a broad range of courses and service experience.

Social Sciences
The systematic study of human behaviour, including anthropology, development studies, economics, political science, psychology, public policy and governance, sociology and women’s and gender studies.

Sophomore
A second-year student.

Special Needs Student
A student with a physical or learning disability. See 1.1.

Spring Session
An eight-week term from early May to late-June.

Student Loan
A sum of money which must be repaid. Loans to university students are obtained through the Canada Student Loan Program.

Study Abroad
The opportunity for a student enrolled in a four-year program to study at another accredited university as part of a degree from StFX. See 3.18.

Subject Abbreviations
The abbreviations below are used throughout the Calendar and on transcripts:

- ADED: Adult Education
- ANTH: Anthropology
- AQUA: Aquatic Resources
- ART: Art
- BIOL: Biology
- BSAD: Business Administration
- CATH: Catholic Studies
- CELT: Celtic Studies
- CHEM: Chemistry
- CLAS: Classical Studies
- CLEN: Climate & Environment
- COOP: Co-operative Education
- CSCI: Computer Science
- DEVSS: Development Studies
- ECON: Economics
- EDUC: Education
- ENGL: English
- ENGR: Engineering
- ESCI: Earth Sciences
- FREN: French
- GERM: German
- HIST: History
- HN: Human Nutrition
- IDS: Interdisciplinary Studies
- MATH: Mathematics
- MIKM: Mi'kmaq
- MNST: Ministry
- MUSI: Music
- NURS: Nursing
- PGOV: Public Policy and Governance
- PHIL: Philosophy
- PHYS: Physics
- PSCI: Political Science
- PSYC: Psychology
- RELS: Religious Studies
- SOCI: Sociology
- SMGT: Sport Management
- SPAN: Spanish
- STAT: Statistics
- WMGS: Women’s and Gender Studies

Subsidiary Subject
When the study of two subjects is combined such that one is subordinate to the other, the second is considered a subsidiary to the first. Within the BA Honours with Subsidiary program, the subjects in which an honours is possible are those in which one may complete a single honours, with the added exceptions of development studies and women’s and gender studies. A subsidiary is possible in those fields in which one may complete at least a major in the Bachelor of Arts, with the added exception of art history.

Summer Session
A six-week term scheduled from early July to mid-August.
Thesis
The lengthy paper required for an honours or graduate degree.

Transcript
The record of a student’s program of study, courses taken, and grades achieved. See section 3.15 for information on academic records.

Transfer Credit
Courses taken at another university or college are given equivalent StFX course numbers and credit value for transfer credit. These courses may be used to meet StFX degree program requirements.

Undergraduate Degree
A first degree completed at a university or college. At StFX, the first degree is the baccalaureate degree which takes four years of full-time study to complete.

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