St. Francis Xavier University
Academic Calendar
2003-2004

1. Admission Procedures and Requirements

1.1 ADMISSION PROCEDURES

Address all applications and inquiries concerning admission to:

The Admissions Officer
St. Francis Xavier University
PO Box 5000
Antigonish, NS B2G 2W5
Phone: 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 $30 is required. Applicants should request their high school guidance counselor to submit a school transcript and confidential report. Students from the United States must submit Scholastic Achievement Test (SAT) scores or ACT Assessment scores by July 15.

The admission procedure is complete when the candidate has returned a confirmation form together 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 as it applies to universities.

Entrance Scholarships

All applicants from high school with superior grades will be considered for entrance scholarships. See section 2.4 for information on university scholarships.

Transfer Candidates

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

Nova Scotia Community Colleges

Applicants who have earned a diploma, completed two years of study at a community college, and achieved an overall minimum average of 75 may be granted up to 30 credits. Credits may count as electives or, if areas of study can be matched to appropriate courses offered at StFX, credits may count as courses in specific subjects.

Ontario Community College System

Applicants who have earned a diploma, completed three years of study at a community college, and achieved an overall minimum average of 75 may be granted up to 30 credits. Credits may count as electives or, if areas of study can be matched to appropriate courses offered at StFX, credits may count as courses in specific subjects.

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.

Part-Time Degree Programs

Details of the part-time undergraduate degree programs are given in section 4.15.

Special Needs

To assist students with physical or learning disabilities, the university offers the services of a contact person. For further information, call 902-867-2281.

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 enrollment 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 FROM NOVA SCOTIA GRADE XII

Applications from students with averages of 70 or higher are processed as soon as documentation is complete. When a student's average is less than 70, the application may not be considered until June 15.

a) Applicants are normally required to have the following:
   i) a combined average of 65 in grade XI and grade XII to include English each year, with no failures; and
   ii) credit for five university preparatory courses in each of grade XI and grade XII.

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. Two of the five subjects may be in a university preparatory subject not listed above.

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 aquatic resources, Catholic studies, Celtic studies, economics, English, French, history, mathematics, statistics, and computer science, music, philosophy, political science, psychology, religious studies, sociology/anthropology, and women's studies.
   ii) Students are expected to declare major and minor subjects by registration for the third year. Students may choose the four-year BA advanced major or honours program during their second year of study.

e) The Bachelor of Science (B.Sc.) degree with advanced major or honours is offered in biology, chemistry, economics, earth sciences, mathematics and computer science, physics and psychology. A B.Sc. major degree is also offered in these subjects and aquatic resources, but not in economics or psychology. Students may choose the B.Sc. advanced major or honours during their second year of study.

f) Students accepted into the Bachelor of Science in Nursing (B.Sc.N.) are required to have current certification in Level C CPR and standard first aid. Candidates for the nursing program must be screened through the child abuse register of their home province and Nova Scotia, and have a criminal records search completed. Students must submit proof of certification in Level C CPR, and standard first aid, and submit documentation of their current child

abuse register search and criminal records check to the admissions office by August 1. Prior to entering the program students are responsible to have their immunizations up-to-date. Hepatitis B immunization and tuberculin (Mantoux) testing are also recommended.

g) Advanced Placement (AP): The AP program is accepted for admission on the same basis as Nova Scotia grade XII. Students who have completed courses in the AP program may be granted advanced standing for individual AP courses for which a grade of 3 or higher has been achieved.

h) International Baccalaureate (IB): The IB program is accepted for admission on the same basis as Nova Scotia grade XII. For students who complete the IB Diploma, admission to the university will require a minimum of 24 points including bonus points. Due to limited enrollment, a higher score will be required for admission to some programs. Advanced standing may be granted for individual higher level subjects for which a grade of 5 or higher has been achieved.

i) Early fall admission*:* Students who have a grade XI average of at least 80% may be considered for early fall admission before their first set of grade XII marks is available. Students applying for early fall admission should include their final grade XI marks and a school-approved list of courses they are taking in grade XII (both semesters) with their application. Grade XII courses must be consistent with the guidelines listed above. For further information, contact the admissions office

1.4 ADMISSION FROM OTHER PROVINCES

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

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.

British Columbia, Manitoba, New Brunswick, Northwest Territories, Nunavut, Prince Edward Island, Saskatchewan, and 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 Nova Scotia students. Courses needed to satisfy entrance requirements must be at the 3000 level and students must achieve at least 11 credits.

Ontario

Under the current curriculum, Ontario secondary school students must have a minimum of six Ontario Academic Courses (OAC) and must have completed the Ontario Secondary School Diploma (OSSD) to be considered for admission.

With the new curriculum, Ontario secondary school students must have a minimum of six grade XII U or U/C courses (including any program-specific prerequisites) and must have completed the Ontario Secondary School Diploma (OSSD), or equivalent, to be considered for admission.

Quebec

Quebec applicants who have completed senior matriculation or one year of CEGEP will be considered for entry into the first year of a program. Applicants who have completed the two-year CEGEP program with an average of at least 70, and who receive the DEC, will receive 30 credits and be considered second year in a four-year degree.

Faculty of Arts

Program (unless otherwise indicated)	**Description**	**High School Requirements**
Bachelor of Arts with Major	Offered in aquatic resources, Catholic studies, Celtic studies, development studies, economics, English, French, history, mathematics, statistics, and computer science, music, philosophy, political science, psychology, religious studies, sociology/anthropology, women's	English and four university preparatory courses in grade XII. See 1.3 d.

	studies. Students may choose the four-year advanced major or honours degree during their second year of study.	
Bachelor of Business Administration	Students may choose the general degree; the degree with major in aquatic resources; major in accounting, enterprise development, finance, information systems, leadership studies and marketing; honours in accounting, enterprise development, finance, information systems, leadership studies and marketing; or joint honours in business administration and economics. ***New*** Co-op programs are available.	English, math and three other university preparatory courses in grade XII. **Limited enrollment**
Bachelor of Information Systems	Designed to prepare graduates for positions such as systems analyst, applications programmer or information systems specialist. Students may choose the major or honours in enterprise resource planning, e-business, or management information systems during their second year of study. ***New*** Co-op programs available.	English, math and three other university preparatory courses in grade XII. **Limited enrollment**
Bachelor of Arts in Human Kinetics	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.	English; one of math, biology, chemistry or physics; and three other university preparatory courses in grade XII. **Limited enrollment**
Bachelor of Arts in Music Bachelor of Music	Students in the BA in Music often continue their studies in education. This program combines composition, arranging and	Academic entrance requirements for all three music programs are the same as those described above for the BA. Admission depends on the student's performance during an

Diploma in Jazz Studies (two years)	performance The diploma is for students who wish to enter the field of commercial music. The first and second year of the Bachelor of Arts in Music, the Bachelor of Music and the Diploma in Jazz follow a common curriculum in jazz studies. Students apply for admission to the Bachelor of Arts in Music with Advanced Major or Honours, or the Bachelor of Music with Honours during their second year of study.	audition, which may be performed in person or submitted on tape. See 1.3 c. **Limited enrollment**
Bachelor of Education (two years)	A professional degree program that prepares graduates to enter the school system as teachers, at either the elementary or the secondary level.	Completion of an undergraduate degree (BA, B.Sc. or equivalent). Minimum average of 70 in senior year of the undergraduate program. **Limited enrollment**

Faculty of Science

Program (four years unless otherwise indicated)	**Description**	**High School Requirements**
Bachelor of Science with Major	Major degree program offered in: aquatic resources, biology, chemistry, earth sciences, mathematics, statistics and computer science, and physics. During their second year of study, students may choose the advanced major, joint advanced major, honours or joint honours program in the above subjects, and in economics and psychology but not aquatic resources.	English; pre-calculus math; two of biology, chemistry or physics; and one other university preparatory course in grade XII. See 1.3 e. **Limited enrollment**
Bachelor of Science in Human Kinetics	The scientific study of human movement prepares students for a variety of options: employment and careers in the health and	English; two of math, chemistry, biology or physics; and two other university preparatory courses in

	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.	grade XII. **Limited enrollment**
Bachelor of Science in Human Nutrition	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 Diploma program and for the Graduate Dietetic Internship program.	English; math; two of biology, chemistry or physics (normally biology and chemistry); and one other university preparatory course in grade XII. **Limited enrollment**
Bachelor of Science in Nursing (four years and one intersession)	The program prepares nurses to think critically and creatively by providing a sound education in nursing science, related sciences, and the humanities. Students may choose the advanced major or honours program during their second year of study. Graduates practice nursing in acute care or community settings, through teaching and leadership.	English, math, chemistry, either biology or physics, and one other university preparatory course in grade XII. See 1.3 f. **Limited enrollment**
Engineering Diploma (two years)	Upon completion of the diploma, students transfer to another university such as Dalhousie University, to complete the remaining requirements for the four-year Bachelor of Engineering degree.	English; pre-calculus math; two of biology, chemistry or physics (normally chemistry and physics); and one other university preparatory course in grade XII. **Limited enrollment.**

Graduate Sutdies	Diploma in Adult Education	Diploma in Ministry
See section 6	*See section 4.13*	*See section 4.14*

XE "ADMISSION:FROM THE US" 1.5 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 table below.

Program	Additional Subjects and Notes at 1.3
Bachelor of Arts (4 years) Bachelor of Arts in Human Kinetics (4 years) Bachelor of Arts in Music (4 years) Bachelor of Music (4 years) Diploma in Jazz Studies (2 years)	see note d see note c see note c see note c
Bachelor of Business Administration Bachelor of Information Systems	3 mathematics
Bachelor of Science Bachelor of Science in Human Nutrition Bachelor of Science in Nursing Diploma in Engineering	4 mathematics and 4 science
Bachelor of Science in Human Kinetics	4 science and/or mathematics

1.6 ADMISSION FROM OTHER SYSTEMS OF EDUCATION

International applications will be considered on an individual basis. Applicants should contact the admissions office before March 1; all documentation must be received by April 30.

For students from a British system of education, two General Certificate of Education (GCE) advanced-level examinations or the equivalent, with grades of A, B, or C, are normally required for admission to any program. Students may also be granted advanced standing in certain programs. A student who has successfully completed one year of study in an academic program beyond the GCE at the ordinary level may be considered for admission. All students must have completed English with a minimum grade of B and four other academic courses with grades of at least C at the ordinary level. 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 Test of English as a Foreign Language (TOEFL) or its equivalent is recommended. If TOEFL scores are submitted, then a minimum score of at least 580 on the paper-based test, or 236 on the computer-based test, and the Test of Written English with a minimum score of 4.0, may be required.

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.

Associates of Nova Scotia Teachers College (NSTC) may apply for admission to the program leading to a B.Ed. degree granted by the university in association with NSTC.

See section 4.12 for admission and program requirements.

1.8 ADMISSION TO GRADUATE PROGRAMS

The requirements for admission to graduate programs are given in section 6.

2. General Information

2.1 UNIVERSITY FEES

2.1.1 Payment Regulations

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 Visa, MasterCard, American Express, debit card, telebanking or online banking.
A portion of the fees is due and payable at registration in September and the balance at registration in January.
Recipients of university scholarships may deduct one-half the value of their scholarship from fees required in September. The balance of the scholarship is applied to fees due in January.

2.1.2 Refunds

For students who drop one or more course(s) or withdraw from StFX university, refunds are applied according to the date, within the applicable term, on which the drop(s) occur(s) or the student withdraws. For each term, there is a date by which all course changes for that term must be completed. After that date, tuition and fee charges are refunded at 95% for the first week and then at 5% less per week for every week thereafter. Refunding in this manner continues until the last day on which courses may be dropped for the applicable term, after which there is no refund for courses in that

term. *These dates are clearly indicated in the calendar of events at the front of this StFX Academic Calendar*. Students are not charged for second-term courses if they drop those courses or withdraw prior to the last day for changing second-term courses.

The refunding process applies the appropriate refund percentages to the credit hour value of courses that are dropped and then adds all of the student's credit hours to determine the correct tuition and fee assessment.

For example, if a student were registered in 30 credits (full tuition charge of $4,940 in 2002-2003), consisting of three full-year courses (18 credits), two first-term courses (6 credits) and two second-term courses (6 credits) and dropped one course from each term on October 20, the revised charges would be calculated as follows:

First-term course dropped,
at 75% refund: .25 x 3 = .75 credit hours
Second-term course dropped,
at 100% refund: 0.0 x 3 = 0.0 credit hours
Full-year course dropped,
at 75% refund: .25 x 6 = 1.5 credit hours
Courses still registered in (18 credits), 18.0 credit hours

Total = 20.25 credit hours

In this example the student's new charge is 20.25 x $175 per credit hour = $3,543.75. Since the student was originally charged $4,940.00, the refund will be $1,396.25.

Students should note that no reduction in fees is allowed for late entrance.

Unwarranted breakage of or damage to StFX university property will be charged to the student responsible.

For more information on fee assessment and refunding, refer to the accounts receivable web page at <www.mystfx.ca/campus/admin/accounts-receivable>

2.1.3 Tuition Fees

The fees given here are for 2002-2003 and are subject to change. An addendum to this Academic Calendar will show the fees for 2003-2004. The information is also available on the Internet at <www.mystfx.ca>

Tuition fees including tuition, laboratories, library, and university health service are:	
Bachelor and diploma programs	$4940
Part-time courses, education program (6 credits)	1050
Part-time students, per 6 credits (see note a)	1050
Master's program (see note b)	5640
Bachelor of Science in Nursing (B.Sc.N.) (intersession)	1050
Diploma in Adult Education	3550
International students (see note c)	

a) Students registered in fewer than 24 credit hours are charged on a pro-rata basis at $175 per credit hour. Between 24 and 30 credit hours, inclusive, students are charged full-time tuition. Above 30 credit hours, students are charged the full-time rate plus an additional $157.50 for each credit hour above 30.

b) Master of Adult Education (M.Ad.Ed.) students should consult the department chair regarding pro-rated tuition fees after the first year of study.

c) Students who are not Canadian citizens or permanent residents are required by the Government of Nova Scotia to pay an international student fee in addition to tuition. The fee is $1,700 for full-time students (24 or more credit hours) who began prior to 1996, and $3,600 for full-time students who began in 1996 or later.

d) A pro-rated technology fee is assessed up to 24 credit hours, at $8.33 per credit hour. For 24 or more credit hours, a flat rate of $250 is assessed for the technology fee.

e) Students who audit courses (not for credit) are charged one-half of the regular tuition fee.

f) Seniors (age 65 and over) are not charged tuition fees.

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. Up to 18 credits hours, the Students' Union fee is assessed on a pro-rata basis at $2.17 per credit hour. For 18 or more credit hours, the fee is a flat rate of $132.50.

Capital Campaign

Students registered in 18 or more credits automatically make a contribution of $15.00 to the university's capital campaign.

Students' Union fees fund the following:

	full-time	*part-time per credit*
Refugee student support	$ 2.50	
Athletic fee	6	2.17
Bloomfield Centre/ Students' Union building	35	.55
University fundraising campaign: planning for student priorities	15	.27
Students' Union general budget	70	1.23
Capital Campaign fee	15.00	
	$ 147.50	$ 2.17

The general budget covers: student societies; the student newspaper, radio station, yearbook, and handbook; orientation; the walk-home program, off-campus housing service, and tutoring service; activities and concerts; membership in the Canadian Campus Business Consortium (CCBC); the film and lecture series; lobbying and publicity; issue awareness campaigns; the resource centre; elections; the campus police force; and general operations.

Health Plan

Canadian students	$ 120.00
International students	$ 614.88

Students registered in 18 or more credits are automatically enrolled in the plan and charged the applicable fee when they register for classes for the academic year.

If a student is already covered under an extended health plan (this does not mean a provincial health care plan), they may opt out of the plan and receive a reversal of the health plan fee charged.

To opt out students must show proof of equivalent coverage to the Students' Union secretary by September 30, 2003.

 **2.1.5 Other Fees** 

All fees are subject to revision.

Application fee for admission to undergraduate and B.Ed. programs	$ 30
Late payment fee (each term) (see note a)	25
Confirmation payment:	
M.Ad.Ed. programs	200
New and B.Ed. students (see note b)	100
New B.Sc.N. students (see note c)	100
Re-entry	25
Transcript of record (each copy)	5
Graduate students continuing *in absentia*	200
Supplementary exam (each paper)	100
Fee per extra 6 credits	880
Fee per extra 3 credits	440
Extension fee for M.Ad.Ed. program	1746
NSF cheque	15

Notes:

a) A late payment fee of $25 is charged in the first term if payment is delayed beyond September 15, and in the second term if payment is delayed beyond January 15.

b) A student who declines an acceptance within 30 days of paying a $100 confirmation fee qualifies for an $85 refund. No refunds are made after 30 days or after August 1.

c) See b above except that no refunds are made after July 1.

Monthly late payment fee: a late payment fee of one percent per month, or 12 percent per annum, will be charged on overdue accounts as of the last banking day of each month. The charge will begin in the first semester at the end of September, and in the second semester at the end of January.

Graduation fees for students in full-time study will be billed by the business office. Others will pay the graduation fee at the time of application.

2.1.6 Non-Payment of Fees

Students who have a balance of fees owing from a previous term will not be permitted to register for a subsequent term unless they have made satisfactory arrangements with the business office.

The university reserves the right to cancel the registration of students who fail to pay any fees owing to the university. The university reserves the right to refuse to let students sit for examinations if their fees to the university are overdue. The university will not release information about a student's attendance or performance at the university (including provision of a transcript) unless arrangements satisfactory to the business office have been made by the student for the payment of any outstanding fees. The university is not responsible for deadlines missed by students who do not pay their fees on time (e.g., deadlines for supplementary exams).

The university reserves the right to cancel residence and meal contracts for non-payment of fees.

2.2 RESIDENCE

Students in residence agree to be governed by the StFX university Community Code and the Residence Life Handbook; 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.

2.2.1 Application for Residence

New, Re-Entry and Transfer Students

The residence and food service application and contract form will be mailed with letters of acceptance to StFX. Applications from newly accepted students must be accompanied by a $300 room deposit, which includes a non-refundable $100 residence application fee. The total deposit is applied toward the student's residence and board fees. No application will be considered complete without the deposit.

Returning Students

Returning students are encouraged to apply for residence during March room selection. Returning students have their choice of rooms up to May 15, with preference for single rooms given to the more senior student. Rooms will not be held for returning students who have not filled out an application. After May 15, priority for room assignments and roommate preferences is given to new students normally in order of the date of receipt of their completed application.

2.2.2 Residence and Meal Fees and Regulations

All students living in residence (with the exception of the apartment-style residence) are required to participate in a combined room and board plan. Students living in apartment-style residence are required to make a minimum commitment to the food service program usually in the form of declining cash balance (DCB), though they have the option of any of the meal plans. Off-campus students may purchase a meal plan and/or DCB or buy meals on a cash basis.

Residence fees must be paid at registration; however, payment may be made in two installments. A first installment may be made in September with the balance due at registration in January.

In 1999, as part of our continuing efforts to improve the quality of residence life, Morrison Hall, the architecturally magnificent dining facility, was completely renovated and enlarged to provide students with restaurant-quality food in one of the most advanced campus dining facilities in North America.

The following rates were in effect for 2002-2003 and are intended to serve as a guide for 2003-2004. The rate structures for university residence vary with single and double occupancy and choice of meal plan.

Meals per week in Morrison Hall, Based on Single or Double Occupancy

Meals/week	*10 + $200 DCB*		*14 + $250 DCB*	*17 + $200 DCB*
Single	$6235	$6430	$6535	
Double	$5585	$5780	$5885	

Mount Saint Bernard

In July 2001 StFX assumed ownership and operation of MSB including its three residence halls, Camden, Gilmora and Marguerite. MSB was previously owned and operated by the Sisters of the Congregation of Notre Dame. In September 2003 there will be three types of accommodation at MSB. Camden Hall and the third floor of Gilmora will be an all-female residence with unrestricted male visitation, similar to the rest of campus. Marguerite Hall will house female and male students with gender-specific washrooms on each floor. Gilmora's fourth floor will be an all-female residence with limited male visitation. Priority in Marguerite is given first to returning MSB residents, then to returning students from other residences. Quiet hours throughout MSB begin at 9 p.m. Sunday through Thursday (earlier than the rest of campus) and at 2 a.m. on Friday and Saturday (the same as the rest of campus).

2.2.3 Cancellation of Residence Application and Contract

a) Dormitory-Style Residence

Students who wish to cancel their residence and food service contract must notify the residence office in writing.

Cancellation Before Commencement of the Academic Year

New Students

If a letter of cancellation is received prior to June 15, $200 of the $300 room deposit will be refunded. After June 15, but on or before July 15, $100 is refundable. After July 15, but on or before the September opening date, $50.00 is refundable.

Returning Students

Although returning students are not required to submit an application deposit, they will be assessed a cancellation fee as follows. If a letter of cancellation is received by the residence office on or before May 15, the student will be assessed a $100 cancellation fee; after May 15 but on or before July 15, the student will be assessed a $200 cancellation fee; after July 15 but on or before the first day of classes the student will be assessed a $300 cancellation fee.

Unless the university is otherwise notified, a room is held for the student. Failure to check into the assigned room by 4 p.m. on the first day of classes will result in cancellation of the residence contract, forfeiture of the $300 room deposit for new students, or a $300 cancellation fee for returning students. Normally students are responsible for room fees until the end of term.

Cancellation After Commencement of the Academic Year

Voluntary Withdrawal from Residence

New students withdrawing from residence will forfeit the $300 room reservation deposit, and returning students withdrawing from residence will be charged a $300 cancellation fee. In addition, students will be charged room fees to the end of the semester in which they withdraw, unless the university can fill the vacancy with a new residence application. In this event, the student will be responsible for room fees to the day in which s/he withdraws, and meal plan fees until the end of the month in which s/he withdraws.

Students who choose to withdraw from residence for the second term must notify the residence office in writing before the end of the first term, complete the paper work, return the keys, and vacate their room 24 hours after their last exam to avoid being held financially responsible for the second term.

Involuntary Withdrawal from Residence

The university reserves the right to cancel residence contracts on the basis of violation of the university Community Code and/or Residence Life Handbook. In this event, new students will forfeit the $300 room deposit, and returning students will be charged a $300 cancellation fee. As well, students will be charged room fees to the end of the term in which the contract is cancelled or 30 days' room fees, whichever is greater. Students will be charged for their meal plan until the end of the month in which their contract is cancelled.

Withdrawal from University

New students withdrawing from the university, including completion of courses at Christmas, will forfeit the $300 room deposit, and returning students will be charged a $300 cancellation fee. Students will be charged room fees to the day on which they withdraw, and will be charged for meals until the Friday of the week in which they withdraw. Students withdrawing from the university are required to vacate their residence within 24 hours of withdrawal.

Notwithstanding any of the exceptions hereinbefore noted, no refund for either residence or food service will be made to students withdrawing from residence and/or withdrawing from the university after November 15 in the first term or February 15 in the second term.

No refund of fees for residence or food service will be made if students are temporarily absent from residence. This includes absences for academic reasons such as practice teaching. Refunds are only processed after the appropriate paper work has been completed and room keys have been returned.

b) Apartment-Style Residence

Accommodation is based on an eight-month academic year contract.

Cancellation Before Commencement of the Academic Year

Although returning students are not required to submit a deposit with their application and contract for apartment-style residence, they will be assessed a $300 cancellation fee if they withdraw from apartment-style residence after an apartment has been assigned to them by the residence office. If notice is received before the first day of classes in September, there will be no financial penalty added to the $300 cancellation fee. The student must notify the residence office in writing of his/her intent to withdraw from apartment-style residence. If the residence office is not so notified, a room will be held for the student. Failure to check into the room by 4 p.m. on the first day of classes in September will result in a $300 cancellation fee, and the student may also be held responsible for the balance of the residence fees for the remainder of the year.

Cancellation After Commencement of the Academic Year

Voluntary Withdrawal from Apartment-Style Residence
Students withdrawing from apartment-style residence will be charged residence fees for the remainder of the year.

Involuntary Withdrawal from Apartment-Style Residence
The university reserves the right to cancel any residence contract on the basis of violation of the StFX university Community Code and/or Residence Life Handbook. In this event, the student will be charged residence fees to the end of the academic year in which the contract is cancelled or 30 days' room fees, whichever is greater. When the student has a meal plan other than DCB, which is non-refundable, s/he is responsible for meal plan fees until the end of the month in which the contract is cancelled.

Withdrawal from University
Students withdrawing from the university, including completion of courses at Christmas, will normally be held responsible for room fees until the end of the academic year. When the student has a meal plan other than DCB, (which is non-refundable), s/he is responsible for meal plan fees until the Friday of the week in which s/he withdraws. Students withdrawing from the university are required to vacate their residence within 24 hours of academic withdrawal.

2.2.4 Residence will open and close as follows:

First Term

Sun. Aug. 31, 2003	9 a.m. Residence opens for new students only.
Wed. Sep. 3, 2003	2 p.m. Residence opens for returning students.
Sun. Dec. 14, 2003	Residence closes and meals end with breakfast.

Second Term

Sun. Jan. 4, 2004	Residence opens for all students and meals begin with dinner.
Fri. Apr. 23, 2004	Residence closes and meals end with breakfast.

Please note that students are required to leave residence 24 hours after their last exam in each term.

All inquiries about residence or meal contracts should be made to:
The Coordinator, Residence Services, Morrison Hall
email: bjmacdon@stfx.ca 902-867-2473

2.3 STUDENT SERVICES

Along with residence and food service, other 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 coordinate the first-year orientation program.

The location, telephone number and email address of the contact person for each service is published in the brochure, *People to Help You*, which is updated annually and is available through the office of the vice-president, student services.

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 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 record in intercollegiate 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 and Canadian Interuniversity Sport organizations. There are women's teams in basketball, cross-country, hockey, rugby, soccer and volleyball; and men's teams in basketball, cross-country, hockey, football, and soccer. Men's rugby is a club sport.

2.3.2 Career Planning and Placement Services

The centre for student employment and career development provides a variety of services, workshops, and resources to assist students with career planning and job searches. The office coordinates on-campus recruitment and helps students find permanent, summer, and part-time employment.

2.3.3 Chaplaincy Services

In keeping with the university's Catholic Christian character, a university chaplain and an associate chaplain coordinate a team ministry. This team gives students an opportunity for religious expression in meaningful ways. Part-time ministers of the Anglican, Pentecostal, Presbyterian and United faiths coordinate activities for students of their denominations.

2.3.4 Counselling Services

The counseling centre provides a variety of services to help students take full advantage of their university experience. Issues dealt with on a one-to-one basis with a counselor include interpersonal relationships, self-confidence, motivation, sexuality, depression, academic and career choices. All contact with the counseling centre is strictly confidential.

A resource room contains material on other educational institutions in Canada and abroad, graduate school admission tests, and study skills.

2.3.5 Dean of Students

The dean of students is responsible for the student judicial system and administration of the Community Code. In addition, the dean of students works with the Students' Union on quality of life issues for students both in residence and off campus.

2.3.6 Financial Aid Office

The university maintains a financial aid office during the academic year to advise students regarding 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.

2.3.7 Health Services

A physician is available at regular hours Monday through Friday in the health and counseling centre. Three physicians share this service. Medical care is also available from specialist physicians based at the regional hospital in the community.

University nurses are available at regular office hours and are on call 24 hours a day. They also coordinate a campus wellness program for health promotion.

The university is not responsible for the cost of prescriptions nor for any medical or dental expenses incurred by students.

International students are responsible for payment of their own medical and surgical expenses, as well as hospitalization and diagnostic fees.

All students, Canadian and international, are automatically enrolled in a health benefit insurance plan administrated by the Students' Union. The premium is charged to their university account. Students may opt out of the plan by providing proof of alternate equivalent coverage.

2.3.8 Special Advisors and Contact Persons

Student Services provides points of contact and assistance for special groups of students. These include the Aboriginal student advisor, Black student advisor, contact person for students with disabilities, contact person for gay, lesbian and bisexual students, international student advisor and mature student advisor.

2.3.9 Wellspring Centre 

The Sisters of St. Martha staff Wellspring Centre, a comfortable, relaxing place which offers to the university community an environment for reflection, interaction, prayer and support. Various opportunities for personal and spiritual growth are available.

2.3.10 Writing Centre 

The services of the Writing Centre are designed to complement course work by assisting students in the development of their academic skills. Students can arrange one-to-one meetings with a staff person to discuss specific work in progress, or to assess and improve their academic skills, such as note-taking, time management, oral presentations and exam preparation.

In addition to this one-to-one service, the instructors at the centre offer the StFX university community assistance through three programs, each of which builds on the Writing Centre's dedication to individualized attention to students.

a) eXcel: A Success Program for First-Year Students
This program is designed to provide entering students with the skills necessary to ensure that they receive the highest quality university education possible. No matter how well the student performs in high school, university presents a new set of challenges. The program will enable students to develop the skills necessary to excel in this new environment. The classes are 75 minutes each week during both terms. In addition, students will meet individually with their instructors four times over the year. There is a deposit of $300 for the course, $200 of which is refundable at the end of March to all students who meet the attendance requirements and complete the program. The course is graded on a pass/fail basis and that grade is noted on the student's academic transcript.

b) APEX: Academic Program of Excellence
This is a mandatory university program which students on probation must take in order to register at StFX. These include students accepted or placed on probation and students re-admitted after suspension or dismissal as a result of a previous year's academic performance. *See section 3.12*. Upon application by a student, the Committee on Studies of the appropriate faculty may excuse the student from taking APEX. If a student misses classes or one-to-one meetings in the APEX program, without permission for reasonable cause, the student's registration at StFX will be cancelled. There is a non-refundable charge of $875 for APEX.

c) LEAP: Learning English for Academic Purposes
This innovative program will enhance English for international students at the university level, help build communication skills and expand thought and ideas in an English environment. The program is an intensive one-month immersion focusing on listening, speaking, reading and writing. As well, students are given the opportunity to practice their English in social activities outside the classroom. Throughout the academic year, the students receive one-to-one support from the Writing Centre. Any international student with a TOEFL score between 520 and 580 is required to take LEAP as a condition of admission to StFX. As this course can benefit all international students, the program is available on an optional basis to those with a score of 580 or higher. The charge for LEAP is $1500, plus room and board.

 2.4 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
Christopher Amirault Award
George D. Anderson Business Award
Bank of Montreal Scholarship
Rev. R.V. Bannon Scholarship Fund
Bergengren Credit Union Scholarship
Harry and Martha Bradley Scholarship
Bishop Bray Foundation Scholarship
Jo M. Brown Scholarship in Nursing
Claude Brunelle Memorial Scholarship
CJFX Scholarship

Rev. J. V. Campbell Bursary
Cape Breton Scholarship and Bursary Fund
Dr. J.J. Carroll Scholarship
Central Home Improvement Fund
Dr. Leo P. Chiasson Award
Donald A. Chisholm Memorial Scholarship
Rev. J.C. Chisholm Scholarship in Biology
Rev. John Archie Chisholm Memorial Scholarship in Celtic Studies
Rev. John W. Chisholm Fund
Joseph D. Chisholm Scholarship
Mary Ann Chisholm Nursing Bursary Award
Rev. Dr. E.M. Clarke Scholarship in Pure and Applied Sciences
Class of 1965 Fund
Paul Cogger Memorial Scholarship
Gerald P. Coleman Q.C. Award
Rev. C.B. Collins Scholarship
Rev. Cornelius J. Connolly Scholarship
Louis Connolly Fund
James E. & Mary D. Deagle Endowment
Alphonse Desjardins Commemorative Scholarship
L.A. DeWolfe Memorial Scholarship
John Dobson Memorial Scholarship
Rev. John Dougher Bursary
The Sir James Dunn Foundation Internship Scholarship
Trudy Eagan Women in Business Award
J. Wallace Farrell Memorial Scholarship
Rev. Peter Fiset Fund
H. J. Francis Business Leadership Award
Roger Franklin Memorial Scholarship
Douglas P. Furlott Award
Hugh Allen Fraser Scholarship
Fund for French Scholarships
Danny Gallivan Memorial Scholarship
Wilfred J. Garvin Scholarship
Dr. Marie Gillan Award
Rev. J. Edward Grant Bursary
General Motors of Canada Ltd. Women in Science Scholarship
General Motors of Canada Ltd. Women in Science Bursary
Joseph and Tessie Gillis Fund
Julie Anne Award
The Glen Scholarship
Fred Gormley Scholarship
Daniel and Emeline Grant Scholarship
The Gulf Canada Scholarship
Dr. H.B. Hachey Scholarship
Charles Hamilton Fund
Heaslip/Macdonald Award Fund
Bernard M. Henry Scholarship
Philip H. Hynes Memorial Scholarship
Julie-Anne Award
B.J. Keating Memorial Award
Rev. George Kehoe Memorial Bursary
Alexander and Mary Kell Memorial Scholarship
Angus Kell Memorial Bursary
Thelma May Kempffer Award
Margaret Kennedy Scholarship
Livingstone-Topshee Award
Rev. Martin Luther King, Jr. Award
Rev. John B. Kyte Scholarship
Joan Gillis Lang Fund
Senator John MacCormick Scholarship
MacDonald-MacIntyre Scholarship
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
John H. MacDougall Award
Allan J. MacEachen Fellowship in Celtic Studies
Angus MacGillivray Fund

Rev. R.K. MacIntyre Scholarship
Rev. Charles MacIsaac Memorial Bursary
Donald F. MacIsaac Memorial Scholarship
John C. MacIsaac Foundation Scholarship
Elizabeth Mackasey Scholarship
Michael and Jean MacKenzie Award
Hugh MacKinnon Scholarship
Donald and Ethel Lyle MacLean Scholarship
Monsignor Donald A. MacLean Scholarship
Rev. Leonard (Butch) MacLean Bursary
Roderick D. MacLean Award
Rev. J.D. MacLeod Bursary Fund
Joan M. and Douglas MacMaster StFX University Award
Donald and Mary MacNeil Fund
John V. MacNeil Fund
Joseph B. MacSween Award
Rev. Rod J. MacSween Scholarship
Margaret Martell Farrell Scholarship Fund
Married Students Bursary
James A. Martin Award
Emerson Mascoll Scholarship
James McArthur Memorial Fund
Harrison McCain Scholarship
J.P. McCarthy Scholarship
Dr. Daniel McCormick Scholarship
Irene McFarland Memorial Bursary
Frederick J. McInerney Scholarship
Rev. Roderick McInnis Fund
Rev. L.G. McKenna Scholarship Fund
Mary McNair MacIsaac Bursary
William Ian Meech and Lloyd Remington Meech Memorial Scholarships
Memorial Scholarship for a Woman in Engineering
Dr. Edward J. Meyer Scholarship
Dr. Marguerite Michaud Scholarship
Myles Mills Class of 1959 Leadership Award
Robert J. and Gertrude Gillis Munroe Scholarship
Daniel Joseph Murphy Fund
Nasha Murphy Award
Rev. J.B. Nearing Scholarship
Rev. Dr. P.J. Nicholson Scholarship
Nova Scotia Power Scholarships
Daniel and Margaret O'Brien Fund
Dr. Ed O'Connor Scholarship
Commodore Bruce S. Oland Scholarship
Philip W. Oland Scholarship
Barry O'Leary Leadership Award
Pluta Family Bursary
Rev. Donald M. Rankin Scholarship
Dr. Abraham Risk Award
Bruce and Dorothy Rossetti Scholarship
Dr. Ria Rovers Memorial Scholarship
Royal Bank Leadership Award
B.A. Ryan Scholarship
James P. Sawler Scholarship
J.P. Sawler Scholarship
Scotiabank International Women Leaders Fund
T.J. Sears Family Scholarship
Sisters of St. Martha Scholarship in Nursing
C. Gordon Smith Scholarship
St. Francis Xavier University Alumni Scholarships
J. Jarvis Stewart Bursary
John L. Stoik Scholarship
Students' Union Bursary
Fred L. Taylor Memorial Scholarship
Allard Tobin Fund
Dr. J.J. Tompkins Memorial Scholarship
Rev. John F. Toomey Scholarship Fund
Judge D. Tramble Scholarship
Arthur P.H. Tully Fund
Katherine Tully Scholarship

Paul Wacko Scholarship
Katherine Wdowiak Memorial Award
James and Mary Whelan Scholastic Award
Rev. Robert Wicks Fund
John H. Young Award
Young Family Award

2.4.1 Entrance Scholarships

StFX is founded on the values of academic excellence, leadership and service to others. The new StFX National Entrance Scholarship program reflects these qualities. Students' efforts in achieving a high school average of 85% or greater are recognized with a guaranteed minimum award. Students offered a renewable scholarship must maintain a superior grade average and rank in each year of study, similar to conditions listed in 2.4.3.

$32,000 StFX President's Scholarships

These awards recognize outstanding academic achievement. Renewable for four years at $8,000 per year, these awards are for entering students who demonstrate the qualities and values honored at StFX: high academic success, leadership, and dedication in service to others.

$20,000 Philip W. Oland Scholarships and J.P. McCarthy Scholarships

Students with the highest scholastic standing and demonstrated leadership ability are eligible for these scholarships which are renewable for four years at $5,000 per year. Students are nominated by their high schools. Oland/McCarthy scholarships are available to students from the Atlantic provinces.

$20,000 StFX Canadian Scholarships

These scholarships are awarded based on academic achievement and the province of origin of the student. The scholarships are renewable for four years at $5,000 per year.

$20,000 StFX International Scholarships

These scholarships are awarded based on academic achievement in the country of origin of the student. The scholarships are renewable for four years at $5,000 per year.

$10,000 StFX Merit Scholarships

These scholarships are awarded to outstanding students across our programs in arts, science, and the Gerald Schwartz School of Business and Information Systems, based on academic achievement. The scholarships are renewable for four years at $2,500 per year.

$1,000 StFX Guaranteed Scholarships

These entrance scholarships are awarded to all students who graduate from high school with a scholarship admissions average of 90 and above. These scholarships are awarded automatically; therefore, no application is required.

$500 StFX Guaranteed Scholarships

These entrance scholarships are awarded to all students who graduate from high school with a scholarship admissions average between 85% and 89.9%. These scholarships are awarded automatically; therefore, no application is required.

International Baccalaureate (IB) Scholarships

Students who successfully complete the IB Diploma will be eligible for StFX guaranteed scholarships. Applicants with 24 to 29 points will be awarded an entrance scholarship of $500. Those who receive more than 29 points will be awarded an entrance scholarship of $1000. All IB applicants for all renewable scholarships are eligible to apply.

2.4.2 Scholarship Application Process

StFX President's, National, Merit Scholarships

To be considered for scholarships, students must apply to StFX no later than March 1. All applications for renewable scholarships (excepting the Philip W. Oland Scholarships and J.P. McCarthy Scholarships) require the following:

a) A high school transcript with an average greater than 85;
b) A résumé including a description of extra-curricular activities and employment;
c) A brief letter outlining the student's goals;
d) Two letters of recommendation from high school teachers, one of which must be from the current year.

Philip W. Oland Scholarships and J.P. McCarthy Scholarships

The Philip W. Oland Scholarships are offered to entering students from the Atlantic provinces and the J.P. McCarthy Scholarships to entering students from Canada. Students with the highest scholastic standings and demonstrated leadership ability may be nominated by their high schools. These scholarships, tenable over four years of study towards

a first degree, have a maximum value of $20,000. Successful candidates will be awarded $5,000 per year of study provided they maintain a superior grade average and rank in each year of study, similar to the conditions listed in 2.4.3. After the second year, scholarship holders must be enrolled in an honours program, when this is available. A letter of nomination from the high school administration should be accompanied by a résumé of extra-curricular activities. To be considered for the Philip W. Oland and J.P. McCarthy Scholarships, students must apply to StFX by March 1 of the year of attendance.

Philip W. Oland Scholarship Recipients 2001-2002
Mary Elizabeth Brothers, Alberton, Prince Edward Island
C. Johnny Veliath, Inverness, Nova Scotia

J.P. McCarthy Scholarship Recipients 2001-2002
Laura Crawford, Greenwood, Nova Scotia
Alisha Gillis, Port Hood, Nova Scotia
Jessica Kirkwood, Lethbridge, Alberta
Alexander MacDonald, Baddeck, Nova Scotia
Lindsey MacGillivray, Antigonish, Nova Scotia

StFX Guaranteed Scholarships

Students are automatically considered for these scholarships, and no additional application is necessary beyond the application for admission to StFX.

2.4.3 University In-Course Scholarships

In-course scholarships are awarded to students who have completed at least one academic year of 30 credits towards a first degree. They are awarded on the basis of academic performance at StFX university. A minimum average of 80 and a rank in the top 10% of the scholarship group is required. No application is necessary. The scholarships, ranging in value from $1,000 to $3,000, 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 and BIS
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 with an average of 85 or higher and ranking first in a scholarship group may qualify for the amount of $3,000.
b) A student with an average of 85 or higher and a rank in the top five percent of a scholarship group may qualify for the amount of $1,500.
c) A student with an average of 85 or higher and a rank in the top 10 percent of a scholarship group may qualify for the amount of $1,200.
d) A student with an average of 80 or higher and a rank in the top 10 percent of a scholarship group may qualify for the amount of $1,000.

2.4.4 Bursaries

A number of university bursaries are available, usually ranging in value from $100 to $1000. Grants are based on the demonstrated need of the student and the availability of bursary funds. The holder of a bursary is expected to maintain a satisfactory academic record. Bursaries are not automatically renewed; an application must be made each year.

Application forms for university bursaries may be obtained from the financial aid officer and must be returned by January 30 of the year for which a grant is sought.

Other awards, up to $3,000, are available to students with satisfactory academic standing and may be based on extra-curricular activities, place of residence, or financial need. These awards are advertised to all students.

2.4.5 Federal and Provincial Student Aid Programs

Details of these programs are available from provincial student aid offices and from the StFX financial aid office.

2.5 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 are awarded to graduating students:

Dr. Leo P. Chiasson Award for Biology to the Outstanding Advanced Major or Honours Student
Dr. Marguerite Michaud Prize for Canadian Studies
Angus L. Macdonald Memorial Scholarship for Celtic Studies
Society of Chemical Industry Merit Award
Dr. D.J. MacDonald Memorial Prize for Economics
Elizabeth Mackasey Memorial Award for Education
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
Margaret MacGillivray-MacDougall Prize for English
Reverend R.J. MacSween Prize for English
Ambassador of France Book Prize for French
Ambassador of Switzerland Book Prize for French
Professor Donald J. MacNeil Memorial Award for Geological Sciences
Mining Society of Nova Scotia Centennial Scholarship Medal
Mining Society of Nova Scotia Prize for Best Thesis in Geological Sciences
Mary Tramble Memorial Award for Field Geology
Reverend A.A. Johnston History Award for Diocesan History
Dairy Farmers of Canada Award for Further Study in Dietetics/Nutrition
Dr. A.A. MacDonald Prize for Mathematics
Canadian Academy of Recording Arts and Sciences Award for Music
Chevrolet High Note Student Bursary
Reverend Charles R. MacDonald Memorial Medal for Philosophy
Dr. M.S. Gautam Memorial Prize for Physics
Craig McDonald Mooney Prize for Psychology
History of Psychology Prize
Kontak Prize in Public Policy
John and Mary Fraser Memorial Prize for Senior Religious Studies
Reverend Frank J. Mifflen Award for Sociology/Anthropology
Dr. G.H. Murphy Prize for Proficiency in Pre-medical Studies
Nominations to the Kappa Gamma Pi Honour Society

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
Reverend Donald M. Rankin Scholarship for Celtic Studies
Reverend John Archie Chisholm Memorial Award for Celtic Studies
Cecil MacLean Prize for Achievement in First-Year French
B.J. Keating Memorial Award for Geology
Frank S. Shea Scholarship for Geology
Student-Industry Geology Field Trip Award
Canadian Society of Petroleum Geologists Stanley E. Slipper Award
Dr. F.J. Ginivan Prize for Mathematics
Elizabeth Tobin McGivern Prize for Music
Winston Jackson Prize in Nursing
David Davis Prize for First-Year Physics
David Davis Prize for Third-Year Physics
Charles Jordan Memorial Prize for Second-Year Physics
History of Psychology Prize
Craig McDonald Mooney Prize for Psychology
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. xe "Academic Regulations"Academic Regulations

3.1 COURSE LOAD

a) A course taught three hours a 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 and is called a half course.

b) In most programs the academic load is 30 credits each year. Full-time students normally enroll in 15 credits each term.

c) Students may drop a course on or before the relevant deadline. See the calendar of events for deadline dates for dropping full-year, first-term and second-term courses. A course dropped within the drop period will not be included in a student's average. A course discontinued after a deadline will be treated as a failure. Students must 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 for the next year, in-course scholarships for the next year, or a StFX bursary or award.

d) Students who wish to enroll in additional courses must apply to the registrar. A grade average of at least 65 in the preceding year will be expected. Normally, students may not enroll in more than 36 credits in one academic year. *See section 2.1.5 regarding fees for extra courses.*

e) Credit will not be granted for any course in which a student is not formally enrolled.

f) Courses in education, engineering, human kinetics, human nutrition or nursing normally may be applied only to those programs respectively. See the BA (section 4) and B.Sc. (section 5) programs for certain exceptions.

g) A pair is 12 credits in one subject with six credits normally at the 200 level or higher.

3.2 TRANSFER CREDIT INCLUDING INTERSESSION AND SUMMER SCHOOL COURSES

a) Transfer credit will normally be given for all courses with passing grades for which credit has been earned, if the courses are applicable to the program the student is entering. All transfer credit grades and any average requirements as outlined for the programs in chapters 4 and 5 must be met.

b) Students wishing to take a part-time course at StFX (e.g., in summer school, intersession), or at another university for transfer credit must be in good standing to register for part-time study. Students require a minimum average of 65 to take two courses concurrently.
Normally credit will be granted for a maximum of 18 credits from May to August.

Regulation 3.2 b applies to students wishing to enroll in correspondence courses during the summer. No other summer school course may be taken while a student is enrolled in a correspondence course. To enroll in a correspondence course as an extra course during the academic year, students must obtain prior approval of the dean; regulation 3.1 d applies.

c) Restrictions may apply to the transfer of credit for business administration courses at the 300 and 400 level. See section 4.1.2 f on French and Spanish immersion courses which may count as electives only.

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

e) Transfer credits, to a maximum of 24 credits, may be granted for correspondence courses in recognized academic disciplines taken at Canadian universities. Transfer credit will not be granted for correspondence courses with a laboratory component. Correspondence courses may be used only as pairs or electives in degree pattern requirements.

3.3 RESIDENCE REQUIREMENTS

For the purpose of this section, residence is defined as being registered as a full-time student. As an exception to these residence requirements a student may, with the dean's permission, spend the junior year abroad. See section 3.19.

a) Honours Programs:
   i) Four years' university residence
   ii) The junior and senior years in residence at StFX

b) Advanced Major, Major and Four-Year Programs:
   i) Four years' university residence
   ii) The junior and senior years in residence at StFX, unless the student is registered part-time in the Faculty of Arts

c) All Programs:
   i) A student who enrolls in an undergraduate degree program must normally complete the degree requirements within 10 years from the date of initial registration.
   ii) A degree candidate must normally receive credit for at least 60 credits from StFX regardless of the number of transfer credits granted.

3.4 RE-ADMISSION TO UNIVERSITY

a) A student whose course of study is interrupted by one or more academic years is bound by any changes made in the curriculum and regulations after his/her first registration.

b) Course requirements for a degree, whether three or four years, must be completed within 10 years of the initial date of registration.

c) Courses taken for credit 10 years before acceptance into a degree program will be assessed by the Committee on Studies.

d) A student whose course of studies is interrupted must re-apply for admission. *See also regulation 3.12.*

e) If a student previously suspended or dismissed from the university is re-admitted, the student will be on probation for up to one year. The student will be required to enroll in the APEX program. See section 2.3.10 for more information.

3.5 DIRECTED STUDY AND SPECIAL TOPICS COURSES

The directed study course permits students of exceptional ability and motivation to pursue, on a tutorial basis, an individualized program of study. The program does not provide alternative instruction in areas which are normally offered by the department.

Directed study courses are normally limited to no more than two students. Normally a faculty member may offer no more than two directed study courses per year.

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

To be eligible for a directed study students must normally have:
a) completed 12 credits in the department;
b) attained a minimum average of 70 in the 12 credits;
c) obtained written consent from the department.

Students interested in a directed study course should consult with the department chair and the appropriate faculty member before September 1. Formal application must be submitted by the chair to the appropriate dean during registration or earlier.

Subject to approval of the dean of faculty, any department may offer a specific selected topics course in that discipline in any term or year. A particular selected topic course may be offered twice before the department must seek regular course approval through the appropriate Committee on Studies and the University Senate.

3.6 STUDENT CLASSIFICATION

Students entering a four-year degree program or diploma program are classified as first year.

Advancement in classification (first year to sophomore to junior to senior) is granted when a student earns 30 credits in the preceding classification.

Students who are 6 credits short of the next level will be placed in the next classification on a conditional basis.

Registration as a senior does not guarantee that a degree will be awarded in that academic year; all requirements for the degree must be fulfilled.

Students wishing to change degree programs must obtain permission from the dean.

3.7 SPECIAL STUDENT STATUS

Students with a baccalaureate degree who wish to attend StFX to continue their education, but who are not pursuing a second degree, are encouraged to do so on either a part-time or a full-time basis. Students applying for a full-time program are expected to develop an educational plan with the appropriate academic dean. Letters of recommendation and/or an interview may be required. The admission process must be completed before August 15, and students are expected to perform satisfactorily on Christmas examinations to be eligible to register for the second term.

3.8 CLASS ATTENDANCE AND WITHDRAWAL FROM UNIVERSITY

Students are expected to attend all classes and laboratory periods. A student should contact each course instructor following a return from an absence of more than one class. In the case of sudden emergency requiring the student to be away from the university for a period of more than five days, the dean's office should be contacted.

Professors are required to report to the dean all unexplained absences after the first three hours of class time over at least two classes missed in any term. Students who miss more than this number of class hours in a course without reasonable cause may, after a warning letter has been sent by the dean's office, be dismissed from the course.

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.

Students wishing to withdraw from the university must give formal notice to the appropriate academic dean in person or in writing. Formal notice of withdrawal is required for tuition refunds. *See 2.1.2*. Other departments and offices will receive a copy of the withdrawal: the business office, campus post office, dean of students, library, registrar's office, residence office, students' union (for health insurance), telecommunications, and TSG (Technology Support Group).

A student who withdraws, formally or otherwise, during December examinations or after March 1 may be liable to academic suspension or dismissal. Students on probation who withdraw at any time may be liable to the same penalties.

3.9 REGULATIONS ON PLAGIARISM, CHEATING AND ACADEMIC DISHONESTY

a) Plagiarism is "the act of appropriating the literary composition of another, or parts or passages of his [or her] writings, or the ideas or language of the same, and passing them off as the product of one's own mind" (*Black's Law Dictionary*).

   A student found to have plagiarized will receive zero for the work concerned.

b) Cheating may be defined as, but not limited to, employing crib sheets, copying, consulting concealed material during an examination, and having information stored in a calculator that is not available to all members of the class.

c) The following procedures govern suspected cases of cheating or plagarism:
   i) The instructor or invigilator will report the case to the department chair.
   ii) The department chair will report to the appropriate dean who will ensure that an impartial assessment is made by an independent member of the faculty.
   iii) Candidates who cheat on an examination, or assignment, or who are found to have plagarized, will receive zero for the work concerned. Upon conviction for a second offence, they will be dismissed immediately, and

will not be permitted to re-enter the university for a minimum period of one year. Collaborators shown to be culpable will be subject to the same penalties.

d) The following rules govern the treatment of candidates found guilty of attempting to obtain academic credit dishonestly:
   i) For an imposter writing an examination in place of a candidate, if both the candidate and imposter are StFX students, the candidate will have zero entered on his/her record for the course concerned, and both will be dismissed immediately from the university for a minimum period of one year.
   ii) If the imposter is not a member of StFX, the university may take what legal action is open to it.

e) Students disciplined under these regulations may appeal their cases under sections 3.13 and 3.14.

f) These regulations and sanctions are currently under review. Any changes adopted by the University Senate will come into effect immediately.

3.10 EXAMINATIONS

Examinations are written during the examination periods listed in the Academic Calendar. The exam schedule is printed with the academic timetable, and students are advised to consult the exam schedule when selecting courses. There is no rule against three exams in 24 hours.

Students unable to write an examination at the time listed must have a doctor's certification of illness and must notify the dean's office prior to the examination.

Students who miss an examination will normally write on the date for supplementary exams as indicated in the calendar of events.

3.10.1 Supplementary Examinations

To be eligible to write a supplementary examination in a course, students must apply by the date listed in the calendar of events, and must have:

a) a grade of at least 40 in that course;
b) an average in all courses of at least 55; the average will include the grades in all failed courses;
c) permission from the professor; professors will normally give permission when the supplementary exam could result in a passing grade in the course.

Since a supplementary examination replaces the final written examination, supplementaries are granted only in courses with final written examinations. Supplementary examinations for first-term courses must be written in January of the academic year in which the course was failed; for other courses the examination must be written on the date indicated in the calendar of events.

The supplementary examination grade will not be used to re-calculate the student's average.

No more than four courses (regardless of the credit value of the courses) passed by supplementary examination may be used to satisfy degree or diploma requirements. Senior students may write only one supplementary examination; other students may write no more than two in any one term.

3.11 GRADING SYSTEM FOR UNDERGRADUATE PROGRAMS

a) The passing grade is 50.

b) The student's average is a weighted calculation. A six-credit course has a weighing factor of one; a three-credit course has a weighing factor of one-half. Grades in supplementary examinations are not used in average calculations. The average is based on the final grades in all courses carried.

c) An average of 55 is required each academic year, intersession or summer session; the number of credits for which the average is calculated may be as small as three. If this average is not maintained for the academic year, intersession or summer session, academic penalties may be incurred. *See section 3.12.* Unless otherwise specified, students must maintain an overall average of 55 during their final three years.
   Full-time senior students applying for a degree, no matter how many credits they require for their course pattern, must have an average of at least 55 and credit for 18 credits in their senior year to be granted a degree.

d) The grade and average requirements for major, advanced major and honours degrees are stated in section 4 for arts degrees, and section 5 for science degrees.

e) At least 75% of the final grade in all courses will be based on written (not oral) work, and at least 40% of the final grade in a 100 or 200 level course will be based on invigilated written December and April examinations.

f) 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.

3.12 ACADEMIC PENALTIES

To remain in satisfactory academic standing, students are required during the academic year to:

a) earn a year-end average of 55 or better, and
b) earn at least 18 credits.

Students who fail to meet these requirements will incur an academic penalty as follows:

i) A student who has incurred no previous penalty will be placed on probation if one requirement is not met, or be suspended from the university if both requirements are not met.
ii) A student who has incurred one previous probation will be suspended from the university if one requirement is not met, or be dismissed from the university if both requirements are not met.
iii) A student who has incurred one previous suspension will be dismissed if either of the requirements is not met.
iv) A student who has incurred more than one previous penalty will be dismissed if either of the requirements is not met.

Any student incurring probation will be allowed to register at the university only if the student enrolls in the APEX program (see section 2.3.10) unless, upon application by the student, the committee of studies of the appropriate faculty excuses the student on the grounds that the student would not benefit in a meaningful way from the program.

The procedure for appealing an academic penalty is given in 3.13.

Students on probation may write supplementary examinations provided all other conditions are met. However, a passing grade in a supplementary exam will not alter the probationary status.

Students who are suspended from the university may apply to the registrar for re-admission after a period of one year. See section 3.4. No transfer credit will be granted for work completed elsewhere while a suspension or dismissal is in effect.

Students who have been dismissed will not be eligible for further study at the university.

Attention is drawn to the following regulations: 3.1, 3.8 and 3.9.

3.13 APPEAL OF AN ACADEMIC REGULATION

Decisions resulting from the application of academic regulations may be appealed to the Committee on Studies of the appropriate faculty. Appeals must be in writing and must be made within 14 days of the date of notification of the decision. When the decision is mailed to a student, notification will be deemed to have occurred on the seventh day after the letter is mailed. In cases where a verbal decision is made or a written decision is handed to a student, notification will be deemed to have occurred on that day. The decisions of the Committee on Studies are final.

3.14 GRADE APPEAL PROCEDURE

a) Only final grades may be appealed.

b) All appeals must be made in writing through the dean's office. The letter must state why an appeal is being made. The student pays a fee of $10 for each grade appealed. This fee is credited to the student's account if the appeal results in a change in grade.

c) Appeals must be made before January 15 for first-term courses; before June 15 for full-year and second-term courses; before July 15 for intersession; and before September 15 for summer courses.

d) The dean will request a review from the instructor and report it to the student, or the student may request the dean to arrange an interview between the student and the instructor.

e) If the student is dissatisfied, the dean will set up an appeal committee of three instructors from the department, one chosen by the student, one chosen by the instructor, and a third chosen by the first two members. To initiate this proceeding, the student must appeal in writing within 10 days of receiving notification of the results of the review. Both the student and the professor may present their respective cases in writing to the appeal committee.

f) The student pays a fee of $25 if an appeal committee is established; this fee is credited to the student's account if the committee decides in his or her favor.

g) Supplementary examinations may be appealed in the same way:
i) within 6 weeks of the examination; and
ii) if the original grade was not appealed to an appeal committee.

3.15 APPLICATION FOR DEGREES AND DIPLOMAS

Candidates in their graduating year must apply to the registrar to be admitted to the degree or to be awarded the diploma for which they are registered. Application must be made in the prescribed manner not later than the deadline dates listed in the Academic Calendar for the spring and fall convocations.

3.16 ACADEMIC RECORDS

3.16.1 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. A member of the registrar's staff will be present during the inspection. In the event of a dispute, the academic vice-president will act as arbiter.

b) Students will, on submission of a signed request, have the right to receive transcripts of their own marks. These transcripts will be marked "Issued to Student." This right will not apply to students in debt to the university, but they will still have the right to inspect and review their academic records. Information on a student's record will not be given over the phone.

c) No partial transcripts will be issued.

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

Disclosure to University Officials

Information on students may be disclosed without their consent to faculty, university officers or committees deemed to have a legitimate educational interest.

Disclosure to Third Parties

a) The following information is considered public information and may be released at the discretion of the registrar without restriction:
   i) Name;
   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) StFX is required to abide by the Freedom of Information and Protection of Privacy legislation of the provincial government, and the federal Privacy Act and the Statistics Act. The university reports information on the students' names, ID and Social Insurance Numbers, contact information, demographic characteristics, enrollment information, previous education, and labor force activity, to Statistics Canada. For more information, students may go to <http://www.statcan.ca/english/concepts/ESIS/index.htm>
   Students may request that Statistics Canada remove their identifying information from the national database. To do so, they may contact StatsCan via

   Mail Postsecondary Education and Adult Learning Section
   Centre for Education Statistics
   Statistics Canada, 17th Floor, R.H. Coats Building
   Tunney's Pasture, Ottawa, Ontario, K1A 0T6

   Email ESIS-SIAE_contact@statcan.ca

   Telephone Monday to Friday:
   8:00 A.M. - 4:00 P.M. EST/EDST
   1-613-951-1666

e) Other than in the above situations, information on a student will be released to third parties only 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). This restriction applies to requests from parents, spouses, credit bureaus and police.

3.16.2 Transcript Requests

Requests for transcripts must be made in writing by students and accompanied by the required fee. Requests by phone are not accepted. Where possible, requests are to be made on the appropriate form obtainable from the registrar. Transcript requests are processed in the order in which they are received. Although the normal processing time is three days, additional time may be needed at certain periods of the year.

Transcripts include the following information:
a) The student's program;
b) Courses and grades (failed as well as passed) for all academic work attempted or completed at StFX;
c) The rank and year-end average if the student is enrolled in a full-time undergraduate program;
d) Transfer credits granted; grades for transfer credits are not shown.

The average is calculated by weighing each grade by the credit value; see section 3.11. Supplementary grades are not included in the average calculation.

Where appropriate, reference is also made to:
i) Degrees and diplomas awarded;
ii) Academic penalties;
iii) Distinctions, including placement on the Dean's List.

Official transcripts are only those forwarded directly from the registrar's office to an official third party.

3.17 REGULATIONS FOR A SECOND DEGREE

a) A graduate of the university may be a candidate for a second degree. The candidate must complete at least 30 credits in full-time attendance at the university and must comply with all the course requirements of the second degree.

b) If the second degree sought is a BA, the pattern of the four-year BA must be followed.

c) A graduate of the university who previously earned a BA or B.Sc. major or advanced major degree from StFX may subsequently qualify for and receive an honours degree. The candidate may qualify by meeting the faculty and department course, residence, grade and average requirements for honours degrees, and by satisfactorily completing at least one additional year of full-time study.

3.18 CONTINUING EDUCATION PROGRAM

The continuing education program offers learning opportunities (degree and non-degree) for persons who wish to study on a part- time basis.

For degree-credit courses, see section 4.15 for information on the part-time BA and BBA programs; section 5.10.5 for information on the part-time B.Sc.N. program; and section 6 for programs leading to master's degrees in education.

Non-degree courses in the continuing education program are normally concentrated in the two areas of general interest and professional development. General interest courses (e.g., courses in computer literacy) are open to the public. Professional development courses cater to the learning needs of specific groups (e.g., health professionals, business managers, real estate assessors, religious education instructors, adult educators). Several programs are available by distance education. Current listings may be obtained from the continuing education department; call 902-867-3906 or toll-free 1-877-867-3906 in Nova Scotia.

3.19 XE "STUDY ABROAD"STUDY ABROAD

StFX has an exchange agreement with the following colleges and universities for the junior year abroad unless otherwise indicated. Some restrictions apply. See section 7.22 for additional information or contact the study abroad/exchange coordinator at exchange@stfx.ca.. However, students may propose to attend any accredited university.

Aalborg University, Denmark
Charles University, Czech Republic
Crichton Campus, University of Glasgow ,Scotland
Edinboro University ,USA
Florida International University ,USA
Hanken, Finland
Institut d'Etudes Politiques de Lille, France
Pontificia Universidad Catolica del Peru
St. Mary's College, University of Surrey England
l'Université Catholique de Lille, France

l'Université Catholique de l'Ouest, France
Universidad de Colima ,Mexico
Universidad de Veracruzana, Mexico
Universidad del Salvador ,Argentina
Universidad Iberoamericana, Mexico
Universitat Koblenz-Landau ,Germany
Université de Moncton, NB ,Canada
University of Central Arkansas ,USA
University of Stuttgart, Germany

New England/Nova Scotia Student Exchange Program

Quinnipiac University, CT
Eastern Connecticut State University, CT

St. Joseph's College, ME
University of Maine at Fort Kent, ME
University of Maine at Presque Isle, ME
University of New England, Westbrook Campus, ME
University of Southern Maine, ME

Anna Maria College, MA
Bridgewater State College, MA
Fitchburg State College, MA
Framingham State College, MA
Gordon College, MA
Massachusetts College of Liberal Arts, MA
Nichols College, MA

Colby-Sawyer College, NH
University of New Hampshire, NH
University of Rhode Island, RI
Lyndon State College, VT

CSSC Exchange Program

StFX students have the opportunity to participate in the North American Mobility in Higher Education Program. The program, developed by seven North American universities who have partnered to study Civil Society and Sustainable Communities (CSSC), offers a limited number of StFX students the opportunity to study at one or two of the institutions listed below. An integral component of the CSSC exchange experience is the opportunity for StFX students to participate in an immersion service-learning project as part of their program of study at the host institution(s). See section 7.22 for additional information on service learning. Participating institutions:

Central Washington University Ellensburg, WA
Arizona International College of the University of Arizona Tucson, AZ
Daemen College Amherst, NY
Universidad de Guanajuato Guanajuato, Mexico
Universidad LaSalle Mexico City, Mexico
University of Northern British Columbia Prince George, BC

For further information, call 902-867-3905 or email: exchange@stfx.ca

StFX students have studied at the following universities even though there is no formal exchange agreement:

The Moscow Institute of Social and Political Studies, Russia

University of Arizona, USA

Université Catholique de l'Ouest in Angers, France

Université Canadienne en France

University of St. Andrews, Scotland

National University of Lesotho, South Africa

University of London, England

University of Durham, England

University of Haifa, Israel

A student who wishes to spend the junior year abroad must:

a) be enrolled in a four-year program;

b) normally earn an average of at least 70 at the end of the sophomore year;

c) apply in writing to the dean at least one month prior to registration, giving the name of the university and descriptions of courses to be taken, dates, credit value, and other pertinent information. If the student has been accepted to an advanced major or honours program, a letter of support from the chair of the student's department must be sent to the dean.

3.20 XE "DEAN'S LIST"DEAN'S LIST

At the end of each academic year students who have carried at least 30 credits, and have earned an average of at least 75, will be named to the Dean's List if they rank in the top:

20%in the first year;
25% in the sophomore year; or
33⅓% in the junior or senior year.

3.21 DISTINCTION AND FIRST CLASS HONOURS

Faculty of Arts

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

Candidates in the Faculty of Arts 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, with an average of 80 or higher in all courses taken in the honours subject over the final three years.

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

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.

In the Faculty of Science, the designation of First Class Honours is awarded to students whose general average in each of 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.

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.

For students in the B.Sc.N. for Registered Nurses by Distance program, the average of at least 80 will be calculated on the best 39 credits completed at StFX if the student's program is 75 credits; where the program is 96 credits, the average will be calculated on the best 51 credits from StFX. The requirement of no grade below 75 in any course completed at StFX or elsewhere also applies.

4. xe "Arts Degrees and Regulations"Faculty of Arts Regulations

See glossary for degree and subject abbreviations.

4.1 GENERAL REGULATIONS

Students wishing to complete a BA degree must choose the BA with Honours; BA with Advanced Major; or BA with Major. All three BA degrees are four-year programs.

Each degree requires 120 credits. Courses must follow the pattern required by the program chosen.

Candidates for the four-year BA programs must include at least 36 credits at the 300 or 400 level.

Students wishing to follow the honours or advanced major in a subject are advised to consult with the department chair as early as possible.

Degrees, Majors, Advanced Majors, Honours, or Minors in Both or Either of Canada's Official Languages

Students are reminded that courses and programs in English and French are available to enhance and complement anydegree in the Faculty of Arts. See the department chairs for more information.

4.1.2 Subject Requirements

In BA programs, subjects for a major, minor, pair or electives are the following, with qualifications as noted:

Aquatic resources (see section 7.2)
Art (see note a)
Canadian studies (see note b)
Catholic studies
Celtic studies
Classical studies (see note c)
Computer science (see note e)
Development studies (see section 7.12)
Economics
English
History
Information systems (see note d)
Mathematics/Sciences (see note e)
Modern languages (see note f)
Music (see note g)
Philosophy
Political science
Psychology
Religious studies
Sociology/Anthropology (see note h)
Theatre
Women's studies

Notes:

a) Art
Courses may be used as electives, a pair, or a minor.

b) Canadian Studies
In the BA with Major and Advanced Major, a pair or the minor (subject B) may consist of the courses listed under Canadian studies in section 7.6. The minor must consist of at least two subjects and not more than three, and may not include any courses at the 100 level. Canadian studies may not constitute a major, advanced major or honours concentration.

c) Classical Studies

Courses may be used as electives, a pair or a minor. See section 7.10.

d) Professional Programs

A student in a BA program, including those who have transferred from another program, may count a maximum of 18 credits in courses taken in professional programs towards the degree. The following regulations apply:

i) Students may complete a maximum of 12 credits in BSAD but only students who transfer out of the BBA or BIS programs may count these as a pair.
ii) Students may complete a maximum of 12 credits in INFO, which may count as a pair.
iii) A maximum of 6 credits in HKIN or HNU may be used as open electives, but may not be taken in the first year.
iv) Students who transfer out of the engineering program may complete a maximum of 6 credits in ENGR.
v) Students who transfer out of the nursing program may complete a maximum of 6 credits in NURS.

e) Mathematics/Sciences

All references to MATH courses include CSCI and STAT courses unless otherwise noted. A pair must be in MATH or one science. A minor may include two different sciences, or one science and one MATH and CSCI, but at least one course must be at the 200 level or higher. Students who wish to major in a science may do so only in the B.Sc. program.

f) Modern Languages

A pair or a minor must be in one language. FREN 110 and 115 may count toward a pair. A student may major in French by taking 36 credits, excluding French summer immersion courses. A student who majors in French or completes a minor in French may also count Spanish as a pair. It is possible for other students to complete a minor in Spanish.

g) Music

If music is chosen as a pair, the courses must be 12 credits in music history, music theory, choral ensemble, or performance ensemble.

If music is chosen as a minor subject in the BA or BBA program, see section 4.11.3 for specific course requirements. Candidates must pass an audition on a major instrument or voice; see section 4.11.

h) Sociology and Anthropology

Courses in these subjects may be combined in a major, minor or pair. Students may not use SOCI 100 and ANTH 110 as a pair.

Course Restrictions

A maximum of 6 credits may be earned from: STAT 201, 231, 331 (232), PSYC 290, SOCI 305 (255) and 300. Normally, STAT 201 and PSYC 290 may not be taken for credit in a B.Sc. program.

Credit may not be earned for both courses that are cross-listed. In all arts and science programs, credit may be earned for either the course in column A or the course in column B in the table below. Bracketed numbers refer to former course numbers, and appear in the chart for administrative purposes only.

A	B	A	B
BIOL 100 (102, 101)	BIOL 111, 112	CHEM 100	CHEM 120
BIOL 115	BIOL 315	ESCI 100	ESCI 170
BIOL 252	BIOL 304	MATH 111, 112 (110)	MATH 121, 122
CSCI 100	CSCI 235	MATH 221	MATH 367
CSCI 100	INFO 131 (130)	MATH 222	MATH 267
CSCI 125	CSCI 161	MATH 223	MATH 253
CSCI 235	CSCI 255	MATH 224	STAT 231
CSCI 254	CSCI 256	STAT 201	STAT 231
INFO 131 (130)	CSCI 235	NURS 300	NURS 310
INFO 151, 152 (150)	CSCI 160	PHYS 100	PHYS 120
PSYC 290	STAT 201, 231, 331		

4.2 BACHELOR OF ARTS WITH MAJOR

The BA with Major is offered in Catholic studies, Celtic studies, economics, English, history, mathematics, statistics, and computer science, French, music, philosophy, political science, psychology, religious studies, sociology/anthropology, and women's studies. The BA with Major in Aquatic Resources is offered with a major in economics or public policy and social research (political science or sociology/anthropology); s*ee section 7.2*.

a) Declaration of Major

Students apply for admission to the program by March 31 of the second year after meeting with an advisor from the major department.

b) Department Advisor

Students meet with a department advisor in the academic year in which their major is declared to discuss future course selection.

c) Course Patterns

The course pattern for the four-year program is:

Subject A, major subject	36 credits in one subject
Subject B, minor subject	24 credits in another subject
Subjects C, D, and E	12 credits in each of the three other subjects
Electives	24 credits

See section 4.1.2 for regulations governing subjects.

d) 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., HIST 110).

Group I Celtic Studies, English, history, mathematics, statistics, and computer science, philosophy, religious studies

Group IIEconomics, political science, psychology, sociology/anthropology, modern languages (French)

Group I	6 credits
Group II	6 credits
Group I or II	6 credits
Arts/Science electives	6 credits (may not be a course from a professional program such as human nutrition, human kinetics or information systems)
Open electives	6 credits

e) Graduation Requirements

To qualify for a major degree candidates must have:

i) fulfilled the course and pattern requirements for theprogram;
ii) fulfilled the course and seminar requirements of the major department; and
iii) maintained a general average of 55 over the final three years.

See section 3.21 for regulations governing Distinction.

The BA degree may also be earned by part-time study; see section 4.15.

4.3 BACHELOR OF ARTS WITH JOINT MAJOR

It is possible, in the four-year BA degree, to pursue a major program that involves the combined study of two subjects (see section 4.1.2 for the list of possible subjects). A joint major involves 36 credits in each of the two disciplines (subjects A and B). The program or department requirements for majors are applicable in both subjects. For details of specific programs, consult department requirements in section 7.

See 4.2 a, b and d for regulations governing major programs.

Course Pattern

Major subject A	36 credits
Major subject B	36 credits
Pair C	12 credits
Pair D	12 credits
Open electives	24 credits (courses in subject A or B may not be used as open electives)

4.4 BACHELOR OF ARTS WITH ADVANCED MAJOR

The advanced major is a four-year program designed for the student who wishes both depth and breadth in subject offerings. This degree requires superior achievement in grades and average. The BA with Advanced Major is offered in: Celtic studies, economics, English, history, mathematics, statistics, and computer science, French, music, philosophy, political science, psychology, religious studies, sociology/anthropology, and women's studies. A liberal arts option is also offered; see 4.4.1.

a) Application for Admission

Students who wish to enter an advanced major program should contact the department chair or designate. Application for admission should be made by March 31 of the sophomore year. The application form must be signed by the department chair or designate and returned to the dean's office. Students will be advised of their acceptance to the program in the summer following their second year.

b) Admission Requirements

The normal admission requirements are:

i) an average of 60 or higher in each of the first and sophomore years;
ii) grades of at least 60 in the major and minor subjects; and
iii) no failures in the previous year.

c) Course Pattern

Subject A, major subject	36 credits in one subject
Subject B, minor subject	24 credits in another subject
Subjects C, D, E	12 credits in each of three other subjects
Electives	24 credits

See section 4.1.2 for regulations governing subjects.

d) Research Report/Senior Paper Requirements

i) A thesis in the form of a research report or senior paper is required for an advanced major degree.
ii) Department regulations regarding dates for the selection of thesis supervisor and choice of topic must be followed. These dates may not be later than September 30 of the academic year during which the student expects to graduate.
iii) The thesis must be completed and in the hands of the department chair by March 31 of the senior year.

e) Graduation Requirements

To qualify for an advanced major degree, candidates must have:

i) been admitted to the program;
ii) earned an average of 65 or higher in each of the junior and senior years;
iii) earned an average of 65 or higher in the major as well as the minor subject in each of the junior and senior years; and
iv) fulfilled the course, seminar, research report or senior paper requirements of the major department.

A student who fails to satisfy one or more of the requirements for the advanced major degree may be eligible for the major degree.

See section 3.21 for regulations governing Distinction.

4.4.1 Bachelor of Arts with Advanced Major (Liberal Arts Option)

The advanced major with liberal arts option offers students a broad experience of the humanities, social sciences, fine arts, and sciences. This degree requires superior achievement in grades and average. It includes the integrating course IDS 400: Arts IV described in section 7.22.

a) Application Procedure, Admission Requirements, Research Report or Senior Paper Requirement, Graduation Requirements

These are the same as for the advanced major. *See 4.4 a, b, d and e.*

b) The Course Pattern for the Liberal Arts Option is

Subject A, major subject	36 credits in one subject

Subject B, minor subject	24 credits in one subject	
Subjects C, D	12 credits in each of two	other subjects
Electives	36 credits	

Included in the pairs or electives must be a fine arts course (e.g., ART 341/342: History of Art I and II or MUSI 117: History of Popular Music); a science course or PHIL 210: Philosophy of Science; and IDS 400: Arts IV.

c) Major Subject

The 36 credits in the major subject may be chosen from one of the departments listed below:

Group I Celtic studies, English, history, French, music, philosophy, religious studies

Group II Economics, mathematics, statistics, and computer science, political science, psychology, sociology/anthropology, women's studies

When the major subject is chosen from group I, the minor subject may also be from group I, or from group II or from science; see 4.1.2 e. If both the major and minor are chosen from group I, then the balance of the program must include a minimum of 24 credits from group II and/or science.

When the major subject is chosen from group II, the minor subject may also be from group II, or from group I, or from science. If both the major and minor are chosen from group II, then the balance of the program must include a minimum of 24 credits from group I and/or art and/or Spanish.

See section 4.1.2 for regulations governing subjects.

4.5 BACHELOR OF ARTS WITH JOINT ADVANCED MAJOR

It is possible, in the four-year BA degree, to pursue an advanced major program that involves the combined study of two subjects *(*see section 4.1.2 for the list of possible subjects). A joint advanced major involves 36 credits in each of the two disciplines (subjects A and B). The program or department requirements for advanced majors are applicable in both subjects. For details of specific programs, consult department requirements in section 7.

See 4.4 a, b, d and e for regulations governing advanced major programs.

Course Pattern

Subject A	36 credits in one subject, plus a senior paper
Subject B	36 credits in another subject
Subjects C, D	12 credits in each of two subjects
Electives	24 credits

4.6 BACHELOR OF ARTS WITH HONOURS

The BA with Honours is offered by the following departments: Celtic studies, economics, English, French, history, mathematics, statistics and computer science, music (see section 4.11), philosophy, political science, psychology, religious studies, and sociology/anthropology.

a) Application for Admission

Students who wish to enter an honours program should contact the department chair as early as possible. Application for admission to an honours program may be made in the second term of the sophomore year. Application forms must be signed by the chair or designate before being returned to the dean's office by March 31. Students are advised of their acceptance into the honours program in the summer following their second year.

b) Admission Requirements

The normal admission requirements are:

i) an average of at least 70 in 60 credits completed during the first two years; and

ii) an average of at least 70 in all courses completed in the honours subject during the first two years.

c) Course Pattern

Subject A 60 credits in the honours subject; with department approval, up to 12 credits from other departments may be included in the 60

Subject B	12 credits in a second subject
Subject C	12 credits in a third subjects
Electives	36 credits

d) Degree Requirements

To qualify for an honours degree, candidates must have:

i) been admitted to the program;
ii) earned an average of at least 70 in all courses completed during the four years of the program;
iii) normally earned grades of not less than 70 in each course in the honours subject;
iv) earned an average of at least 70 in all courses taken in the honours subject in each of the junior and senior years; and
v) fulfilled the course, seminar and thesis requirements of the honours department.

e) First Class Honours
See section 3.21.

f) A student who fails to satisfy one or more of the requirements for the honours degree may be eligible for the major or advanced major degree providing the requirements for that degree have been met.

g) Thesis Requirements for the Honours Degree
i) The honours department requires a written thesis. It must be carefully written and well organized, and should demonstrate good literary style, scholarly investigation and critical evaluation.
ii) Department regulations regarding dates for the selection of thesis supervisor and choice of topic must be followed. These dates may not be later than September 30 of the academic year during which the student expects to graduate.
iii) The thesis must be completed and in the hands of thedepartment chair by March 31 of the senior year.

4.6.1 Bachelor of Arts Honours with a Subsidiary Subject

In the fields listed below, it is possible to pursue an honours program involving combined study in two disciplines. An honours degree with subsidiary subject involves a minimum of 48 credits in the honours subject and a minimum of 24 credits in the subsidiary subject. For specific department regulations, consult the department offerings in section 7.

See 4.5 a, b, d, e, f and g for regulations governing honours programs.

Within the Bachelor of Arts Honours with a Subsidiary Subject program, the disciplines in which an honours is possible are those in which one may complete a single honours; a subsidiary is possible in those fields in which one may complete at least a major. The possible honours fields are: Celtic studies, economics, English, French, history, mathematics/statistics and computer science, philosophy, political science, psychology, religious studies, and sociology/anthropology. The possible subsidiary fields include the above, and in addition: Catholic studies, music, and women's studies.

a) Requirements
Normally the core courses and the seminar and thesis requirements for the honours with a subsidiary subject are the same as for the single honours program in one subject. Course requirements in the subsidiary subject are determined by that department.

b) Course Pattern
i) 120 credits are required, consisting of
ii) up to 84 credits in the honours and subsidiary subjects with a minimum of 48 credits in the honours subject and 24 credits in the subsidiary subject;
iii) 12 credits in a third subject; and
iv) 24 to 36 credits of open electives, depending on the total of honours and subsidiary courses.

THE GERALD SCHWARTZ SCHOOL OF BUSINESS AND INFORMATION SYSTEMSXE "GERALD SCHWARTZ SCHOOL OF BUSINESS & INFO SYSTEM"

The Gerald Schwartz School of Business and Information Systems was formed in September 1999 to provide students with skills and knowledge to meet the challenges of managing effectively in the 21st century. The major benefactor of the school is Gerald Schwartz, founder and CEO of Onex Corporation, a leading Canadian business. The Schwartz School brings together the Departments of Business Administration and Information Systems and offers Bachelor of Business Administration (BBA) and Bachelor of Information Systems (BIS) degrees.

In addition to primarily classroom-based degrees, The Schwartz School offers a co-op, work-study option, *The Expanded Classroom.* BBA and BIS students may earn their degrees by completing a 12-month co-op placement following their third year or by completing three four-month co-op placements during their third and fourth years. To prepare for the co-op placement, students must complete several personal skill development workshops. To remain in the co-op program, BBA and BIS students are required to maintain a 70 average. For

further details consult the StFX website or contact the appropriate department chair.

The Schwartz School's BBA program is described in sections 4.7 and 4.8 and its BIS program is described in section 4.9. Students will find the most up-to-date information about the Schwartz School at <http://www.mystfx.ca/tresearch>.

4.7 BACHELOR OF BUSINESS ADMINISTRATION

The objective of the Bachelor of Business Administration program is to develop graduates who possess the knowledge, skills, perspectives and attitudes to become effective managers. To attain this objective the BBA program combines the acquisition of conceptual knowledge with the development of analytical, communication and leadership skills. Each stream in the BBA program consists of an integrated set of required courses in BSAD, ECON, INFO, MATH, and STAT complemented by elective courses in the arts and/or sciences.

BBA students work with faculty who have significant practical business experience and whose research interests are relevant to practicing managers. Faculty employ a variety of applied learning approaches (projects, presentations, simulations, field trips). In class learning approaches include class discussions, case analyses, lectures, readings, films and guest speakers. The goal is to ensure that each graduate is prepared to contribute effectively in large or small organizations, or to begin graduate study.

The BBA program provides 15 streams: BBA general; BBA with aquatic resources; BBA Major- in accounting, enterprise development, finance, information systems, leadership studies, and marketing; BBA Honours-in accounting, enterprise development, finance, information systems, leadership studies, and marketing; and BBA Joint Honours in business administration and economics. Each BBA stream, except the BBA with aquatic resources, offers a primarily classroom-based option and a co-op, work-study option.

Students who wish to study business administration and another discipline may choose the B.Sc. with Advanced Major in a Science and Business Administration (see section 5.5); the BA with Major or Advanced Major in economics and a minor in business administration (see section 7.13); or the BIS program (see section 4.9).

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 department chair prior to registration to confirm their course selections.

See section 3.21 for regulations governing Distinction.

Note: This calendar presents the sequence and pattern for the *new* BBA program which came into effect in September 2001. For 2003-2004, most third-year students and all first-and second- year students are following the *new* program meaning BSAD 101, 102 and a tech-designated elective are required. Students in fourth year are following the *old* BBA program meaning BSAD 321, 331 and 361 are required. If in doubt, see the department chair.

a) Course Pattern for Most BBA Students:

BSAD courses (required + elective)	60 credits
Arts/Science electives, to include two pairs	36 credits
ECON 100	6 credits
INFO 131, 135	6 credits
STAT 201 and MATH 205	6 credits
Open electives	6 credits

Exceptions to this general pattern are students in joint honours in business administration and economics, majors in finance, and majors in information systems who substitute ECON or INFO courses for selected BSAD courses. Course sequences for the 15 BBA streams are provided in section 7.5.

b) Course Pattern for the BBA Aquatic Resources major is:

BSAD courses (required + elective)	60 credits
AQUA courses (required + elective)	30 credits
ECON 100	6 credits
INFO 131, 135	6 credits
ESCI 171 and BIOL 112	6 credits
STAT 201and MATH 205	6 credits
Open electives	6 credits

c) Arts/Science Electives

BBA students must earn 36 credits of arts/science electives. Normally these credits are earned as 12 credits (2 full-year courses or equivalent) in each of years 1-3. The arts/science electives must include, a pair (12 credits), in each of two different subjects. The third 12 credits of arts/science electives may be additional courses in paired subjects or courses in other subjects.
Economics, information systems, mathematics and statistics courses required to earn the BBA degree may not count as arts/science electives**.**
At least one of the two pairs must be in an arts subject. To maximize flexibility, students are advised to complete at least one arts/science pair by the end of their second year.

Allowable **Arts Subjects**:

Art (see 4.1.2 a)	Modern languages
Canadian studies	Music (see 4.1.2 g)
Catholic studies	Philosophy
Celtic studies	Political science
Classical studies	Psychology
Development studies	Religious studies
Economics	Sociology/Anthropology
English	(see 4.1.2 h)
History	Women's studies

Allowable **Science Subjects**:

Biology	Earth sciences (geology)
Chemistry	Mathematics/Statistics
Computer science (see below)	Physics

Professional and Applied Subjects Not Permitted as Arts/ Science Electives are:

Adult education	Human nutrition
Aquatic resources	Information systems
Education	(see below)
Engineering	Nursing
Human kinetics	Theatre

Economics courses (ECON) may count as an arts pair except for BBA students enrolled in the major in economics and joint honours in business administration and economics streams. All BBA students may count ECON courses as electives.
Computer Science 100 (CSCI 100) may not count toward the BBA degree since BBA students have credit for INFO 131. However, students may use other CSCI courses as arts/science electives or as a pair.
Information Systens (INFO) courses may count as BSAD electives with permission of the chair. INFO courses may also count as open electives. INFO courses may not count as arts/science electives for BBA students.

d) Earning a Minor in an Arts or Science Elective Subject

Any BBA student earning 24 of the 36 arts/science electives in one arts subject qualifies for a minor in that subject. BBA students contemplating a minor in a science subject should consult the department chair as some restrictions apply. Students earning a minor in an arts or science subject must still earn a pair in a second subject.

e) Open Electives

All BBA streams except joint honours in business administration and economics include 6 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 or dean, courses in selected subjects not normally permitted as arts/science electives including information systems, engineering, human kinetics, human nutrition and nursing.

f) BSAD/INFO Tech-Designated Elective

During their third or fourth year BBA students, except those in the major or honours in information systems streams, must earn credit for one of the following 9 information and communications technology electives:

BSAD 319	Management of Information Technology
BSAD 415	Electronic Business
BSAD 416	Project Management and Practice
BSAD 417	Enterprise Resources Planning: Implementation and Management
BSAD 418	Topics in Information Systems
BSAD 469	Technology and Change in Organizations
INFO 345	Introduction to Enterprise Resource Planning (ERP)
INFO 347	Implementation, Configuration and Use of ERP
INFO 475	Database Management Systems

g) Admission to the BBA Program

General admission requirements for the BBA program are outlined in section 1. Admission to the BBA program may be restricted based on quotas, general average, and course grades, as specified by the StFX University Senate.

h) Advancement in the BBA Program

Students enrolled in the BBA program are encouraged to see the department chair during their first year to discuss their programs and options. Progression to second-year courses requires satisfactory academic standing (i.e., an average of 55).

Progression to the third year requires satisfactory academic standing and credit for BSAD 101, 102, 221, 223, 231 and 261 with a minimum combined average of 60 in the four 200-level BSAD courses. 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 instructor to register in a course may override the normal prerequisites.

i) Substitutions

A BBA 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.

Students with credit for MATH 111 and 112 may use them to satisfy the MATH 205 requirement and 3 credits of arts/science elective in math.

j) Affiliations with Professional Associations

The Department of Business Administration maintains ongoing relationships with the Atlantic School of Chartered Accountancy, the Certified General Accountants' Association, and the Society of Management Accountants. Graduates may earn credit for most courses toward completion of the CA, CGA or CMA professional accounting designations. Graduates may also earn credit for courses the Canadian Institute of Management Program, the Fellows Program of the Institute of Canadian Bankers, and other professional certification programs.

k) North American Mobility Option

The BBA program has partners in the US and Mexico offering educational exchange opportunities supported generously by the federal governments of the three NAFTA countries. Students interested in the North American Mobility program should consult the department chair. See section 3.19.

4.7.1 BBA General Degree

The course pattern for the BBA general degree (effective September 2001) is shown below. The normal course sequence is shown in section 7.5.

BSAD	101, 102, 221, 223, 231, 261, 341, 471, 3 credits BSAD/INFO tech elective
BSAD electives	33 credits
ECON	100
INFO	131, 135
MATH	205
STAT	201
Arts/Science electives	36 credits including 12 credits in each of two subjects
Open electives	6 credits

4.7.2 BBA with Aquatic Resources Major

Students seeking to build an integrated knowledge and skills base to assume management positions in private and public sector aquatic enterprises will find the BBA with Aquatic Resources an ideal alternative. The degree combines studies in management, marketing, accounting and finance on a base of public policy and aquatic science. Students participate in a summer work internship between third and fourth years and undertake a major research project in their senior year.

The course pattern for the BBA with aquatic resources is shown below. The normal course sequence is shown in 7.5.

BSAD	101, 102, 221, 223, 231, 261, 341, 471; and 33 credits including 332, 456 and 472; and 3 credits BSAD/ INFO tech elective
AQUA	100, 400, 450 and 18 credits in designated AQUA courses in other departments (6 credits in each of three departments)
ECON	100
INFO	131, 135
MATH	205
STAT	201
Other required courses	ESCI 171; BIOL 112
Electives	6 credits to create a pair in an arts subject

4.7.3 BBA Major Degrees

The BBA program offers majors in accounting, enterprise development, finance, information systems, leadership studies, and marketing. Candidates for BBA major degrees must submit their applications to the dean of arts by March 31 of their second year.

Admission requirements are:

i) a combined average of at least 60 in the courses taken in the first two years; and
ii) a combined average of 65 in the required BSAD, ECON, MATH, STAT, and INFO courses taken in the first two years.

To complete the degree with major, candidates must:

i) follow one of the programs listed in section 7.5;
ii) achieve an average of 65 or better in each of the third and fourth years;
iii) achieve a combined average of 65 in all BSAD and all required ECON and INFO courses taken in years three and four.
iv) achieve grades of 60 or better in all BSAD and INFO courses taken in the third year or be in the top 25% of the third-year class in order to advance to the fourth year of the BBA with major.

The normal course sequences for the six BBA major degrees are shown in section 7.5.

4.7.4 BBA Honours Degrees

The BBA program offers honours degrees in accounting, enterprise development, finance, information systems, leadership studies, and marketing; and a Joint Honours Degree in Business Administration and Economics (see section 4.8). Candidates for the BBA honours degree must submit their applications to the dean of arts by March 31 of their second year. Entrance requirements are:

i) a combined average of at least 70 in courses taken in the first two years;
ii) a combined average of 70 in the required BSAD, ECON, MATH, INFO courses taken in the first two years.

Students are advised in writing of their acceptance to the honours stream for which they apply.

To complete the degree with honours, a candidate must:

i) follow one of the sequences listed in section 7.5;
ii) achieve an average of 70 in each of the third and fourth years;
iii) normally have achieved grades of at least 70 in each BSAD course taken in these years; and
iv) achieve a grade of 70 or higher on the honours thesis.

The residence requirements for honours streams are given in section 3.3 a.
Normal sequences for the six BBA honours degrees are shown in section 7.5.

4.8 BACHELOR OF BUSINESS ADMINISTRATION WITH JOINT HONOURS IN BUSINESS ADMINISTRATION AND ECONOMICS

Admission requirements are:

i) a combined average of at least 70 in courses taken in the first two years;
ii) a combined average of 70 in the required BSAD, ECON, MATH, and INFO courses taken in the first two years.

Application for admission must be made to the dean of arts by March 31 of the second year.

To complete the degree with honours, candidates must:

i) follow the sequence listed below;
ii) achieve an average of 70 in each of the third and fourth years;
iii) normally have achieved grades of at least 70 in each BSAD course taken in these years; and
iv) achieve a grade of 70 or higher on the honours thesis.

The normal course sequence for the BBA with Joint Honours in Business Administration and Economics is shown in section 7.5.

4.9 BACHELOR OF INFORMATION SYSTEMS

Information systems involves the study of the technologies, people, and processes that collect, transform, and disseminate information in an organization. More specifically, the discipline of Information Systems (IS) integrates business administration and computer science to provide technology solutions for the gathering, representing, storing, processing, and deploying of primarily business information.

A university degree in information systems can provide a stepping-stone to a wide variety of career options in areas such as general management, project management, technology management, systems analysis, system design, software development, enterprise resource planning, e-business design, geographic information systems, and multimedia and visual arts. In addition to providing a wide range of career options, the program is designed to provide a strong fundamental education in theoretical information systems for students who wish to pursue graduate studies in management information systems, technology management, and business administration.

The Department of Information Systems offers a wide variety of degrees to meet the needs of students interested in the study of information systems. All degrees closely follow the curriculum recommendations of *IS'2001 Model Curriculum and Guidelines for Undergraduate Degree Programs in Information Systems*, developed by the Association of Computer Machinery, the Association for Information Systems, and the Association for Information Technology Professionals. In addition to core information systems courses, the degrees offered by the department contain a number of credits in the humanities and social sciences to provide a well-rounded, broadly oriented bachelor's degree.

The following degree programs are offered by the Department of Information Systems:

Bachelor of Information Systems General
Bachelor of Information Systems with Major or Honours in Enterprise Resource Planning
Bachelor of Information Systems with Major or Honours in E-Business
Bachelor of Information Systems with Major or Honours in Management Information Systems

Students should be aware that the BIS degree programs outlined in this Academic Calendar were revised effective September 2003. Students enrolled in a BIS degree program prior to the 2003 academic year follow the program in place at the time of their admission. These requirements may be found at <http://www.mystfx.ca/calendar/1999-2000/welcome.html>. In addition, many IS courses offered prior to September 2003 have been renumbered and/or renamed. For students enrolled in a BIS degree program prior to the 2003 academic year, an overview of the old and new course names and numbers is available at <http://www.mystfx.ca/academic/infosys/courses/changes.html>.

An Enterprise Resource Planning (ERP) system is a single, integrated enterprise computing system designed to carry out the most common business activities, including logistics, accounting, finance, and human resource management, at the operational, tactical, and strategic levels of the organization. The Department of Information Systems, by partnering with SAP, has established itself as a leader in ERP education in Canada. The department offers students the opportunity to obtain specialized knowledge in the design, implementation, and management of ERP systems through a major or honours degree in enterprise resource planning.

Business is increasingly conducted through electronic means, often through the Internet. This presents many challenges, including technology, marketing, strategy, operations and systems issues. The Department of Information Systems offers students the opportunity to obtain specialized knowledge in the design, implementation, and management of e-business systems through a major or honours degree in e-business.

The BIS Major or Honours in Management Information Systems is designed to provide students with both depth and breadth regarding the management issues facing information systems in organizations.

Note: The BIS degrees require at least two programming languages. Whereas the first language (C) is covered in INFO 151, 152, elective courses must be chosen such that an additional language is acquired. Examples of such courses are: CSCI 383: C++; CSCI 483: JAVA; CSCI 495: LISP/PROLOG; INFO 346: ABAP.

4.9.1 Bachelor of Information Systems General Degree

The course pattern for the BIS degree is shown below. The sequence and course descriptions may be found in the department listings in section 7.21.

INFO	131 or 145, 135, 151, 152, 275, 325, 375, 415, 416, 425, 465
INFO electives	12 credits, including 6 credits at 300/400 level
BSAD	101, 102, 221, 223, 231, 261, 361
CSCI electives	254 (or 383 with permission of the chair of mathematics, statistics, and computer science) and 3 credits chosen from 383, 455, 483, 485, 495
ECON	100
MATH	205
STAT	201
Arts/Science electives	30 credits including 12 credits in each of two subjects; credits in BSAD, MATH and INFO may not be included in these electives
Open electives	6 credits

Admission Requirements
The normal admission requirements are:

i) an average of at least 60 in each year;
ii) no grades of less than 60 in any INFO or ECON courses;
iii) an average of at least 60 in MATH 205 and STAT 201; and
iv) an average of 60 or higher in BSAD 101, 102, 221, 223 and 231.

4.9.2 Bachelor of Information Systems with Major

The BIS program offers majors in enterprise resource planning,
e-business, and management information systems. The course requirements and normal sequence are shown in section 7.12. Candidates for BIS major degrees must submit their applications by March 31 of the second year.

a) Requirements
The normal admissions requirements are:
i) an average of at least 60 in each of the first two years;
ii) no grades less than 60 in any INFO or ECON course;
iii) an average of at least 60 in MATH 205 and STAT 201; and
iv) an average of at least 60 in BSAD 101, 102, 221, 223, and 231.

b) Course Pattern
i) The course pattern for the BIS with Major in Enterprise Resource Planning is the same as for the BIS General degree, except students replace 15 credits of INFO or open electives with INFO 345, 347, 496, and any two of INFO 346, 427, 446, 447, and BSAD 417.
ii) The course pattern for the BIS with Major in e-Business is the same as for the BIS General degree, except students replace 15 credits of INFO or open electives with INFO 427, 446, 496, and any two of INFO 345, 346, 347, and 445.
iii) The course pattern for the BIS with Major in Management Information Systems is the same as for the BIS General degree, except students replace 3 credits of INFO with INFO 496.

c) Degree Requirements
To complete the degree with major, candidates must:
i) follow one of the programs listed above;
ii) achieve an average of at least 65 in each of the third and fourth years; and
iii) achieve a combined average of at least 65 in all INFO, CSCI, and BSAD courses taken in years three and four.

Students who do not meet the grade and average requirements for the BIS major program after their third or fourth year qualify for a BIS General degree by completing the BIS General degree pattern outlined above.

4.9.3 Bachelor of Information Systems wih Honours

The BIS with Honours degree is designed to equip students for graduate studies and research in information systems and business administration. Students, by working closely with IS faculty, explore classic IS work and recent IS research, as well as the research statistics and methods commonly used to report them. Students will apply their research skills and explore a topic of interest in depth through the preparation and defense of a thesis.

a) Admission Requirements
The normal admission requirements are:
i) an average of at least 70 in each of the first two years;
ii) an average of at least 70 in the required courses in INFO, BSAD, ECON, MATH, and STAT.

b) Course Pattern
i) BIS with Honours in Enterprise Resource Planning: same as for the BIS Major degree in Enterprise Resource Planning, except students replace 3 credits of INFO or open electives and INFO 496 with INFO 397 and 498. Students may also replace any one of INFO 346, 427, 446, 447, or BSAD 417 with INFO 497.

ii) BIS with Honours in e-Business: same as for the BIS Major degree in e-Business, except students replace 3 credits of INFO or open elective and INFO 496 with INFO 397 and 498. Students may also replace any one of INFO 345, 346, 347, or 445 with INFO 497.

iii) BIS with Honours in Management Information Systems: same as for the BIS Major degree in Management Information Systems, except students replace 6 credits of INFO or open elective with INFO 397 and 498. Students may also replace any one of INFO 345, 346, 347 or 445 with INFO 497.

c) Degree Requirements

To complete the degree with honours, candidates must have:

i) achieved an average of at least 70 in each of the third and fourth years;
ii) earned a combined average of at least 70 in all INFO courses taken in years three and four; and
iii) achieved a grade of 70 or higher in INFO 498.

Students who do not meet the grade and average requirements for the BIS with Honours program after their third or fourth year may qualify for a BIS with major or the general degree by completing one of the BIS course patterns outlined above.

4.9.4 Bachelor of Information Systems for Graduates

Students who have completed a StFX university degree can usually complete a BIS degree in one or two additional years of study. Students must have an average of 75 in the last two years of their completed first degree program. Before being admitted to the BIS program, students must complete INFO 131, 135, 151, and 152 with grades of 70 or higher. Transfer students must complete a minimum of 60 credits taken at StFX to earn a StFX degree. Students are encouraged to contact the information systems department chair for additional information regarding this program.

4.9.5 The Gerald Schwartz School Co-op Program

The Schwartz School offers a co-op, work-study option, *The Expanded Classroom.* BBA and BIS students may earn their degrees by completing a 12-month co-op placement following their third year or by completing three four-month co-op placements during their third and fourth years. To prepare for the co-op placement, students must complete several personal skill development workshops. To remain in the co-op program, BBA and BIS students are required to maintain an average of 70. For further details consult the StFX website or contact the appropriate department chair.

4.10 BACHELOR OF ARTS IN HUMAN KINETICS

The Department of Human Kinetics offers a four-year degree program in the study of human movement from a humanities and social sciences perspective. The BA in Human Kinetics program offers the student further specialization with the option to major in either a nationally accredited kinesiology program or a pre-education program. 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, arts/science electives, an approved and open elective, and selected activity courses.

Depending on course selection, the major in kinesiology prepares students for a variety of professional and educational options, including: professional programs such as athletic therapy, occupational therapy; direct employment in the health and fitness sector; or graduate programs in sport psychology, sociology, philosophy, history, or in the areas of special populations and adapted physical activity. Students interested in teaching in the school system should select the pre-education major, as it prepares them for admission to B.Ed. programs. Students who plan careers in other teaching-related professions should also choose the major in pre-education. Students may consult the department chair or designate to ensure proper course selection for acceptance to B.Ed. programs. *See section 4.12 for admission requirements to the StFX B.Ed. program.*

For the B.Sc. in Human Kinetics, see section 5.8.

The course requirements for the **Major in Kinesiology** are:

HKIN	33 credits: 105, 115, 205, 215, 236, 301, 365, 376, 396; 6 credits from HKIN 331, 332, 352, 353, 354
HKIN electives	21 credits
BIOL 251, 252	6 credits
Arts A	24 credits in an arts subject
Arts B	12 credits in a second subject
Arts/Science electives	12 credits
Approved electives	6 credits
Open electives	6 credits

The course requirements for the **Major in Pre-Education** are:

HKIN	42 credits: 105, 115, 205, 215, 236, 305, 365, 376, 385, 405, 425, 426; 6 credits from HKIN 331, 332, 352, 353, 354
HKIN electives	12 credits
BIOL 251, 252	6 credits
Arts A	24* credits in an arts subject

Arts B	12 credits in a second arts subject
Arts/Science electives	12 credits
Approved electives	6 credits
Open electives	6 credits

*For students pursuing the elementary teaching stream option, subject A becomes 18 credits and the approved electives become 12 credits.

4.10.1 Bachelor of Arts in Human Kinetics with Advanced Major

a) Application for Admission
Students who wish to enter an advanced major program should contact the department chair or designate, and apply for admission by March 31 of their sophomore year. The application form must be signed by the department chair before being returned to the dean's office. Students are advised of their acceptance to the advanced major program in the summer following their second year.

b) Admission Requirements
The normal admission requirements are:
i) an average of 60 or higher in each of the first and sophomore years;
ii) grades of at least 60 in the HKIN and subject A courses; and
iii) no failures in the previous year.

c) Course Pattern
See course requirements in section 4.9. Students are also required to complete HKIN 491: Seminar.

d) Degree Requirements
To qualify for an advanced major degree, candidates must have:
i) been admitted to the program;
ii) earned an average of 65 or higher in each of the junior and senior years;
iii) earned an average of 65 or higher in the HKIN courses as well as the courses in subject A in each of the junior and senior years; and
iv) fulfilled the course, seminar, and research report requirements of the department.

A student who fails to satisfy one or more requirements for the advanced major degree may be eligible for the BA in Human Kinetics.

See section 3.21 for regulations governing Distinction.

4.10.2 Bachelor of Arts in Human Kinetics with Honours

a) Application for Admission
Students wishing to apply to the honours program should contact the department prior to making application to the program. Application for admission to the honours program must be made by March 31 of the second year. The department chair must approve the application before the form is submitted to the dean's office for final approval. Students are advised in writing of their acceptance into the honours program.

b) Admission Requirements
i) an average of at least 70 in each of the first two years;
ii) grades of 70 or higher in each HKIN course taken in the first two years.

Exceptions to these requirements must be approved by the dean and the department chair.

c) Course Pattern for Honours Pre-Education
The course requirements for the honours in pre-education are shown below. For the normal sequence see section 7.19.

HKIN	51 credits: HKIN 105, 115, 205, 215, 236, 301, 305, 365, 376, 385, 396, 405, 425, 426; 493 (thesis); 6 credits of 331, 332, 352, 353, 354; and 491(senior seminar, no credit)
HKIN elective	3 credits
BIOL 251, 252	6 credits
Subject A	24* credits in an arts subject
Subject B	12 credits in a second arts subject
Arts/Science	12 credits

electives	
Approved electives	6 credits
Open electives	6 credits

*For students pursuing the elementary teaching stream option, subject A becomes 18 credits and the approved electives become 12 credits.

d) Course Pattern for Honours Kinesiology

The course requirements for the honours in kinesiology are shown below. For the normal sequence see section 7.19.

HKIN	36 credits: HKIN 105, 115, 205, 215, 236, 301, 365, 376, 396; 6 credits of 331, 332, 352, 353, 354; 493 (thesis); and 491 (senior seminar, no credit)
HKIN electives	18 credits
BIOL 251, 252	6 credits
Subject A	24 credits in an arts subject
Subject B	12 credits in a second arts subject
Arts/Science electives	12 credits
Approved electives	6 credits
Open electives	6 credits

e) Degree Requirements

To qualify for a BA in Human Kinetics with Honours degree candidates must have:

i) been admitted to the program;
ii) earned an average of 70 or higher in each of the final two years;
iii) earned grades of 70 or higher in the HKIN course in each of the final two years;
iv) fulfilled the course requirements and satisfied the senior seminar and honours thesis requirements of the department.

A student who fails to meet one or more of the requirements may be eligible for either a BA in Human Kinetics with Advanced Major in Pre-Education or Kinesiology or a BA with Major in Pre-Education or Kinesiology.

See section 3.21 for regulations governing Distinction.

4.11 DEGREES AND DIPLOMAS IN MUSIC

The music faculty offers a curriculum that focuses on jazz studies and contemporary music. Degrees and diplomas are a window to graduate study and commercial applications in the field of music. In addition to academically appropriate course work, the award-winning faculty stresses performance and composition as part of the well-rounded programs offered.

a) General Admission Requirements

In addition to the general admission requirements listed in section 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 Arts in Music the Bachelor of Music or to the Diploma in Jazz. Students must then apply for admission to the Bachelor of Arts in Music with Advanced Major or Honours, or the Bachelor of Music with Honours by March 31 of the second year of study.
Students who fail to meet the admission requirements to one of these three programs may be eligible for the BA with Major in Music, provided they achieve a pass in the Level 1 exam.

b) General Progression Requirements

i) In order to progress to 300-level MUSI courses, students must earn individual grades of at least 60 for advanced major, and 70 for honours, in each MUSI course at the 100 and 200 level.
ii) Students who receive a grade lower than 60 in MUSI 190 or 290 must re-audition to continue in the program.

iii) All candidates for admission to the BA in Music and Bachelor of Music with Honours and/or 300-level applied lessons must pass Level 1 by April 30 of their second year.

c) Course Pattern

The first and second year of the Diploma in Jazz, Bachelor of Arts in Music and Bachelor of Music follow a common curriculum.

The course requirements for first and second years are as follows:

MUSI	101, 103, 106 or 107, 117, 118, 165, 190, 201, 203, 206 or 207, 219, 222, 265, 290, and
Electives	12 credits in arts/science

4.11.1 Bachelor of Arts in Music with Advanced Major or Honours

The music department offers an advanced major or honours music program with a jazz concentration for students who are able to demonstrate, in their respective fields, musical knowledge and talent warranting development.

a) Admission Requirements

All candidates for admission to the BA in Music with Advanced Major or Honours must achieve an honours pass in the Level I exam.

b) Progression Requirements

Regulations governing admission to an honours program and conditions for qualifying for an honours degree are set out in *section 4.6 a, b, d, g*. A candidate who fails to meet the requirements for an honours degree may qualify for the BA in Music with either Advanced Major or Major. Regulations governing admission to an advanced major program and the conditions for qualifying for an advanced major degree are set out in *section 4.4 a, b, d, e.* A candidate who fails to meet the requirements for the advanced major degree may be eligible for the BA in Music with Major. A pass with merit in Level I is required for the BA in Music with Major.

Admission to the fourth year requires advanced major or honours standing in the third year.

c) Course Pattern:

The course requirements for the third and fourth years are:

MUSI	306 or 307, 315, 335, 395, 406 or 407, 415, 416, 495, recital
Arts/Science	36 additional credits, for a four-year total of 48 credits to include 12 credits in each of three subjects and 12 additional credits

4.11.2 Bachelor of Arts with Major in Music

For a major in music, students choose a minimum of 36 credits in music courses in consultation with the chair from the following:

MUSI 101, 103, 106 or 107, 117, 118, 165, 195, 201, 203, 206 or 207, 219, 222, 265, 295

An audition is required for admission to this degree. *See section 4.2* for other degree requirements. Minimum grade requirements do not apply to the major in music.

4.11.3 Minor in Music

Students may complete a minor in music by completing the following courses:

MUSI 101, 103, 106 or 107, 117, 118, 206 or 207, 219, 222

An audition is required for admission to a minor; see section 1.3 c. Minimum grade requirements in music do not apply to the minor in music.

4.11.4 Bachelor of Music with Honours

The music department offers the Bachelor of Music with Honours in jazz studies which integrates performance, composition, and arranging.

a) Admission Requirements

Admission to the third year requires a first class honours pass in the Level 1 exam and an average of at least 70 in 60 credits completed in the first two years.

b) Course Requirements

The courses required in the third and fourth years are listed below. Students may consult the music department handbook for the normal sequence.

MUSI 304, 306 or 307, 315, 325, 335, 365, 390, 406 or 407, 415, 416, 420, 465, 490, and a recital

Arts/Science include 12 — 12 additional credits, for a total over the four years of 24 arts/science electives to credits in each of two subjects

c) Progression Requirements

Candidates are required to submit a thesis in the third year.

Admission to the fourth year requires honours standing at the end of the third year.

4.11.5 Diploma in Jazz Studies

The Diploma in Jazz Studies is a two-year program designed for students who wish to enter the field of commercial music but do not wish to pursue the BA in Music degree. Instruction is offered in theoretical, aural, and improvisational skills.

For course requirements, see 4.11c.

Students in the diploma program who subsequently wish to pursue studies towards BA in Music or Bachelor of Music degrees must achieve the appropriate grade in the Level 1 exam and have no grade of less than 60 for the advanced major, or 70 for the honours, in any MUSI course.

4.11.6 Graduate Diploma in Jazz Studies

The Graduate Diploma program is designed for professional or amateur musicians, teachers and others who are interested in learning about the jazz art form.

The diploma is offered during the academic year and provides training in jazz theory, arranging, history, styles and improvisation.

Students are expected to perform in a variety of ensembles.

Admission Requirements

a) To be admitted to the graduate diploma program, applicants will normally:
   i) possess a B.Mus. degree, or a BA degree with a strong music component;
   ii) be able to demonstrate proficiency on their major applied instrument.

b) Admission Requirements for Selected Courses

To be admitted to selected courses in the diploma program for enrichment purposes, Future Students must provide evidence of the appropriate academic background in the case of theoretical courses, or demonstrate proficiency on their major applied instrument.

c) Course Requirements:

MUSI 501: Jazz Theory I, 502: Jazz Theory II, 503: Jazz Improvisation I, 504: Jazz Improvisation II, and Ensembles; each course is three credits.

4.12 BACHELOR OF EDUCATION

The B.Ed. is a two-year program following a first degree. The program has two divisions: elementary and secondary. A specialist program in physical education is available; however, applicants must still identify themselves as either elementary or secondary. *Completed applications must be submitted by January 31 of the year for which admission is sought.* The general admission requirements for the B.Ed. are as follow:

a) Applicants for the two-year B.Ed. program must have completed a first degree in arts, science, human kinetics (formerly physical education) or the equivalent. Half the course work in the initial degree must be in courses deemed teachable in the schools of Nova Scotia (i.e., students with a three-year degree must have 45 credits in teachable courses; students with a four-year degree must have 60 credits in teachable courses).

b) Normally applicants for the B.Ed. program must have a senior-year average of at least 70 as admission is competitive. Consideration is also given to the applicant's performance throughout the entire undergraduate program.

c) Unless applicants have completed a university-level course in computer science, individuals accepted into the B.Ed. program will be required to take a computer literacy test to demonstrate their competence in word processing, email, Powerpoint or other presentation software, and the Internet. Individuals who have difficulty in one or more of these areas will be required to take a series of non-credit workshops in their first year.

d) At the present time admission to the B.Ed. program is limited to approximately 100 students. Because of the high number of applicants, students admitted usually have superior academic records. Serious consideration is also given to reports from referees and to work experience related to a career in teaching. Interviews are required.

Progression Requirements and 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. In order to progress to the next term, a student is required each term to pass:

i) three of the four academic courses, and
ii) the practicum.

A student who fails to meet either of these requirements will be suspended.

The procedure for appealing an academic penalty is given in the Academic Calendar, section 3.13. A student who is suspended from the B.Ed. program may re-apply to the registrar after a period of one term. *Other regulations in 3.12 may apply.*

Professional Conduct

Students are expected to practice behavior in accordance with the legal, ethical, moral and professional standards of teachers as set out in the StFX Department of Education student handbook, the StFX Community Code, and the Nova Scotia Teachers' Union Code of Ethics. Failure to do so may result in dismissal from the program.

Certification

Candidates for a teacher's certificate may be asked to disclose disciplinary action 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, Level 5 or ITC, awarded by the Nova Scotia Department of Education.

4.12.1 Elementary Education

The subject fields deemed teachable in elementary schools are: English, French, Gaelic, music, physical education, art, social studies (history, geography, economics, political science, sociology*, anthropology*, Mi'kmaq studies*), mathematics, and science (biology, chemistry, physics, astronomy, ecology, earth sciences). An applicant's teachables must include 18 credits in one specific subject or 18 credits in one of the subject fields. Candidates must have at least six credits in English in their first degree to be considered for admission to the program since the core of the elementary school curriculum is language arts; ideally, candidates will have 12 credits in English. Attention will be paid to applicants who have at least one course in children's literature. All candidates must have six credits in each of mathematics and science. Developmental psychology is a requirement for admission to the elementary program. Elementary program candidates must have nine credits of social studies as well.

4.12.2 Secondary Education

Secondary education students must prepare to teach two subject fields normally taught in the public secondary schools of Nova Scotia. A minimum of 30 credits in the first degree must be in one acceptable subject for the first teachable. The first teachable may be chosen from English[1], social studies[2], science[3], mathematics[4], French, diverse cultures[5] or physical education[6]. For the second teachable, students must have 18 credits in English, social studies, science, mathematics, or diverse cultures, or 30 credits in physical education, or music[7].

[1] Secondary education applicants planning to teach English should have courses in Canadian, American, British, including Shakespeare, and post-colonial literature.

[2] Social studies applicants must have a concentration in African Canadian studies, anthropology, classics, economics, geography, history, law, Mi'kmaq, political science, or sociology. A broad background in Canadian, European, international, Maritime, First Nations, and women's studies is preferred.

[3] Science applicants should have a concentration in biology, chemistry, earth sciences, environmental studies, earth sciences, oceanography, or physics.

[4] Applicants with concentrations in mathematics should have courses in calculus, matrix algebra, geometry, and statistics.

[5] Diverse cultures includes courses in anthropology, Black studies, Celtic studies, Mi'kmaq studies, Native studies, sociology, women's studies, and world religions.

[6] See section 4.12.a.

[7] Applicants who wish to have music or French as a second teachable may be asked to take a proficiency test.

Secondary students must have six credits of either mathematics, science or computer science. Candidates must also have six credits of English and six credits of social studies.

4.12.3 Physical Education Specialization

A student in the elementary and secondary stream may specialize in the teaching of physical education by earning credits for EDUC 457: Elementary Physical Education, 425: Secondary Curriculum & Instruction and 444: Outdoor

Experiential Education. These courses prepare the teacher for a K-12 physical education where the emphasis is on the development of a physically active lifestyle, and will include such topics as movement education, fitness and dance, outdoor education, health education, personal development, and physically active lifestyles. Students pursuing this specialization would take EDUC 457 in the fall of year one, EDUC 425A in the winter of year one, EDUC 444 in the fall of year two, and EDUC 425B in the winter of year two.

4.12.4 Mi'kmaq Focus

Students 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.

4.13 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:

		Credits
ADED 311	Module 1 - Assessing Training Needs	1
ADED 312	Module 2 - Setting Learning Objectives	1
ADED 321	Module 3 - Evaluation Strategies	1
ADED 322	Module 4 - Designing Learning Activities	2
ADED 331	Module 5 - Facilitating Learning	1
ADED 332	Module 6 - Practicum	6

Upon completion of the first five modules, a 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.

4.14 DIPLOMA IN MINISTRY

The Diploma in Ministry is a distance-education program offered to students across Canada. The program offers seven 12-week courses. Students must complete five in order to receive the diploma. Three courses are compulsory (*), and students choose two from the remaining four as their electives.

Course			Offered	Credits
MNST110	Ministry in the Christian Community*		Sept or Jan	2
MNST120	Adult Religious Education*		January	2
MNST130	Biblical Foundations	January	2	
MNST140	God and the Christian Tradition		September	2
MNST150	Contemporary Catholic Issues		September	2
MNST160	Self-Directed Study	Open access	2	
MNST170	Practicum*	Open access	4	

Note: Credits are awarded upon completion of the diploma.

The ministry program prepares graduates to carry out responsibilities in the areas of religious education, the Rite of Christian Initiation of Adults, liturgy, preparation for reception of the sacraments, health care, and social action programs, while experiencing personal faith development. Upon completion of the Diploma in Ministry, students earn 12 credits which may be used in a BA program as electives.

4.15 PART-TIME BA AND BBA PROGRAMS

The university offers the BA and the BBA degree for students who wish to study on a part-time basis. With certain exceptions (see below), the regulations and requirements for part-time students are the same as for full-time students. *See sections 4.1 through 4.8.*

New students, mature students, and transfer students who wish to enter the BA or BBA program part-time must fulfill the entrance requirements and apply to the admissions office; *see section 1.1.* Full-time students attending StFX who wish to complete their degree part-time must apply to the dean's office.

To facilitate earning a BA or BBA degree, the university offers a limited number of courses in Pictou County and through distance learning. However, the university cannot guarantee that all courses required to earn a BA or a BBA

will be offered off campus or by distance. Students may have to register in courses on the StFX campus to fulfill degree requirements. StFX offers a number of courses in the late afternoon and evening in Antigonish. Information concerning courses may be obtained from the registrar's office (902-867-2160), or the continuing education office (902-867-3906 or toll-free 1-877-867-3906).

Academic advising for part-time students is carried out by the office of the dean of arts.

Regulations for Part-Time Studies:

a) The course requirements for the BA and BBA are the same for part-time and full-time students.

b) Of the number of courses required for graduation, a minimum of 60 credits must be obtained from StFX.

c) Of the credits in BSAD required for the BBA degree, at least 36 must be obtained from StFX.

d) Normally credit is granted for a maximum of 18 credits from May to August.

e) Normally all students must complete degree requirements within a period of 10 years after admission to the program.

f) To maintain a satisfactory academic standing, students must maintain an average of 55 in all courses taken for credit toward their degree. If their average falls below 55, students are placed on probation. Failure to increase the average to 55 after completion of a further 12 credits will result in dismissal from the university. Students may appeal probation or dismissal to the Committee on Studies; see section 3.13.

g) Part-time students in satisfactory academic standing may write supplementary examinations, subject to *regulation 3.10.1*.

h) Part-time students may appeal a grade, subject to *regulation 3.14*.

i) Students in the BA program must complete the requirements of the BA with Major *(see 4.2)*. Students wishing to pursue the BA with Advanced Major *(see 4.4)* or with Honours *(see 4.6)* should apply to the dean of arts for acceptance into these programs. Students who are accepted into the advanced major or honours programs must transfer to the full-time program for their final year of study.

5. Faculty of Science Regulations

See glossary for degree and subject abbreviations.

5.1 GENERAL REGULATIONS

The B.Sc., the B.Sc. in Human Kinetics, and the B.Sc. in Human Nutrition require 120 credits. The B.Sc. in Nursing requires 129 credits for students admitted in September 1994 and thereafter; formerly the B.Sc.N. required 132 credits. Courses must follow the pattern required by the program chosen. Senior students may take 100-level courses only with permission of the dean.

Students wishing to apply for a major, 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.

Minors or Courses in Both or Either of Canada's Official Languages

Students are reminded that courses or minors in English and French are available to enhance and complement any degree within the Faculty of Science. See department chairs for more information.

5.1.1 Arts Elective Regulations, Applicable to All Science Programs

a) Art
12 credits of ART may be chosen as an arts pair.

b) Business Administration
BSAD is not accepted as an arts elective subject. Students in the B.Sc. with Major may take up to 12 credits in BSAD as open electives. Those in a single advanced major or single honours program may take up to 24 credits: 12 credits as science A, with the approval of their major or honours department, and 12 credits as approved electives. Students in joint advanced major or joint honours programs may take up to 12 credits as approved electives.

c) Modern Languages
When modern languages is chosen as an arts pair, the 12 credits must be in the same language.

d) Music
When music is chosen as an arts pair, the courses must be 12 credits in music history, music theory, choral ensemble, or performance ensemble.

e) Psychology

PSYC 290: Statistics and Research Methods is not accepted as an arts elective course.

f) Sociology and Anthropology
Courses in these subjects may be combined in 12 credits. Students may not use SOCI 100 and ANTH 110 as a pair.

5.1.2 Science Course Regulations, Applicable to All Science Programs

a) All references to MATH courses include those in CSCI and STAT unless otherwise noted.

b) Course restrictions: Credit may not be earned for both courses that are cross-listed. In all arts and science programs, credit may be earned for either the course in column A or the course in column B in the table below. Bracketed numbers refer to former course numbers, and appear in the chart for administrative purposes only.

A	B	A	B
BIOL 100 (102, 101)	BIOL 111, 112	CHEM 100	CHEM 120
BIOL 115	BIOL 315	ESCI 100	ESCI 170
BIOL 252	BIOL 304	MATH 111, 112 (110)	MATH 121, 122
CSCI 100	CSCI 235	MATH 221	MATH 367
CSCI 100	INFO 131 (130)	MATH 222	MATH 267
CSCI 125	CSCI 161	MATH 223	MATH 253
CSCI 235	CSCI 255	MATH 224	STAT 231
CSCI 254	CSCI 256	STAT 201	STAT 231
INFO 131 (130)	CSCI 235	NURS 300	NURS 310
INFO 151, 152 (150)	CSCI 160	PHYS 100	PHYS 120
PSYC 290	STAT 201, 231, 331		

c) Courses for which credit is not granted in the science faculty: CSCI 100, MATH 100, 205; STAT 201; INFO 131, (130). INFO 131 is permitted for human kinetics, human nutrition, and nursing students, and STAT 201 for human nutrition students. Human nutrition students may also enroll in certain HKIN courses; see section 5.9.

d) A maximum of six credits may be earned from: STAT 201, 231, and 331; PSYC 290; SOCI 305 and 300. Normally, STAT 201 and PSYC 290 may not be taken for credit in a B.Sc. program.

e) As an exception to regulation 3.1 f, students in B.Sc. major, advanced major or honours programs may take six credits in ENGR, HKIN or HNU with the approval of the chair of the professional department and the chair of the major, advanced major or honours department. The six credits will be counted as an open elective in the B.Sc. major program, or as an approved elective in the advanced major, honours, joint advanced major or joint honours program.

5.2 BACHELOR OF SCIENCE WITH MAJOR

The B.Sc. with Major is offered in aquatic resources, biology, chemistry, earth sciences, mathematics, statistics, and computer science, and physics. The B.Sc.with Major in Aquatic Resources is offered with a major in biology, earth sciences or mathematics, statistics, and computer science.

a) Application for Admission

Students apply for admission to the program by March 31 of the second year, after meeting with an advisor from the major department. The student's program of courses must be approved first by the chair or designate of the major department and then by the dean.

b) Course Pattern

The course pattern for the B.Sc. with Major is:

Science A	36 credits in the major subject; with permission of the department 6 of the 36 may be from another science department
Science B	12 credits in a second science subject
Science C	6 credits in a third science subject
Science electives	6 credits
Arts X	12 credits in one humanities or social science subject
Arts Y	12 credits in a second humanities or social science subject
Arts Z	6 credits in a third humanities or social science subject
Open electives	30 credits in science/arts subjects. Students who transfer from a professional program may include up to 18 of the 30 credits from professional courses.

Of the science A, B or C one must be MATH, and six credits of MATH must be calculus. Six credits of arts X, Y or Z must be one of the humanities, and the other six credits must be a social science. The major department may specify up to 30 of the 36 credits in the science A courses; see department listings in section 7. *See section 3.21 for regulations governing Distinction.*

5.3 BACHELOR OF SCIENCE WITH ADVANCED MAJOR

The B.Sc. with Advanced Major is offered by the departments of biology, chemistry, earth sciences, economics"Science Degrees and Regulations:general regulations"cs, mathematics, statistics, and computer science, physics and psychology. *For department requirements, see section 7.*

a) Application for Admission

Application for admission to the program must be made by March 31 of the student's second year, after a meeting with an advisor from the major department. The application must be approved first by the chair or designate of the major department and then by the dean. Students are advised in writing of their acceptance into the program.

b) Admission Requirements

The normal admission requirements are:

i) an average of at least 60 in each of the first and sophomore years;

ii) grades of at least 60 in each course in the major field. Exceptions to these requirements must be approved by the dean and the appropriate department chair.

c) Course Pattern

The course pattern for the B.Sc. with Advanced Major is:

Science A	42 credits plus a seminar and/or thesis in the major subject. With permission of the department up to 12 of the 42 credits may be from other science departments; see 5.1.1.
Science B	12 credits in a second science subject
Science C	6 credits in a third science subject
Arts pair	12 credits in one humanities or social science subject
Arts electives	6 credits in a second humanities or social science subject
Approved	18 credits approved by the major electives department
Open electives	24 credits in science/arts subjects. Students who transfer from a professional program may include up to 18 credits of professional courses in these 24.

The minimum number of science credits required is 72. One of science A, B or C must be MATH, and six credits of MATH must be calculus.

d) Degree Requirements

To qualify for the B.Sc. with Advanced Major candidates must have:

i) been admitted to the program;
ii) earned a general average of at least 65 in each of the two final years;
iii) earned an average of at least 65 in the science A courses in each of the junior and senior years;
iv) fulfilled the course requirements of the department and satisfied the seminar and thesis requirements.

A student who fails to obtain the required average may qualify for the degree with major.

See section 3.21 for regulations governing Distinction.

5.4 BACHELOR OF SCIENCE WITH JOINT ADVANCED MAJOR

It is possible to pursue an advanced major program which involves combined study of two science subjects:

Biology	with	Chemistry
		Computer science
		Earth sciences
		Human kinetics
		Mathematics
		Physics
		Psychology
Chemistry	with	Biology
		Computer science
		Earth sciences
		Mathematics
		Physics
Earth sciences	with	Biology
		Chemistry
		Computer science
		Mathematics
		Physics
Human kinetics	with	Biology
Mathematics and computer science	with	Biology
		Chemistry
		Earth sciences
		Physics
Physics	with	Biology
		Chemistry
		Earth sciences
		Mathematics
		Computer science
Psychology	with	Biology

The details of established programs are in department listings in section 7. Interested students should consult the chairs of the relevant departments about requirements.

a) Course Pattern

Science A	42 credits plus a seminar and/or thesis
Science B	36 credits
Science C	6 credits
Arts pair	12 credits in one humanities or social science subject

Arts electives	6 credits in a second humanities or socia lscience subject
Approved electives	12 credits approved by both departments
Open electives	6 credits

One of the science A, B or C must be MATH, and six credits of MATH must be calculus. With permission of both departments (science A and science B), six or 12 of the 78 science A and science B credits may be from other science departments.

b) Application for Admission, Admission Requirements, Degree Requirements

These requirements are similar to those listed in section 5.3 for the B.Sc. with a single advanced major; the overall average requirements are the same. The normal admission requirement of grades of at least 60 applies to each science A and science B course. In addition, degree candidates must earn an average of at least 65 in the science A and science B courses in each of the junior and senior years.

See section 3.21 for regulations governing Distinction.

5.5 B.SC. WITH ADVANCED MAJOR IN A SCIENCE AND BUSINESS ADMINISTRATION

Students with an interest in biology, chemistry, earth sciences, mathematics or physics, who desire some exposure to accounting, finance, marketing, improving product/service quality, and managing an organization, will find the B.Sc. with Advanced Major in a Science and Business Administration ideal. In this program, students build their technical/scientific and business knowledge while improving their effectiveness in writing reports, making presentations, working in groups and analyzing decision-making situations. This is an excellent program for students considering a marketing, management or sales career in a scientific environment.
The details of established programs are in department listings in section 7. Interested students should consult the chairs of the relevant departments for requirements.
The admission requirements for this program are the same as in section 5.3 b. The course pattern is:

Science A	36 credits in the major subject; with permission of the major department up to 12 credits may be from another science department
Science B	12 credits in a second science subject
Science C	6 credits in a third science subject
BSAD	101, 102, 221, 223, 231, 261, 341, 471, 3 credits tech-designated, and 3 credits of BSAD elective
CSCI	235
ECON	6 credits
Arts X	12 credits in one humanities or social science subject
Arts Y	6 credits in a second humanities or social science subject
Approved electives	9 credits approved by the major department

If science A is not MATH, science B must be MATH and six credits of science B must be calculus.

To qualify for the degree, candidates must satisfy the requirements in section 5.3 d and, in addition, must earn an average of 65 or more in the BSAD courses. Interested students should consult the chairs of the relevant departments for requirements.

5.6 BACHELOR OF SCIENCE WITH HONOURS

The B.Sc. with Honours is offered by the departments of biology, chemistry, earth sciences, economics, mathematics, statistics, and computer science, physics, and psychology. *For department requirements, see section 7.*

a) Application for Admission

Students who wish to enter an honours program should contact the chair of the appropriate department as early as possible. Application for admission to the program must be made by March 31 of the second year, after a meeting with a department advisor. The application must be approved first by the chair or designate of the honours department and then by the dean. Students are advised in writing of their acceptance into the program.

b) Admission Requirements

The normal admission requirements for the program are:

i) an average of at least 70 in each of the first two years;
ii) grades of at least 70 in each course in the honours subject.

Exceptions to these conditions require the approval of the dean and the appropriate department chair.

c) Course Pattern

The course pattern for the B.Sc. with Honours is:

Science A	60 credits, including a 3-credit thesis course and a seminar in the honours subject. With permission of the department up to 18 of the required credits may be in other science subjects; see 5.1.1.
Science B	12 credits in a second science subject
Science C	6 credits in a third science subject
Arts pair	12 credits in one humanities or social science subject
Arts electives	6 credits in a second humanities or social science subject
Approved electives	18 credits approved by the honours department
Open electives	6 credits arts/science

One of science A, B or C must be MATH and six credits of MATH must be calculus.

d) Degree Requirements

To qualify for an honours degree candidates must have:

i) been admitted to the program;
ii) earned an average of 70 or higher in each of the final two years;
iii) normally earned grades of not less than 70 in each science A course in the junior and senior years;
iv) earned an average of at least 70 in all science A courses in each of the junior and senior years;
v) fulfilled the course requirements and satisfied the seminar and thesis requirements. A thesis must be carefully written and well organized, and must demonstrate adequate literary style, scholarly investigation and critical evaluation. A thesis supervisor should be appointed and the thesis subject should be chosen in consultation with the supervisor by September 30 of the senior year.

A student who fails one or more requirement may be eligible for a degree with either advanced major or major.

See section 3.21 for regulations governing First Class Honours.

5.7 BACHELOR OF SCIENCE WITH JOINT HONOURS

It is possible to pursue an honours program which involves combined study of two science subjects:

Biology	with	Chemistry
		Computer science
		Earth sciences
		Mathematics
		Physics
		Psychology
Chemistry	with	Biology
		Computer science
		Earth sciences
		Mathematics
		Physics
Earth sciences	with	Biology
		Chemistry
		Computer science
		Mathematics
		Physics
Mathematics and computer science	with	Biology
		Chemistry
		Earth sciences
		Physics
Physics	with	Biology
		Computer science
		Chemistry
		Earth sciences
		Mathematics
Psychology	with	Biology

The details of established programs are in department listings in section 7. Interested students should consult the chairs of the relevant departments for requirements.

a) Course Pattern

The course pattern for the B.Sc. with Joint Honours is:

Science A and B 84 credits, including a 3-credit thesis course in science A and a seminar in science A. With permission of both departments, up to 12 of the 84 credits may be from other science departments; see 5.l.l.

Science C	6 credits	
Arts pair	12 credits in one humanities or social science subject	
Arts electives	6 credits in a second humanities or social	science subject
Approved	12 credits approved by both honours electives	departments

One of science A, B or C must be MATH and six credits of MATH must be calculus.

b) Application for Admission, Admission Requirements, Degree Requirements

These requirements are similar to those listed in section 5.6 for the B.Sc. with single honours; the overall average requirements are the same. The normal admission requirement of grades of at least 70 applies to each science A and science B course. In addition, degree candidates must earn grades of 70 or more in each science A and science B course in the junior and senior years, and have an average of at least 70 in all science A and science B courses in each of the junior and senior years.

5.8 BACHELOR OF SCIENCE IN HUMAN KINETICS

The Department of Human Kinetics offers a four-year degree program in the scientific study of human movement. The B.Sc. in Human Kinetics program offers the student further specialization with the option to major in either a nationally accredited kinesiology program or a pre-education program. 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, science courses, arts electives, an approved elective, an open elective, and selected activity courses.

The major in kinesiology prepares students for a variety of professional and educational options, including: professional programs such as athletic, physical, or occupational therapy, dentistry, or medicine; direct employment in the health and fitness sector; acceptance into graduate programs in biomechanics, exercise physiology, motor learning and control, or adapted physical activity/special populations. Students interested in the health sciences (medicine, dentistry, physiotherapy, or occupational therapy) may select the B.Sc. with Major in kinesiology and Minor in health sciences, which allows them to meet the admission requirements for these programs. Students interested in nutrition should select with Major in kinesiology and Minor in nutrition, which allows them to obtain a 24-credit minor in nutrition. Students interested in teaching in the school system should select the major in pre-education, as it prepares them for admission to B.Ed. programs. Students who plan careers in other teaching-related professions should also choose the major in pre-education. See section 4.12.
For the BA in Human Kinetics, see section 4.10.

Course Requirements for the **Major in Kinesiology**:

HKIN	33 credits: HKIN 105, 115, 205, 215, 236, 301, 365, 376, 396; 6 credits from HKIN 331, 332, 352, 353, 354
HKIN electives	21 credits
BIOL 251, 252	6 credits
Science A	24 credits
Science B	6 credits
Arts X	12 credits
Arts Y	6 credits
Approved electives	6 credits
Open electives	6 credits

Course Requirements for the **Major in Pre-Education**:

HKIN	42 credits: HKIN 105, 115, 205, 215, 236, 305, 365, 376, 385, 405, 425, 426; 6 credits from HKIN 331, 332, 352, 353, 354
HKIN electives	12 credits
BIOL 251, 252	6 credits
Science A	24* credits
Science B	6 credits
Arts X	12 credits
Arts Y	6 credits

Approved electives	6 credits
Open electives	6 credits

* For students pursuing the elementary teaching stream option, science A becomes 18 credits and the approved electives become 12 credits.

BIOL 251 and 252 are required courses but may be included as science A courses if science A is biology. If science A is biology, then science B must be chemistry. Chemistry or calculus is required if science A is physics.

5.8.1 B.Sc. in Human Kinetics with Advanced Major

a) Application for Admission

Students who wish to enter the advanced major program should contact the department chair or designate, and apply for admission by March 31 of their sophomore year. The application form must be signed by the department chair before being returned to the dean's office. Students are advised of their acceptance to the advanced major program in the summer following their second year.

b) Admission Requirements

The normal admission requirements for the program are:

i) an average of at least 60 in each of the first two years;
ii) grades of at least 60 in each HKIN course taken in the first two years;
iii) an average of at least 60 in the science A courses taken in the first two years.

Exceptions to these requirements require the approval of the dean and the department chair.

c) Course Pattern

See course requirements in section 5.8. Students are also required to complete HKIN 491.

d) Degree Requirements

To qualify for an advanced major degree candidates must have:

i) been admitted to the program;
ii) earned a general average of at least 65 in each of the final two years;
iii) earned an average of at least 65 in the HKIN courses, and an average of at least 65 in science A in the final two years of the program;
iv) fulfilled the course requirements of the department and satisfied the seminar and research report requirements.

A student who fails to attain the required average may qualify for the general degree.

See section 3.21 for regulations governing Distinction.

5.8.2 B.Sc. in Human Kinetics with Honours

a) Application for Admission

Students wishing to apply to the honours program should first contact the department chair. Application for admission to the honours program must be made by March 31 of the second year. The department chair must approve the application before the form is submitted to the dean's office for final approval. Students are advised in writing of their acceptance into the honours program.

b) Admission Requirements

i) an average of at least 70 in each of the first two years;
ii) grades of 70 or higher in each HKIN course taken in the first two years.

Exceptions to these requirements require the approval of the dean and the department chair.

c) Course Pattern for Honours Kinesiology

The course requirements for the honours in kinesiology are shown below. For the normal sequence see section 7.19.

HKIN	36 credits: HKIN 105, 115, 205, 215, 236, 301, 365, 376, 396, 491 (no credit), 493; 6 credits from 331, 332, 352, 353, 354;
HKIN electives	18 credits
BIOL 251, 252	6 credits
Science A electives	24 credits
Science B electives	6 credits
Art X pair electives	12 credits in one social science or humanities subject
Art Y electives	6 credits in a second social science or humanities subject

Approved electives	6 credits
Open electives	6 credits

d) Course Pattern for Honours Pre-Education

The course requirements for the honours in kinesiology are shown below. For the normal sequence see section 7.19.

HKIN	51 credits: HKIN 105, 115, 205, 215, 236, 301, 305, 365, 376, 385, 396, 405, 425, 426; 6 credits of 331,332, 352, 353, 354; 493 (thesis); 491(senior seminar, no credit)
HKIN elective	3 credits
BIOL 251, 252	6 credits
Science A electives	24* credits
Science B electives	6 credits
Art X pair electives	12 credits in a social science or humanities subject
Art Y electives	6 credits in a second social science or humanities subject
Approved electives	6 credits
Open electives	6 credits

*For students pursuing the elementary teaching stream option, subject A becomes 18 credits and the approved electives become 12 credits.

e) Degree Requirements

To qualify for a B.Sc. in Human Kinetics with Honours degree candidates must have:

i) been admitted to the program;
ii) earned an average of 70 or higher in each of the final two years;
iii) earned grades of 70 or higher in the HKIN course in each of the final two years;
iv) fulfilled the course requirements and satisfied the senior seminar and honours thesis requirements of the department.

A student who fails to meet one or more of the requirements may be eligible for either a B.Sc. in Human Kinetics with Advanced Major in Pre-Education or Kinesiology or a B.Sc. with Major in Pre-Education or Kinesiology.

See section 3.21 for regulations governing Distinction.

5.9 BACHELOR OF SCIENCE IN HUMAN NUTRITION

The B.Sc. in Human Nutrition integrates core requirements in professional courses (e.g., foods, nutrition and related areas) with studies in biology, chemistry, statistics, humanities and social sciences. The program combines a strong science background with a process orientation, focusing on the effective delivery of nutritional information in various institutional settings, as well as in the general community. Collectively, the course requirements provide the expertise needed by nutrition professionals today, and graduates are both knowledgeable about nutritional science and oriented toward community service.

The fourth year of the program focuses on specialized knowledge in the areas of food, nutrition, food service management, and related subjects. Students may choose either the advanced major program, which has a seminar requirement; or the honours program, which has a seminar requirement as well as six required credits in advanced nutrition and advanced clinical nutrition, and a three-credit thesis course. Seminar topics may reflect the student's area of interest.

With the proper selection of courses (HNU 445 and 455 as HNU electives) students may meet the requirements for admission to a Dietitians of Canada (formerly the Canadian Dietetic Association) approved graduate dietetic internship program (comprehensive practicum).

Since 2002, the Integrated Dietetic Internship (IDI) Program is offered as an alternative to the traditional graduate internship. The IDI program will enable eligible students to attain Dietitians of Canada competencies for entry-level

dietetic practice. The program consists of three 12-week practicum courses, the first after the third year and the last two after graduation. Each practicum includes one or more placements in different dietetic practice settings. Students must have completed the third-year course sequence, including HNU 455, with an average of 70 and have satisfied the criteria for acceptance into the IDI program. Students must declare their intent to apply for the IDI program by the end of their second year, at the time of application for the advanced major or honours program.

With an appropriate selection of courses, students may also meet the requirements for admission to a B.Ed. program.

As an exception to other regulations, human nutrition students may take up to 12 credits of HKIN 215, 222, 236, 365 and 376 as open electives.

a) Course Pattern

The course requirements for the program are as shown below. For the normal sequence see 7.20.

HNU courses	145, 146, 185, 261, 262, 335, 361, 362, 365, 385, 405, 475
HNU electives	15 credits
BIOL	102, 251, 252, 315
BSAD	261, and one of 221, 231 or 463
CHEM	100, 221, 255
MATH	231 or 201
Humanities	12 credits in one subject
Social sciences	12 credits in one subject
Open electives	12 credits

b) Department Requirements

i) An average of 60 in HNU courses is required for students to progress through the program.

ii) To progress from first to second year, students must achieve an overall average of 55, and a combined average of 55 in HNU and science courses.

iii) To move from second to third year, major students are required to have an overall average of 55, and an average of 60 in the HNU courses taken in the first two years.

iv) To progress from second to third year, advanced major students must have an overall average of 60 or higher in each of the first and second years, and an average of 60 or higher in the HNU and science courses taken in the first two years.

v) To move from second to third year, honours students are required to have an overall average of 70 or higher in each of the first two years, and grades of 70 or higher in each HNU course.

vi) All third- and fourth-year students in the program are required to attend the presentations in HNU 491: Advanced Major and Honours Seminar. The attendance of first- and second-year students is recommended.

5.9.1 B.Sc. in Human Nutrition with Advanced Major

a) Application for Admission

Students who wish to enter the advanced major program should contact the department chair as early as possible. Application for admission to the advanced major program should be made in the second term of the sophomore year. The application form must be signed by the department chair before being returned to the dean's office. Students are advised in writing of their acceptance into the advanced major program.

b) Admission Requirements

The normal admission requirements for the advanced major program are:

i) an average of 60 or higher in each of the first two years;

ii) grades of 60 or higher in each HNU course taken in the first two years.

Exceptions to these requirements require the approval of the dean and the department chair.

c) Course Pattern

The course requirements for the advanced major program are as shown below. For the normal sequence see 7.20.

HNU course	145, 146, 185, 261, 262, 335, 361, 362, 365, 385, 405, 475, 491
HNU electives	15 credits
BIOL	102, 251, 252, 315
BSAD	261, and one of 221, 231 or 463
CHEM	100, 221, 255
STAT	231 or 201
Humanities	12 credits in one subject
Social sciences	12 credits in one subject
Open electives	12 credits

d) Degree Requirements

To qualify for a B.Sc. in Human Nutrition with Advanced Major degree candidates must have:

i) been admitted to the program;
ii) earned a general average of 65 or higher in each of the final two years;
iii) earned an average of 65 or higher in the HNU courses in each of the junior and senior years;
iv) fulfilled the course requirements of the department and satisfied the seminar requirements.

A student who fails to obtain the required average may qualify for the B.Sc. in Human Nutrition degree.

See section 3.21 for regulations governing Distinction.

5.9.2 B.Sc. in Human Nutrition with Honours

a) Application for Admission

Students who wish to enter the honours program should contact the department chair as early as possible. Application for admission to the honours program should be made by March 31 of the second year. The application form must be signed by the department chair before being returned to the dean's office. Students are advised in writing of their acceptance into the honours program.

b) Admission Requirements

The normal admission requirements for the honours program are:
i) an average of 70 or higher in each of the first two years;
ii) grades of 70 or higher in each HNU course taken in the first two years.
Exceptions to these requirements require the approval of the dean and the department chair.

c) Course Pattern

The course requirements for the honours program are as shown below. For the normal sequence see 7.20.

HNU courses	145, 146, 185, 261, 262, 335, 361, 362, 365, 385, 405, 461, 467, 475, 491, 493
HNU electives	12 credits
BIOL	102, 251, 252, 315
BSAD	261, and one of 221, 231 or 463
CHEM	100, 221, 255
STAT	201or 231
Arts pair	12 credits in one humanities or social science subject; a PSYC pair is strongly recommended
Arts electives	6 credits in a second humanities or social science subject. If the pair choice is a social science, the second arts must be in the humanities.
Open electives	12 credits

d) Degree Requirements

To qualify for a B.Sc. in Human Nutrition with Honours degree candidates must have:
i) been admitted to the program;
ii) earned an average of 70 or higher in each of the final two years;
iii) earned grades of 70 or higher in the HNU courses in each of the junior and senior years;
iv) fulfilled the course requirements of the department and satisfied the seminar and thesis requirements.

A student who fails to meet one or more of the requirements may be eligible for either a B.Sc. in Human Nutrition with Advanced Major or a B.Sc. in Human Nutrition.

See section 3.21 for regulations governing Distinction.

5.10 BACHELOR OF SCIENCE IN NURSING

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 individual care and attention across the lifespan, and which involves health promotion, restoration and maintenance; illness prevention; and palliative care.

The nursing curriculum 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.

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 (2002), the Entry-Level Competencies for Registered Nurses (RNANS 1998) and the Standards of Nursing Practice (RNANS 1997), and the StFX nursing program objectives. Student nurses are expected to act in a manner comparable to the average prudent student nurse at a particular level in the program, regardless of setting. Further, behavior unbecoming a

nurse that is manifested outside the classroom or practice settings, and has the potential to endanger public health or safety may warrant a professional alert or failure, which may result in dismissal from the program, pending due process. Future Students are advised that the College of Registered Nurses of Nova Scotia (CRNNS) (the licensure body for nurses) requires disclosure of criminal activity prior to consideration for registration. Those considered a risk to others may not be considered for registration by the CRNNS. 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 intersession and independent experiences; field trips; practice experiences; uniforms, nursing books, stethoscopes; first aid and CPR certification and re-certification fees; the RN examination fees; other external exam fees; and travel costs to and from practice areas while in the program.

5.10.1 B.Sc. in Nursing

The degree program for high school graduates is four years, including one spring intersession.

The B.Sc.N. program is also available as a joint degree program on the campus of the University College of Cape Breton (UCCB). StFX provides nursing courses and faculty while UCCB provides support courses.

a) Course Pattern

The required courses are shown below. For the normal sequence see section 7.26.

NURS	105, 115, 125, 205, 215, 225, 245, 250, 260, 305, 315, 345, 355, 300 or 310, 330, 405, 415, 425, 491, 493
BIOL	105, 115, 251, 252
CHEM	150
HNU	261, 263
PSYC	100
RELS	120
Electives	12 credits arts/science and 9 credits open electives

b) School of Nursing Requirements

i) A grade of 60 in each NURS course is required for students to progress through the program.
ii) To move from first to second year, an overall average of 55, and a combined average of 55 in the NURS and science courses, is required.
iii) To progress from second to third year, students must have a combined average of 60 in the first two years, and a combined average of 60 in the NURS and science courses taken in the first two years.
iv) BIOL 105, 115, 251, 252 and CHEM 150 must be completed before the student may progress to the third year.
v) Supplementary exams are not permitted in NURS courses.
vi) A pass must be received in the practice component of a NURS course for the student to progress to the next NURS course.
vii) Receipt of two clinical alerts, or a clinical failure, in the practice component of the program will result in dismissal from the program. A student's eligibility for and conditions surrounding re-entry into the nursing program, following a clinical or professional failure, are determined by the School of Nursing.
viii) Students who fail to meet the progression requirements on two occasions are ineligible for re-admission to the program.
ix) Current certification in standard first aid and Level C CPR is required for entrance into the program; *see 1.3 f.* Students in the nursing program are responsible for re-certification as necessary.
x) Students must be screened through the child abuse register search of their home province and Nova Scotia, and have a criminal records check completed prior to entry into the program. Documentation of both is required; *see 1.3 f.*

See section 3.21 for regulations governing Distinction.

c) Fast-Track Option for Transfer students

Students transferring from other university programs with previous credit for CHEM 100 or 150; BIOL 105, 115; PSYC 100; RELS 120, or equivalents, may be eligible to take the three required first-year nursing courses (NURS 105, 115, 125) in a spring intersession. Students who successfully complete intersession may progress to the second year of the program and complete the B.Sc.N. in three additional years. Interested students who meet program requirements should apply through the admissions office; see 1.1.

5.10.2 B.Sc. in Nursing with Advanced Major

a) Application for Admission

Students who wish to enter the advanced major must apply by March 31 of the second year, after meeting with an advisor from the nursing department. The application must be approved first by the department chair or designate and then by the dean. Students are advised in writing of their acceptance into the program.

b) Admission Requirements

The normal admission requirements are:

i) an average of at least 60 in each of the first and second years;
ii) grades of at least 65 in each NURS course;
iii) no clinical alert in the second year.

Exceptions to these requirements require the approval of the dean and the department chair.

c) Course Pattern

The course pattern is the same as for the general B.Sc.N., except that nine credits of open electives, three credits of art/science elective, and NURS 499 (an independent practice and/or seminar in nursing) are required in the senior year.

d) Degree Requirements

To qualify for a B.Sc.N. with Advanced Major, candidates must have:

i) been admitted to the program;
ii) earned a general average of at least 70 in each of the two final years;
iii) earned a grade of at least 70 in each NURS course in each of the junior and senior years;
iv) fulfilled the course requirements of the department and satisfied the seminar/independent practice requirements;
v) received no clinical alert in the last three years.

A student who fails to meet the required average may qualify for the general degree.

See section 3.21 for regulations governing Distinction.

5.10.3 B.Sc. in Nursing with Honours

a) Application for Admission

Application for admission to the program must be made by March 31 of the second year, after a meeting with an advisor from the nursing department. The application must be approved first by the department chair or designate and then by the dean. Students are advised in writing of their acceptance into the program.

b) Admission Requirements

The normal admission requirements are:

i) an average of at least 70 in each of the first two years;
ii) grades of at least 70 in each NURS course.

Exceptions to these conditions require the approval of the dean and the department chair.

c) Course Pattern

The course pattern is the same as for the general B.Sc.N. except that NURS 300/SOCI 300 is required in year three and that three credits of NURS elective, six credits of open electives, and three credits of arts/science elective replace the electives in the senior year. In addition NURS 496 and 498 are required. Students in the four year B.Sc.N. program or transfer students in the Fast-Track Option program are eligible for the honours program.

d) Degree Requirements

To qualify for a B.Sc.N. with Honours, candidates must have:

i) been admitted to the program;
ii) earned an average of at least 70 in each of the final years;
iii) earned a grade of at least 70 in each NURS course in each of the final two years;
iv) fulfilled the course requirements and satisfied the honours thesis requirement of the department;
v) received no clinical alert in the last three years.

A student who fails to meet the required average may qualify for the advanced major or the general degree.

See section 3.21 for regulations governing Distinction.

5.10.4 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. The required courses are:

NURS	115, 135, 201, 205, 245, 300, 330,	415, 425
BIOL	105, 115, 251, 252	
CHEM	100 or 150	
Nursing electives	12 credits	
Arts/Science electives	6 credits	
Open electives	6 credits	

Please note that 400-level elective NURS courses (NURS 405 and 494) have a prerequisite of all 100-level NURS courses.

For information on this limited-enrollment program, write Continuing Education, StFX University, Antigonish, NS, B2G 2W5 or phone 902-867-5190 or 1-800-565-4371.

5.10.5 Certificate in Gerontological Nursing

A 12-credit certificate program in Nursing Gerontology is offered by distance education to graduates of nursing diploma programs. The required courses are NURS 115, 245, 246, 425.

For information on this limited enrollment certificate program, write Continuing Education, StFX University, Antigonish, NS, B2G 2W5 or phone 902-867-5190 or 1-800-565-4371.

5.10.6 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-enrollment program, write Continuing Education, StFX University, Antigonish, NS, B2G 2W5 or phone 902-867-5190 or 1-800-565-4371.

5.11 ENGINEERING DIPLOMA

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

The diploma consists of 69 credits taken over two academic years. Students entering the second year of study must choose one of the following engineering disciplines: biological, civil, electrical, mechanical, industrial, chemical, mining, or metallurgical engineering. Transfers to B.Eng. programs at institutions other than Dalhousie University may be arranged upon completion of the engineering diploma program.

As Dalhousie and the associated universities form a unified system of engineering education, all diploma graduates from the associated institutions are guaranteed admission to Dalhousie University. It is not possible, however, for Dalhousie to guarantee that students will gain entry to the department of their choice, since all departments are subject to a known maximum number of annual admissions. Thus students are required to specify their choice of at least three departments, in preferential order, and at a predetermined date departments will select students for admission, based on their academic performance.

Students who transfer to this program from other universities must obtain credit for at least 39 credits taken at StFX in order to receive a diploma from StFX.

Students who wish to earn the Engineering Diploma and a B.Sc. degree should consult with the dean and appropriate department chairs.

a) Course Pattern

The required courses are shown below. See 7.16 for the normal sequence.

ENGR	121, 122, 133, 136, 221, 224, 237, 242, and up to 21 credits of discipline-specific courses
CHEM	120
CSCI	125
PHYS	120
Arts electives	up to 9 credits depending on the disciplin echosen

b) Department Requirements

To progress to the second year of the program, students require an overall average of at least 60.

c) Diploma Requirements

To qualify for the Diploma in Engineering, students must have a combined average of 60 over the two years of the program.

5.12 ARCHITECTURAL STUDIES

In association with Dalhousie University, StFX offers the first two years of a minimum of four calendar years of study in a six-year course in architecture 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. To obtain details of the requirements, interested students are encouraged to write to the School of Architecture, Dalhousie University.

5.13 PRE-MEDICAL AND PRE-DENTAL STUDIES

Most Canadian medical and dental schools require or recommend that applicants earn credit for general biology, general chemistry, organic chemistry, physics and English. They also require a superior academic record. It is possible to satisfy the entrance requirements while completing either a B.Sc. or a BA degree.

Dalhousie University Faculty of Medicine requires applicants to have a baccalaureate degree, or the equivalent of the three-year B.Sc. degree at Dalhousie University. Students are advised to take the courses listed above in order to do well on the science sections of the Medical College Admissions Test (MCAT). Beyond these courses, their education should encompass broad study in the physical, life and social sciences, and the humanities. For more information, especially concerning what constitutes a program equivalent to the three-year B.Sc. at Dalhousie, please consult the assistant to the deans at StFX.

Dalhousie University Faculty of Dentistry requires the courses above except that English may be replaced by any humanities or social science course with a strong writing component. Also required are biochemistry, vertebrate physiology, and microbiology (i.e., CHEM 255, BIOL 304 and 315).

5.14 PRE-VETERINARY MEDICINE

The Atlantic Veterinary College is located at the University of Prince Edward Island. The academic requirement for admission is 60 credits: a total of six MATH credits including STAT; BIOL 111, 112 (101,102), 204, 315; CHEM 100 and 221; PHYS 100; ENGL 100; nine credits of humanities and social sciences; and 12 credits of arts/science electives. Veterinary-related experience is also required.

6. xe "Graduate Studies"Graduate Studies

Courses of study leading to the following graduate degrees and diplomas are offered:

Master of Arts
Master of Science
Master of Adult Education
Master of Arts in Teaching
Master of Education

6.1 ADMISSION PROCEDURES AND REQUIREMENTS

For all master's programs except the M.Ad.Ed. (discussed in 6.1.2) and the M.Ed. (discussed in 6.1.4), the following rules apply.

Deadlines for application are October 15 for entry in January or March and April 15 for entry in July or September. Students will not be admitted to any graduate course unless, on the first day of class, they present a course registration form signed by the chair of the committee on graduate studies.

Applications for admission should be sent to the admissions officer two months before the date of registration. Applicants may be required to write the Graduate Record Examinations (GRE) administered by the Educational Testing Service.

6.1.1 Master of Arts and Master of Science

The MA program may be offered in Celtic studies; and M.Sc. degree programs may be offered in biology, chemistry, earth sciences and physics. Minimum admission requirements for these degree programs are:

a) a bachelor's degree with the equivalent of an undergraduate major (30 credits) normally in the same field of study;

b) an overall average of 70 (B) or higher in the bachelor's program.

Admission to these programs is based on the following factors:
a) The university must be able to provide a program of study and research which meets the expectations of the applicant as specified in the application for admission.
b) The candidate's academic performance and references must indicate that s/he is able to complete the program of study and research prescribed in the degree program.
c) A faculty member must be available who is competent to supervise the program of study and the research prescribed for the degree.

6.1.2 Master of Adult Education

For admission to the M.Ad.Ed. program applicants must:
a) have completed an appropriate bachelor's degree with an overall average of 70 (B) or higher; and
b) have post-baccalaureate experience in work relating to adult education.

Applications for admission should be sent to the admissions office. Upon acceptance to the M.Ad.Ed. program, candidates are assigned to begin their studies in one of the orientation workshops which are held in the fall, winter and spring.

6.1.3 Master of Arts in Teaching

For admission to the MAT program, applicants must:
a) hold a B.Ed. degree (or its equivalent);
b) have completed a bachelor's degree with major (or its equivalent) in the field of graduate study;
c) have completed one year of successful teaching.

Normally, an average of 70 in the last 30 undergraduate credits is required. Before the degree is granted, candidates must complete two years of successful teaching.

6.1.4 Master of Education

Eligibility to Enroll in M.Ed. Courses
Normally, only students who have been accepted into the StFX M.Ed. program are eligible to enroll in M.Ed. courses offered by the university, with the exception listed immediately below. Graduate students in good standing in M.Ed. programs at other universities may also apply to take up to 12 credits of M.Ed. courses at StFX. Such students should apply to the coordinator of graduate programs in the Department of Education; a letter of permission from the student's own university must be supplied. If permitted to register, students will be notified in writing.

For regular admission to the M.Ed. program, candidates will normally have:

a) completed a B.Ed. or its equivalent;
b) earned an average of 80 in the B.Ed. program or placed in the top 25% of the B.Ed. graduating class; and
c) completed at least two years of teaching before enrolling in the first graduate course.

Considerable weight will also be given to the references supplied by the applicant and to successful teaching experience. Candidates will be asked to indicate their research interests and provide a writing sample. Interviews may be required.

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.

Admission to the M.Ed. is highly competitive. Meeting the minimum admission requirements does not ensure acceptance into the program. Decisions of the admissions committee are final. Candidates who wish to begin their studies in July or September must complete their applications by April 15.

6.2 FULL-TIME AND PART-TIME STUDIES

6.2.1 Full-Time Study

The university may admit suitable candidates for full-time study during the regular academic year in the MA and M.Sc. programs.

Full-time students register for a minimum of 18 credits and a maximum of 24 graduate credits during the academic year, including thesis credits.

For purposes of classification as full-time, candidates for graduate degrees may take up to 12 undergraduate credits, to a combined total of 30 credits. However, undergraduate credits thus included will not count for graduate credit.

Candidates must complete the program, including thesis, so that the degree is awarded within three years of the date of initial registration.

6.2.2 Part-Time Study

The university may admit suitable candidates for part-time study for the MAT and the M.Ed.

Part-time students may register for only six graduate credits during any term or summer session.

Students may be granted credit for 12 credits from another university if approval is obtained before registration in the course.

Candidates must complete the program so that the degree is awarded within six years of initial registration.

6.2.3 Master of Adult Education

The M.Ad.Ed. program is, with the exception of the orientation workshop, a distance-learning program. Students may not use courses taken elsewhere towards the M.Ad.Ed. degree.

6.3 GENERAL INFORMATION 

Students without previous admission to a degree program will be permitted to register in graduate courses provided they meet the program's entrance requirements.

A student who has registered in, or completed, courses in compliance with the previous paragraph, and who is later admitted to a degree program without condition, may be granted credit for a maximum of 12 credits provided they are acceptable as part of the program in which the student is enrolled.

6.4 PROGRAM REQUIREMENTS 

6.4.1 General

The passing grade in all graduate courses is 60 and a general average of 70 is required for graduation.

Students in the part-time program are assessed, and their academic standing is reviewed annually, by the committee on graduate studies. To maintain a satisfactory standing, students must be successful in 12 of any 18 consecutive credits with a passing grade of 60, and in addition must maintain a moving average of 70. Students who fail courses beyond this number or do not maintain the required average will be placed on academic probation. A student on academic probation who subsequently fails a course or does not achieve a moving average of at least 70 may be liable to academic dismissal.

Registration in a course for graduate credit must be approved by the chair of the committee on graduate studies.

6.4.2 Master of Arts and Master of Science

The degree requirements are:

a) A minimum residence of 12 months for candidates with an honours degree, and a minimum residence of two years for other candidates.
b) Students must earn a total of 30 credits in graduate work; original research may account for up to 12 credits.
c) Candidates must satisfy course, seminar, and comprehensive examination requirements as determined by the department chair in consultation with the chair of the committee on graduate studies.
d) On the recommendation of the department chair, candidates may be required to demonstrate a reading knowledge of French, German or Russian, and an examination in the designated language must be passed within six months after registration.

6.4.3 Master of Adult Education

This program provides an effective learning experience for professional adult educators. Candidates come from a wide variety of career areas such as literacy, health education, higher education, vocational education, human resources training and development, community development, and educational technology.

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 critical review of the literature;
   ii) a comprehensive annotated bibliography; and

iii) a learning plan that incorporates a professional portfolio;

b) implement a professional development research project;
c) evaluate the learning experience;
d) complete an academic document (thesis) which demonstrates that the learning objectives of the program have been achieved.

The completed thesis must be submitted to the committee on graduate studies within five years of commencement of the program. Each academic year, exceptions to the five-year requirement may be granted to a limited number of candidates who have demonstrated satisfactory academic progress and paid an extension fee equal to one-third of the tuition for the M.Ad.Ed. Typically, the thesis must be received by the committee on graduate studies no later than March 31 for Spring Convocation or September 30 for Fall Convocation.

6.4.4 Graduate Programs for Teachers

Master of Education

StFX 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, though they may also select elements of study appropriate to their own interests.

The M.Ed. degree requires the equivalent of one year's study beyond the B.Ed., plus a thesis or project. This degree fulfills the requirements of the Nova Scotia Department of Education for an increase in level of teacher certification. Graduate courses in education are offered as fall, winter, spring, and summer school courses in locations around the province.

Candidates for the M.Ed. are normally required to take EDUC 505 in Antigonish during the summer session. This is normally the first course taken. It is a prerequisite for EDUC 506 and 507, and may not be taken concurrently with them. EDUC 534 will also be taught regularly during summer sessions in Antigonish.

There are two options by which a student may complete the requirements for the M.Ed.: the thesis and the project. Students who choose the thesis option must complete 24 credits in graduate education courses and a thesis worth 12 credits. Those in the project option are required to complete 30 credits in graduate education courses and a project for 6 credits.

Educational Administration and Policy Stream

505	Introduction to Educational Research	3 credits	
506	Quantitative Research Methods in Education	3 credits	or
507	Qualitative Research Methods in Education	3 credits	
533	Dynamics of Change	3 credits	
534	Introduction to the Foundations of Education	3 credits	
561	Leadership and Administrative Theories	3 credits	
573	Professional Development and Supervision	3 credits	
599	Thesis 12 credits		or
590	Research Project	6 credits	
Electives	6 credits in the thesis option or		
	12 credits in the project option		

Electives are to be selected from the graduate courses offered in education and should reflect the focus of study chosen by the student.

Curriculum and Instruction Stream

505	Introduction to Educational Research Methods	3 credits	
506	Quantitative Research Methods in Education	3 creditd or	
507	Qualitative Research Methods in Education	3 credits	
527	Principles of Learning	3 credits	
532	Curriculum Theory	3 credits	
534	Introduction to the Foundations of Education	3 credits	
536	Program Development	3 credits	
599	Thesis 12 credits		or
590	Research Project	6 credits	
Electives	6 credits in the thesis route or		
	12 credits in the project route		

No substitution or transfer of credit will normally be allowed in the core courses.

Graduate courses which may be taken for credit towards a Master of Education degree are listed in section 7.15.

Master of Arts in Teaching

The MAT program provides specialist training in subjects in the high school curriculum. The program may be offered in English, history, mathematics or science.

The MAT program fulfills the requirements of the Nova Scotia Department of Education for an increase in level of teacher certification.

Candidates must earn a total of 30 credits of graduate work:

i) at least 24 credits must be in the field of concentration; in science, 12 credits must be in one science subject;
ii) the thesis may count for six credits; and
iii) at least six credits should be in curriculum theory or program development.

The program is normally offered during academic sessions over a period of four years, but in certain departments it may be offered during a 12-month period.

Secondary school teachers with three or more years of teaching experience who wish to pursue an MAT in the discipline they teach, but who lack the major or its equivalent required for admission to the degree program, have the following option: they are permitted to challenge for admission to the program by sitting for examinations in up to 12 undergraduate credits in that discipline on the basis of knowledge or experience gained outside the formal educational context.

6.5 THESIS REGULATIONS

This section does not apply to M.Ad.Ed. students who are required to prepare a thesis based on original research under the guidance of the chair or faculty advisor. Theses must be approved by two members of the faculty of the department of adult education and the committee on graduate studies.

Candidates who are interested in the thesis option in any graduate program must consult with the department chair who will arrange for the appointment of a thesis supervision committee.

Candidates who register for this option 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. After presentation of the proposal, and on the recommendation of the candidate's thesis supervisory committee and the department chair, the candidate is permitted to register the thesis topic with the committee on graduate studies.

Part-time students in the M.Ed. and MAT programs must complete 12 credits of graduate work before they present a thesis proposal.

Full-time graduate students normally complete six credits (or the equivalent) of graduate work before they present a thesis proposal.

The thesis for a master's degree is considered the equivalent of at least six credits.

The thesis is read by two faculty members designated by the department chair; they are not normally members of the supervisory committee. The completed thesis is submitted to the candidate's supervisory committee for approval. The thesis is also read by an external examiner chosen by the supervisory committee. The external examiner must submit a report on the thesis to the chair of the committee on graduate studies. A public defence of the thesis is presented by the candidate after receipt of the external examiner's report. An *in-camera* examination of the candidate, open to members of the supervisory committee and members of the committee on graduate studies, is held immediately after the public defence.

A bound copy of the thesis must be submitted to the chair of the committee on graduate studies for approval at least four weeks prior to the date of the convocation at which the candidate expects to graduate.

7. Department and Program Information

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.

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.

7.1 ADULT EDUCATION

The university offers both the Diploma in Adult Education and the Master of Adult Education (M.Ad.Ed.).

Diploma in Adult Education

See section 4.13 for the Diploma in Adult Education.

Master of Adult Education

J. Dawson, Ph.D.
L. English, Ed.D.
D. Lander, Ph.D.
A. Quigley, Ed.D. (sabbatical 2003-2004)
P. Cranton, Ph.D

Graduate Program

The admission procedures and requirements for the M.Ad.Ed. degree are given in sections 6.1.2 and 6.4.3. Students have five years to complete this part-time program. Further details may be found on the department's web page: <www.mystfx.ca/academic/adulted/>.

Orientation

This is an intensive three-week residential orientation during which students become familiar with the foundations of, and requirements for, this five-year, self-directed master's program.

500Plan and Annotated Bibliography

Development and submission of a learning plan including: a learning narrative, learning goal statement, research project proposal, and learning contract with learning intents. Second, development and submission of an annotated bibliography demonstrating critical reading of a broad range of foundational literature, as well as literature in the chosen area and aspect of study as seen in the learning plan. Six credits.

510Professional Portfolio and Literature Review

Development and submission of a professional portfolio consisting of learning experiences, accomplishments, and demonstrated professional competencies, supported by documentation. 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. At the end of this phase, the student submits a project that includes a detailed description of the learning intents, program design, means of implementation, and evaluation of the project. Twelve credits.

530Learning Program Evaluation

This phase includes a report on the student's personal and professional learning with reference to the learning plan developed in ADED 510. The report is a reflective portfolio evaluating knowledge gained and changes in practice, and is accompanied by a narrative. Six credits.

600Thesis

The thesis is a scholarly contribution to the field of adult education, which demonstrates that the learning intents of the master's program have been achieved. 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 the committee on graduate studies for approval. Six credits.

↖ ANTHROPOLOGY

See Sociology and Anthropology in 7.32

7.2 AQUATIC RESOURCES

P. Clancy, Ph.D., ISAR Coordinator
L. Patterson, M.Sc., ISAR Program Officer

ISAR Steering Committee	Department
J. Apaloo, Ph.D.	Mathematics
S. Holloway, Ph.D.	Political Science
L. Kellman, Ph.D.	Earth Sciences
D. MacInnes, Ph.D.	Sociology/Anthropology
R. Martinez-Espineira, Ph.D.	Economics
I. Spencer, MBA	Business Administration
P.J. Williams, Ph.D.	Biology

Interdisciplinary Studies in Aquatic Resources (ISAR) is a four-year program, leading to a BA, B.Sc. or a BBA degree. It offers an integrated approach to the understanding, use and management of aquatic resources as both natural and social systems. This embraces aquatic ecosystems including groundwater, watersheds, wetlands, lakes, rivers, and oceans.

ISAR prepares students for careers in natural resource management, government or private sector research, consultancy services, community development, and private enterprise. Depending on their program of study, students will also be positioned favorably 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 social science research.

All students complete a major in aquatic resources, and a major in one of: biology; business administration; economics; earth sciences; mathematics, statistics, and computer science; political science; sociology/anthropology. ISAR students must participate in an internship (AQUA 400) and in the senior seminar (AQUA 450).

Major Program

Major candidates are required to complete:

i) a core ISAR major program of AQUA 100, 400, 450; ESCI 171; BIOL 112; ECON 100; plus BSAD 101, 102;
ii) 36 credits in the second major discipline, including at least 18 credits of AR-designated courses from that discipline;
iii) at least 6 credits of AR-designated courses in each of three of the participating academic departments other than the major.

Candidates must also satisfy the requirements outlined in sections 4.2, 4.6 or 5.2.

Progression Requirements

All full-time ISAR major students completing the first-year required courses (AQUA 100; ECON 100; BIOL 112; ESCI 171) must achieve a minimum average of 65 in order to maintain their ISAR major and proceed to the second year of study in the program.

All ISAR major students must receive academic advising from the program coordinator or program officer, in conjunction with the following normal sequences of the six AR streams:

BA Major in Economics & Major in Aquatic Resources

Year 1	AQUA 100; ECON 100; BIOL 112; ESCI 171; INFO 131, 135; 6 credits arts electives
Year 2	ECON 221, 251, 252, 281; BSAD 101, 102; 12 credits arts/science electives
Year 3	ECON 341, 342, 381; STAT 201; MATH 205; 15 credits arts/science electives
Year 4	AQUA 400, 450; 9 credits ECON; 15 credits arts/science electives

BA Major in Public Policy and Social Research & Major in Aquatic Resources

Year 1	AQUA 100; ECON 100; BIOL 112; ESCI 171; BSAD 101, 102; one of SOCI/ANTH 110 or PSCI 100
Year 2	PSCI 240; SOCI/ANTH 201, 202; 18 credits arts/science electives
Year 3	PSCI 341, 342; ANTH 316; 3 credits SOCI/ANTH methods or theory at the 300 level; 18 credits arts/science electives
Year 4	AQUA 400, 450; 24 credits arts/science electives

BBA with Aquatic Resources Major

Year 1	AQUA 100; BIOL 112; BSAD 101, 102; ECON 100; ESCI 171; 6 credits arts/science electives
Year 2	BSAD 231, 261; INFO 131, 135; MATH 205; STAT 201; 6 credits AR-designated courses; 6 credits BSAD electives
Year 3	BSAD 221, 223, 331, 341, 332; 9 credits BSAD electives; 6 credits AR-designated courses
Year 4	AQUA 400, 450; BSAD 471, 456, 472; 6 credits BSAD electives; 3 credits BSAD tech-designated course; 6 credits AR-designated courses

B.Sc. Major in Biology & Major in Aquatic Resources

Year 1	AQUA 100; BIOL 112; ECON 100; ESCI 171; CHEM 100; MATH 111, 112
Year 2	BIOL 111, 201, 202, 203, 204; CSCI 235; STAT 231; 3 credits science elective; 6 credits arts electives
Year 3	12 credits of BIOL 307, 311, 312, 321, 322; BSAD 101, 102; 12 credits arts electives
Year 4	AQUA 400, 450; 6 credits BIOL (3 at the 400 level); 18 credits arts or science electives

B.Sc. Major in Earth Sciences & Major in Aquatic Resources

Year 1	AQUA 100; ESCI 171; ECON 100; BIOL 112; CHEM 100; MATH 111, 112
Year 2	ESCI 201, 202 or 246, 215, 216, 271, 275 or 276; 6 credits MATH or CHEM at the 200 or 300 level; 9 credits arts/science electives
Year 3	ESCI 305, 366, 386, 465; BSAD 101, 102; 12 credits arts electives
Year 4	AQUA 400, 450; ESCI 387, 406; 18 credits arts/science electives

B.Sc. Major in Mathematics, Statistics, and Computer Science & Major in Aquatic Resources

Year 1	AQUA 100; ESCI 171; BIOL 112; ECON 100; MATH 111, 112; BSAD 101, 102
Year 2	MATH 253, 277, 267, 287; CSCI 125, 235; STAT 231; 9 credits arts/science electives
Year 3	STAT 331, 333; 12 credits arts electives; 12 credits science electives
Year 4	AQUA 400, 450; MATH 367, 387; 18 credits arts/science electives

100 Introduction to Aquatic Resources

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 sociological, economic, political, and business dimensions of aquatic resource use, while field trips and laboratory exercises introduce the

methodologies used to study these ecosystems. Restricted to students majoring in aquatic resources. Laboratory, field trips. Six credits.

400Work Experience/Student Internship
This course requires students to spend the equivalent of one semester, normally the summer between the junior and senior year, gaining hands-on experience in an aquatics-related work setting. Areas of placement include research laboratories, aquatic resource businesses, community organizations and public policy agencies. To focus the applied learning experience, students develop a topic for special study, in collaboration with the internship provider and academic advisor. Restricted to students majoring in aquatic resources. Three credits.

450Senior 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 aquatics field. Students also develop and present the results of their major essay projects. Visits by ISAR guest speakers are coordinated with the seminar work. Restricted to students majoring in aquatic resources. Three credits.

AR-Designated Courses, by Department

Biology

BIOL 201	Animal Biology	3 credits
BIOL 202	Plant Biology	3 credits
BIOL 203	Introductory Ecology	3 credits
BIOL 207	Introduction to Natural History	3 credits
BIOL 307	Field Biology	3 credits
BIOL 311	Marine Biology I	3 credits
BIOL 312	Marine Biology II	3 credits
BIOL 321	Environmental Ecology of Mariculture	3 credits
BIOL 322	Marine Pollution	3 credits
BIOL 472	Freshwater Ecology	3 credits

Business Administration

BSAD 101	Introduction to Business	3 credits
BSAD 102	Business Decision-Making	3 credits
BSAD 221	Introductory Financial Accounting	3 credits
BSAD 231	Foundations of Marketing	3 credits
BSAD 261	Foundations of Management	3 credits
BSAD 332	Marketing Research	3 credits
BSAD 356	Entrepreneurship/New Venture Development	3 credits
BSAD 381	Operations Management	3 credits
BSAD 472	Business, Sustainability, and Profitability	3 credits

Computer Science
See MATH, STAT, CSCI

Earth Sciences

ESCI 271	Environmental Earth Science	3 credits
ESCI 272	Global Change & the Climate System	3 credits
ESCI 305	Geochemistry of Natural Waters	3 credits
ESCI 366	Hydrology	3 credits
ESCI 386	Oceanography	3 credits
ESCI 387	Coastal Oceanography	3 credits
ESCI 406	Advanced Environmental Geochemistry	3 credits
ESCI 465	Hydrogeology	3 credits
ESCI 472	Ocean-Atmosphere Interactions	3 credits

Economics

ECON 241	Canadian Economic Policy & Problems	3 credits
ECON 251	Intermediate Microeconomic Theory I	3 credits
ECON 252	Intermediate Microeconomic Theory II	3 credits
ECON 281	Environmental Economics	3 credits
ECON 341	Regional Economics	3 credits
ECON 342	Maritime Economy	3 credits
ECON 370	Econometric Methods	6 credits

ECON 381	Natural Resource Economics	3 credits

Mathematics, Statistics, and Computer Science

STAT 201	Elementary Statistics	3 credits
STAT 231	Statistics for Students in the Sciences	3 credits
STAT 331	Statistical Methods	3 credits
MATH 287	Natural Resource Modeling	3 credits
MATH 367	Differential Equations	3 credits
MATH 387	Mathematical Modeling	3 credits
CSCI 125	Computer Programming in C	3 credits
CSCI 235	Microcomputers in Science	3 credits
CSCI 335	Operations Research	3 credits

Political Science

PSCI 220	Canadian Politics	6 credits
PSCI 240	Business and Government	6 credits
PSCI 250	World Politics	6 credits
PSCI 321	Federalism	3 credits
PSCI 322	Atlantic Canada	3 credits
PSCI 341	Canadian Public Administration	3 credits
PSCI 342	Canadian Public Policy	3 credits
PSCI 343	Law and Politics	3 credits
PSCI 346	The Politics of Resource Management	3 credits
PSCI 351	Canadian Foreign Policy	3 credits

Sociology and Anthropology

SOCI/ANTH 202	Research Principles and Practices	3 credits
SOCI 305	Applied Methods in Social Research	6 credits
ANTH 316	Rural Communities	3 credits
SOCI 321	Sociology of Atlantic Canada	3 credits
SOCI 323	Environment and Society I: Introduction	3 credits
SOCI 360	Social Policy	6 credits
SOCI 423	Environment and Society II: Paradigms and Politics	3 credits

7.3 ART

Full Time

I.M. Delgado, MFA

Part Time

K. Brown, BFA
D. Burge, Dip.
B. Campbell, MFA
J. Fecteau, BA
G. Hills
R. Greenlaw, BFA
T. Kellman, MA, Ph.D.
M. MacFarlane, BFA
G. McCulloch
M. Nicholson, BA, B.Arch., BEDS
L. Quigley, BA
F. Redgrave, B.Ed.
J. Redgrave, F.A.Dip.
B. Segal, MGDC
B. Sparks, BFA, MA
N. Stevens, BFA
A. Syperek, BFA
R. Young, BD Vis.Com.

Art courses may be used as electives, a pair, or minor.

Minors in Studio Art

ART 100, 141, 142, and 12 additional credits in studio courses

Minors in Art History

ART 141, 142, and 18 additional credits in art history courses

100Drawing
An elementary course in drawing and composition with mixed media, including some work in color. The focus will be on line, skeletal forms, planes, mass forms, still life and the figure. Six credits.

115 Introduction to Design
This course provides students with a working knowledge of the elements and principles of design with practice in studio design projects, critiques and analysis of works of art. Three credits.

125Materials and Methods
Students will create small works in watercolor, oil, acrylic and egg tempera. The goal is a working knowledge of each medium's properties, brush handling, supports, and preservation. Three credits.

141 (341) History of Art I
A survey of the visual arts from prehistoric Europe to the late gothic period. Three credits.

142 (342) History of Art II
A survey of the visual arts from the early Renaissance to modern times. Prerequisite: ART 141. Three credits.

145Introduction to Color
This course deals with the vocabulary, nature and physical properties of color: hue, value and intensity. Studio assignments provide practice in learning color relationships in unified and contrasting color schemes. Three credits.

200 Painting
An introduction to watercolor and acrylic painting techniques. Work on drawing skills, design, color and composition will be emphasized. Prerequisite: ART 100 or portfolio demonstrating drawing and design skills. Six credits.

211 Stained Glass Studio I
Original design and color compositions are combined with studio work in stained glass. Three credits.

212Stained Glass Studio II
Original design and color compositions are combined with studio work in stained glass. Prerequisite: ART 211. Three credits.

221Batik Studio
Batik, an art form dating back thousands of years, is a method of making colored designs on textiles by waxing the parts not to be dyed. Prerequisite: ART 100 and/or 115 or portfolio demonstrating drawing and design skills. Three credits.

222Weaving Studio
Tapestry, in contrast to pattern weaving, is a technique whereby threads or yarns are interlaced to produce wall hangings or rugs. Students will learn how to thread looms and weave designs for tapestry. Three credits.

231Etching 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. Prerequisite: ART 100 or portfolio demonstrating drawing skills. Three credits.

232Etching Studio II
Students will complete a portfolio of prints using the techniques learned in Etching Studio I. The emphasis will be on creativity. Prerequisite: ART 231. Three credits.

240Pastels
Pastel is a crayon-like medium made of compressed pigment in either a chalk or a wax binder. It is an expressive, direct medium that combines the best qualities of drawing and painting. The first half of the class will explore the drawing and graphic possibilities of pastels. During the second term, students will paint, learning direct color mixing and color theory, composition and problem solving while experimenting with the many types of pastel, from very soft to very hard, in conte, chalk and oil (as well as some mixed media) on different paper surfaces. Prerequisite: ART 100. Three credits.

255Landscapes and Floral Painting in Watercolor
This course introduces students to the medium of watercolor. Color mixing and watercolor techniques will be explored and students will complete a number of landscape and floral paintings. Prerequisite: ART 100 or portfolio demonstrating drawing skills. Three credits.

300A Cultural and Intellectual History of Canada
This course is an historical analysis of Canadian culture (literature, art, and architecture), and the intellectual forces that have shaped Canadian society. Cross-listed as HIST 300. Six credits. Not offered 2003-2004.

312Art 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. The focus will be on literary works, but painting, music, and architecture will also be explored. Finally, specific policies on art will be discussed. Cross-listed as PSCI 312. Three credits.

320Painting
A continuation of ART 200 with emphasis on composition, technique and creativity in acrylic painting. Prerequisite: ART 200 or portfolio demonstrating painting skills. Six credits.

330Catholicism and the Arts
Cross-listed as CATH 330; see CATH 330. Six credits.

335Chinese Art History
This course provides a brief history of Chinese art beginning with prehistoric ritual vessel decoration, continuing through the rise of ink painting, and concluding with the golden age of the scholar painters and decorative artists, ca. 1700 CE. Three credits.

33620th-Century Chinese Art History
This course will begin with a review of the late Qing Dynasty art of the nineteenth century and will then focus on twentieth-century visual culture in China. This latter period brought many political changes as the last dynasty ended and factions within and outside of China fought for control. The arts of this turbulent time were influenced by thousands of years of tradition as well as contemporary political events, and ideas from the West. Prerequisite: ART 335. Three credits.

351Anatomy for the Artist: Skeleton
This course covers anatomical terminology, the drawing of the skeletal bones (axial and appendicular). Prerequisite: ART 100 or portfolio demonstrating drawing skills. Three credits.

352Anatomy for the Artist: Musculature
This course builds on the knowledge and skills acquired in ART 351. Here the emphasis will be on musculature. Prerequisite: ART 351. Three credits.

358Impressionism
An important movement in French painting during the second half of the 19th century, Impressionism greatly influenced modern art. This course will critically examine the subject in an historical and international context. Prerequisite: a survey course in art history. Three credits. Not offered 2003-2004.

360 20th Century: Modern Art
This course examines the origins of modernist endeavor 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. Prerequisite: a survey course in art history. Three credits.

361Contemporary 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. Prerequisite: a survey course in art history. Three credits.

371 The Renaissance of Italy
A survey of painting, sculpture and architecture in Italy in the 14th century and continuing through to the High Renaissance of the early 16th century. Work will be discussed formally and in the social and historical context. Three credits.

372The Northern Renaissance
A survey of painting, sculpture and architecture in the Netherlands and Germany. This course will focus on the Renaissance outside Italy. Three credits. Not offered 2003-2004.

385 Selected Topics I: Cartooning and Humorous Illustration I
Selected Topics 385 (Cartooning and Humorous Illustration - Basic Course) is a one semester survey of the concepts, techniques and methods of creating cartoon characters, writing the stories and gags, and rendering the finished concept in ink as finished artwork. Students will become acquainted with the major aspects of professional cartooning, and be introduced to the materials and methods essential to success. This is a "hands-on" studio course. Grades will be based on successful completion of assignments and projects.

Prerequisite: Drawing 100 or a portfolio showing commensurate ability. Instructor: Brian G Segal, MGDC. Three credits.

386 Selected Topics I: Cartooning and Humorous Illustration II

Selected Topics 385 (Cartooning and Humorous Illustration - Advanced Course) is a one semester course which focuses on professional techniques and methods of creating cartoon characters, writing the stories and gags, and rendering the finished concept in a variety of media including pen-and-ink, brush, marker and pencil, including both black and white and colour renderings. This course builds on knowledge gained in the Basic Course and helps the student develop a personal style of expression - both visual and conceptual. This is a "hands-on" studio course. Grades will be based on successful completion of assignments and projects.

Prerequisite: Selected Topics 385 or a portfolio showing commensurate ability. Instructor: Brian G Segal, MGDC. Three credits.

399 Directed Study Seminar

The purpose of this course is to stimulate students' creative resources, develop their ability to look critically at art forms including the visual, and prepare them for careers in fine or commercial art. Students will focus on the elements of art and develop several projects from conception to composition. Restricted enrollment. Prerequisite: a survey course in art history or ART 100. Three credits.

441 Issues in Canadian Art Through World War II

This course examines selected issues in Canadian art practice and reception through World War II. Topics include: the changing pictorial and sculptural space and its significance for the projected viewer; the relationship between painting and photography; the role and production of traditional aboriginal art, including its impact by European trade; the revision of landscape by the Group of Seven to serve nationalist aspirations and visionary purposes; Quebec artists' use of abstract art to foster social change; and the connections between European-influenced art and church ritual, the work of explorers and topographers, and the visions of myth-makers and romantics. Prerequisites: ART 141, 142. Three credits.

442 Issues in Contemporary Canadian Art

After discussing the rise of abstraction in selected Canadian regions, this course will examine how contemporary art shifted to questions of representation, in particular the problem of understanding reality as representation in a society of mass consumption. Students will explore the practice of art and the use of images in globalizing culture, through such previously marginalized perspectives as feminism, gender, post-colonialism, psychoanalysis, linguistics, and environmentalism. Prerequisites: ART 141, 142. Three credits.

499 Directed Study. See section 3.5. Three or six credits.

7.4 BIOLOGY

J.A. Buckland-Nicks, Ph.D.
M.E. DeMont, Ph.D.
M.E. Galway, Ph.D.
D.J. Garbary, Ph.D.
L.L. Graham, Ph.D.
V. Karunakaran, Ph.D.
R.F. Lauff, M.Sc.
W.S. Marshall, Ph.D.
A.G. Miller, Ph.D.
G.E. Newsome, Ph.D.
A.V. Newsome, M.Sc.
M. Pulsifer, M.Sc.
R. Rasmussen, Ph.D.
N.R. Seymour, Ph.D.
B.R. Taylor, Ph.D.
P.J. Williams, Ph.D.

Biology is the science of living organisms. Humans are organisms and many biology courses deal with the human condition. By investigating the living world around us, we learn more about ourselves. Biology can provide a background in natural history, and the basis for understanding environmental issues on the global scale. The biology department offers courses that emphasize the structure and function of organisms from the molecular level to the level of global ecology. Programs of study are available in animal biology, cell and molecular biology, ecology and evolution, and plant biology.

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; 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.

Department Requirements

CHEM 100 is a prerequisite for all BIOL courses, except 111, 112, 251, 252. BIOL 111 and 112 are required for all students continuing in biology major, advanced major, and honours programs.

Note: Unless otherwise indicated BIOL 111 and 112, 201, 202, 203, 204 are prerequisites for all third- and fourth-year courses.

CSCI 235 is strongly recommended for students who lack basic skills in word processing, spreadsheets, and computer-assisted presentations.

BIOL 105 is a three-credit course restricted to students in nursing. A passing grade in and credit for BIOL 105 and CHEM 100 or 150 taken concurrently will permit these students to enroll in BIOL 115.

Students wishing to complete a pair in biology should take BIOL 111, 112, 201 and 202. BIOL 201, 202, 203, 204 are normally taken in the second year. Biology students may take no more than six credits of cross-listed courses as BIOL credits.

Advanced major and honours students normally take CHEM 221, 255 and STAT 231 in their second year. Students interested in the health professions should take CHEM 220 in their second year.

The biology department provides guidelines for students wishing to explore a specific area of biology, and joint programs are available for those interested in studying two scientific areas; students should consult the department academic advisors or chair.

Major Program

Program requirements are given in section 5.2. Students in the major program must take BIOL 111, 112, 201, 202, 203, 204, and 18 additional BIOL credits to complete 36 credits for science A.

Advanced Major and Honours Program

Program requirements are given in sections 5.3 through 5.7. Honours and advanced major students select their courses in consultation with the department chair. PHYS 100 or 120 is required in the honours program and may count as science A. In the advanced major program PHYS 100 or 120 is strongly recommended but may not count as science A. BIOL 491 is a required, non-credit course taken in the fourth year. Course requirements are shown below.

Advanced Major Program

Students must take BIOL 111, 112, 201, 202, 203, 204, 491; CHEM 255; 21 additional BIOL credits (at least three credits must be BIOL at the 400 level, other than BIOL 491); CHEM 100, 221; MATH 111, 112; STAT 231; 18 credits arts electives: to include one pair ; 15 credits approved electives (PHYS 100 or 120 recommended); 24 credits open electives.

Honours Program

Students must take BIOL 111, 112, 201, 202, 203, 204, 491, 493; CHEM 255; PHYS 100 or 120; 30 credits of BIOL or other approved science courses (at least 3 credits must be BIOL at the 400 level, other than BIOL 491 or 493); CHEM 100, 221; CSCI 235; MATH 111, 112; STAT 231; 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 5.4 and 5.7. Students considering a joint honours or advanced major should consult with the relevant department chairs as early as possible.

[AR] Indicates Designated Course in Aquatic Resources

105Basic Cell Biology
Covers basic cell biology and genetics with a human orientation. Restricted to nursing students. Three credits and tutorial.

111 (102) 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 laboratory.

112 (101) Diversity of Life
This course emphasizes the interrelationships of living systems and their roles in global ecology, exploring organismic diversity, functional morphology, embryogenesis, and ecology from an evolutionary perspective. Required for students continuing in biology. Three credits and laboratory.

115 Microbes in Human Biology
An introduction to microorganisms from a human perspective, this course deals with viruses, bacteria and fungi. Topics include bacterial structure and function, bacterial genetics and antibiotic resistance, and viral structure and infection. Restricted to nursing students. Prerequisites: BIOL 105; CHEM 150 completed or concurrent. Three credits and tutorial.

201Animal Biology [AR]
An introduction to major groups of animals, emphasizing the structure, physiology and way of life of certain species. Prerequisite: an average of 55 in BIOL 111, 112. Three credits and laboratory.

202Plant Biology [AR]
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. Prerequisite: an average of 55 in BIOL 111, 112. Three credits and laboratory.

203Introductory Ecology [AR]
An introduction to the fundamental concepts of ecology, focusing on factors affecting the abundance and distribution of plant and animal populations. Prerequisite: an average of 55 in BIOL 111, 112. Three credits and laboratory.

204Introductory 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. Prerequisite: an average of 55 in BIOL 111, 112. Three credits and laboratory.

207Introduction to Natural History [AR]
Lectures and field trips provide an introduction to local natural history and a foundation for topics such as ecology, biodiversity, conservation, and land use planning. Students observe organisms in their natural environment and are exposed to plant and animal communities in the context of historical and recent human impact. Restricted to students in at least their second full year of study. Not available for credit as science A. Three credits and laboratory.

220Current Topics in Biology (for Arts Students)
Topics include: life in its relationship to the physical world; heredity and evolution, with emphasis on the human organism; natural history; ecological problems posed by pollution, over-population and the depletion of natural resources; human social behavior from a biological perspective. Restricted to arts students in their third or fourth year or with permission of the instructor. Students applying for a B.Ed. program must complete a three-hour laboratory every other week. Six credits.

251Human Anatomy and Physiology I
Using an integrated approach to the study of the integumentary, skeletal, muscular, nervous and endocrine systems, this course provides students with a comprehensive working knowledge of the anatomy and physiology of these systems. Restricted to students in human kinetics, human nutrition and nursing. Three credits and laboratory.

252Human Anatomy and Physiology II
An integrated study of the cardiovascular, respiratory, urinary, reproductive and digestive systems, this course provides students with a comprehensive working knowledge of the anatomy and physiology of these systems. Restricted to students in human kinetics, human nutrition and nursing. Prerequisite: BIOL 251. Credit may be awarded for only one of BIOL 252 and 304. Three credits and laboratory.

285Paleontology: The History of Life
Cross-listed as ESCI 285; see ESCI 285. Three credits and laboratory.

301Form and Function in Animals
This course will introduce and apply the physical concepts required to understand form and function in the complexity of biological processes. Prerequisite: PHYS 100. Three credits and laboratory.

302Evolution
An introduction to the evolutionary process, including natural selection and adaptation, Darwin and his detractors, the process of speciation, methods of phylogenetic reconstruction, human evolution. Prerequisite: 18 credits BIOL. Three credits and evening tutorial.

304Vertebrate Physiology
This course provides integrated information on how organs work, embellished with examples from ‘primitive’ and ‘advanced’ vertebrates, including the human, with the overarching theme of the functional evolution of vertebrates.

Systems covered include neural, cardiovascular, respiratory, renal, acid-base, reproductive, and endocrine. Credit may be awarded for only one of BIOL 304 and 252. Three credits and laboratory.

307Field Biology [AR]
Provides practical experience in the observation, collection, identification and quantification of organisms in nature. Held for two weeks in May, 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, insects. Three credits and laboratory.

311 Marine Biology I [AR]
This introductory course in marine biology covers photosynthetic organisms in an ecological context and explores the structuring of marine communities and humanity's impact on the ocean. Lectures introduce oceanographic principles but emphasize the ecological and functional roles of primary producers in marine communities such as plankton, kelp forests, intertidal zones, and salt marshes. Three credits and laboratory.

312Marine Biology II [AR]
A continuation of BIOL 311 but focused on animal life in the marine environment. Lectures emphasize the ecological and functional relationships among organisms in selected marine ecosystems such as coral reefs, intertidal zones and deep seas. Human use of and impact on marine resources is also discussed. Prerequisite: BIOL 311. Three credits and laboratory.

315Introductory 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. Open to human nutrition students upon completion of BIOL 111, CHEM 221, 255. Three credits and laboratory.

317Molecular Biology
An introduction to the isolation and analysis of peptides and nucleic acids using standard molecular methodology. Lectures describe electrophoretic techniques and the manipulation of DNA including the introduction of foreign DNA into host cells and the use of gene cloning, gene amplification and DNA sequencing. Laboratories apply many of these methods and instruct students in the interpretation of gels and in the creation of genetically modified bacteria. Prerequisites: BIOL 315; CHEM 220 or 255. Three credits and laboratory.

320Biology of Cancer
An introduction to the problem of cancer, emphasizing the cellular and molecular biology of carcinogenesis in humans and model systems. The multi-causal, multi-step nature of the process will be highlighted, including the role of viruses, oncogenes, carcinogens and ionizing radiations. Students will write an article on an aspect of cancer research. Prerequisite: BIOL 395. Three credits and tutorial.

321Environmental Ecology of Mariculture [AR]
This course explores the environmental implications of mariculture, the aquaculture of marine species. Students are first introduced to the various types of mariculture with emphasis on Canadian examples, and then examine the environmental impact of mariculture on coastal marine ecosystems, including legal implications and licensing practices. Prerequisites: AQUA 100 and BIOL 203; or the usual BIOL prerequisites. Three credits. Not offered 2003-2004.

322Marine Pollution [AR]
An examination of the sources, types, and ecological effects of pollution that enters the marine environment. Lectures will be augmented with examples drawn from Atlantic Canada, with emphasis on the pulp and paper industry and on offshore hydrocarbon exploration and development. Laboratories will cover the detection of pollutants, toxicity testing, regulatory issues, and effluent treatment. Prerequisites: AQUA 100 and BIOL 203; or the usual BIOL prerequisites. Three credits. Not offered 2003-2004.

325Physiological Ecology
An introduction to the physiological adaptation of plants and animals to their environments and the methods by which both physiological and environmental factors can be measured. Three credits and laboratory, including fieldwork.

331Biostatistics
An investigation of statistics and experimental design in the context of biological and health science issues. Topics include: analysis of variance; analysis of categorical data; distribution-free tests; and linear and multiple regression. Students will learn how to analyze data and interpret conclusions using a statistical software package. Recommended strongly for all major, advanced major, and honours students. Prerequisite: STAT 231. Cross-listed as STAT 331. Three credits and a one-hour laboratory.

335Developmental Biology
An introduction to animal embryology placed in a modern context. Laboratories emphasize key events in the embryogenesis of selected animals, including experiments on metamorphosis and regeneration. Three credits and laboratory.

342Invertebrate Zoology
A comparative study of the morphology, taxonomy, physiology and ecology of the invertebrate animals with emphasis on phylogeny. A collection of 25 invertebrate specimens emphasizing diversity is a partial requirement for this course; instructions and material are provided by the instructor. Three credits and laboratory. Not offered 2003-2004.

343Comparative Anatomy of Vertebrates
A comparative study of the anatomy of chordate animals with emphasis on vertebrate phylogeny. Three credits and laboratory.

375Human Biomechanics
This course provides a mechanical analysis of body-motion, including everyday activities from walking to athletic events such as cycling. Laboratories introduce the basic physical principles, and the use of high-speed video in the analysis of physical performance. Cross-listed as HKIN 376. Three credits and laboratory.

385Animal Behavior
An introduction to the principles of behavioral ecology using illustrations from the animal kingdom with emphasis on vertebrates. Students learn the physiological and ecological bases of behavior, and explore topics in communications, mating systems, and sociobiology. Three credits and laboratory.

390Plant Physiology
An introduction to the physiology of vascular plants. Lectures will integrate the knowledge gained through experimentation at the various levels of plant organization, from the molecular to the organ level, into an overall concept of plant function. Prerequisites: CHEM 255, BIOL 202. Three credits and laboratory.

395Cell Biology
An introduction to the eukaryotic cell, including relationships between biochemical mechanisms and organelle functions, and techniques used to study cell function. Prerequisites: CHEM 220, 255. Three credits and laboratory.

401Comparative Physiology and Biophysics
An introduction to the physical aspects of biological systems, including the application of solid and fluid mechanics to living systems and the mechanics of locomotion. Prerequisites: BIOL 304; MATH 111, 112; PHYS 100. Three credits and laboratory.

402Membrane Biology
Molecular biology, physiology, and the biophysics of membranes in animal cells are studied in order to integrate single membrane function into the operation of tissues and organs. Emphasis is on transport channels, enzymes and their regulation in normal cells and in membrane disorders. Prerequisites: BIOL 304; PHYS 100 or 120; CHEM 255. Three credits and laboratory.

404Comparative Endocrinology
Covers principles and concepts in vertebrate and invertebrate control systems, including the principal actions of hormones and neurohormones, hormone interactions, and endocrine disorders. Prerequisite: BIOL 252 or 304. Three credits and laboratory.

415Biogeography
A lecture and seminar course on the description and interpretation of past and present distributions of plants and animals. There will be integration of evolutionary, ecological and historical concepts, and both aquatic and terrestrial organisms will be considered. Prerequisite: BIOL 302. Three credits and evening tutorial. Not offered 2003-2004.

417Microbial Pathogenics
This course provides a general overview of a host's defense mechanisms, including immune and inflammatory responses, and describes the pathogenic interactions between humans and different types of microbes with an emphasis on bacterial systems. Prerequisite: BIOL 315. Three credits and tutorial. Not offered 2003-2004.

425Advanced Cell Biology
Discussion will focus on recent topics in eukaryotic cell biology and the benefits of using many different techniques to gain an understanding of cell structure and function. Prerequisite: BIOL 395. Three credits and laboratory.

430Genes and Development
An examination of the molecular-genetic basis of development in multi-cellular organisms, this course highlights the use of model organisms, mutants, gene cloning and gene engineering to explore how genes, proteins and cells interact in the development of animal and plant bodies. Laboratory work includes the study of development in the fruit fly, *Drosophila* and the mustard cress, *Arabidoposis*. Prerequisites: BIOL 395 completed or concurrent; BIOL 335 is recommended. Three credits and laboratory.

445Experimental Phycology
Covers the biology of marine algae. Seminars will examine research-oriented topics in algal development and cell biology, while in laboratory work, students will obtain training in fluorescence microscopy, photo-microscopy, and algal culturing. Prerequisite: permission of the instructor. Three credits and laboratory. Not offered 2003-2004.

465Electron Microscopy
An introduction to the theory and application of electron microscopy. Laboratories will emphasize the use of EM techniques to investigate current research problems as well as the basic photographic techniques required to prepare a manuscript for publication. Prerequisite: permission of the instructor. Three credits and laboratory. Not offered 2003-2004.

470Environmental Microbiology
This course emphasizes the key role of prokaryotes in the biogeochemical cycling of elements and describes some of the more unusual prokaryotes including the ecto- and endosymbionts of marine organisms, photosynthetic and bioluminescent bacteria. Topics include: the contributions of microbes to the development of soils; microbial mats and stromatolites; bog metal deposits; acid mine drainage; the exploitation of prokaryotes for bioremediation purposes, including waste treatment, hydrocarbon degradation and metal recovery. Laboratories examine microbial ecosystem development and microbial diversity. Prerequisite: BIOL 315. Three credits and laboratory.

472Freshwater Ecology [AR]
A study of the physical, chemical and biological features of fresh water that affect the abundance and distribution of plants and animals. Includes field trips to local freshwater ecosystems. Three credits and laboratory.

473Wildlife Ecology
An introduction to the principles of wildlife ecology including factors that influence the distribution and abundance of populations. This field-oriented course will focus on vertebrate species, especially those that occupy habitats within the local aquatic and terrestrial ecosystems. Guest lecturers will discuss field techniques and current issues in applied wildlife ecology and management. Three credits and laboratory.

474 Soil Ecology
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 laboratory project. Prerequisite: BIOL 315. Three credits and laboratory.

475Accessing the Biological Literature
Library resources and on-line databases will be used to write an essay relevant to the student's interest or dissertation topic. Restricted to senior advanced majors and honours students. Students taking this course must take one other 400-level course, excluding BIOL 491. Three credits.

491Senior 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 Senior Dissertation (Honours)
Three credits.

GRADUATE COURSES

501 Advanced Biomechanics
502 Advanced Topics in Membrane Biology
504 Topics in Vertebrate Physiology
515 Topics in Microbiology
517 Topics in Molecular Biology

533 Advanced Topics in Biometrics
535 Topics in Electron Microscopy
551 Advanced Population Ecology
555 Topics in Vertebrate Morphology
571 Advanced Topics in Ecology
580 Seminars in Phycology
585 Topics in Avian Biology
590 Topics in Botany

595 Topics in Cell Biology
598 Thesis Research I
599 Thesis Research II

Additional courses are available depending on the requirements and interests of the student and the availability of faculty.

7.5 BUSINESS ADMINISTRATION

Full Time

D. Anthony, MBA
W.J. Cormier, MBA, CMA
M.C. Diochon, Ph.D.
C.M. Duncan, Ph.D.
C. Galea, Ph.D.
L. Gallant, MBA, CFP, FCA
B. Hiltz, MBA
T.W. Hynes, Ph.D.
B. Long, MBA
K. MacAulay, Ph.D., CA
R.F. Madden, MBA, FCA
T. Mahaffey, Ph.D.
N. Maltby, MBA
S. Musselman, BBA, CA
M. Oxner, CFA, CA
I. Spencer, MBA
G. Trites, CISA, FCA
B. Wright, Ph.D.
R.K. Young, Ph.D.

Part Time

G. Anderson, LLM
M. Champoux, MBA, FCSI
N. Loosen, CA
L. O'Neil, LLM

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. Many BSAD electives at the 300 and 400 level may be taken in either the third or fourth year. Permission of the instructor to register in a course may override the normal prerequisites.

Note: This calendar presents the sequence and pattern for the new BBA program, which came into effect in September 2001. For 2003-2004, most third-year students and all first- and second-year students follow the *new* program in which BSAD 101, 102 and a tech-designated elective are required. Students in their fourth year follow the *old* BBA program in which BSAD 321, 331 and 361 are required.

Transfer students should consult the department chair prior to registration to confirm their course selections.

The normal course sequences for the 15 BBA streams are shown below. Tech-designated electives are listed in section 4.7(f)

BBA General Degree

Year 1	BSAD 101, 102; ECON 100; INFO 131, 135; 12 credits arts/science electives
Year 2	BSAD 221, 223, 231, 261; STAT 201; MATH 205; 12 credits arts/science electives
Year 3	BSAD 341; 15 credits BSAD electives; 12 credits arts/science electives
Year 4	BSAD 471; 3 credits tech elective; 18 credits BSAD electives; 6 credits open electives

BBA with Aquatic Resources Major

Year 1	BSAD 101, 102; ECON 100; AQUA 100; ESCI 171; BIOL 112; 6 credits arts/science electives
Year 2	INFO 131, 135; BSAD 231, 261; STAT 201; MATH 205; 12 credits AR-designated courses
Year 3	BSAD 221, 223, 331, 341, 332; 9 credits BSAD electives; 6 credits AR-designated courses
Year 4	BSAD 471, 456, 472; 12 credits BSAD electives; 3 credits tech elective; AQUA 400, 450

BBA Major Degree

Accounting

Years 1 and 2	Same as general degree
Year 3	BSAD 321, 322, 323, 324, 341, 342; 12 credits arts/science electives
Year 4	BSAD 424, 471; 3 credits tech elective; 15 credits BSAD electives (at least 6 credits must be from the 420 series); 6 credits open electives

Enterprise Development

Years 1 and 2	Same as general degree
Year 3	BSAD 331, 341, 356; 9 credits BSAD electives; 12 credits arts/science electives
Year 4	BSAD 332, 457 (or 456), 458, 471; 3 credits tech elective; 9 credits BSAD electives; 6 credits open electives

Finance

Year 1	Same as general degree
Year 2	ECON 221, 251; BSAD 221, 223, 231, 261; STAT 201; MATH 205; 6 credits arts/science electives
Year 3	BSAD 341, 342; 12 credits BSAD electives; 12 credits arts/science electives
Year 4	BSAD 471, 492; 3 credits tech elective; 9 credits from the BSAD 34_ or 44_ series or BSAD 454; 6 credits arts/science electives; 6 credits open electives

Note: For the major in finance stream ECON 221, 251 are regarded as BSAD electives.

Information Systems

Year 1	BSAD 101, 102; ECON 100; INFO 131, 135; 12 credits arts/science electives
Year 2	BSAD 221, 223, 231, 261; STAT 201; MATH 205; INFO 151, 152, 345; 6 credits arts/science electives
Year 3	BSAD 319, 341, 361, 345; 6 credits BSAD/INFO electives; 12 credits arts/science electives
Year 4	BSAD 415, 471, 492; BSAD/INFO 416; INFO 415; 9 credits BSAD/INFO electives; 6 credits open electives

Leadership Studies

Years 1 and 2	Same as general degree
Year 3	BSAD 341, 358, 361, 362; 12 credits BSAD electives; 6 credits arts/science electives
Year 4	BSAD 461, 465, 471, 492; 3 credits BSAD elective; 3 credits tech elective; 6 credits open electives; 6 credits arts/science electives

Marketing

Years 1 and 2	Same as general degree
Year 3	BSAD 331, 341; 12 credits BSAD electives including 3 from the BSAD 33_ or 43_ series; 12 credits arts/science electives
Year 4	BSAD 332, 471, 492; 12 credits BSAD electives including 9 from the BSAD 33_ or 43_ series; 3 credits tech elective; 6 credits open electives

BBA Honours Degree

All BBA Honours degrees follow the same patterns as the major degrees except students substitute BSAD 391 for a BSAD elective in year three and either take BSAD 494 or substitute BSAD 494 for 492 in year four.

BBA Joint Honours Degree

Joint Honours in Business Administration and Economics

Year 1	Same as general degree
Year 2	BSAD 221, 223; STAT 201; MATH 205; ECON 221, 222, 251, 252; 6 credits arts/science electives
Year 3*	BSAD 231, 261, 341, 391; 6 credits ECON electives at the 300/400 level; 12 credits arts/s electives
Year 4*	BSAD 471, 494; ECON 490; 6 credits ECON electives at the 300/400 level; 3 credits tech elective; 3 credits BSAD elective; 6 credits arts/science electives

* If the honours thesis is done in the economics department, BSAD 391 and 494 are replaced by 6 credits of BSAD electives.

[AR] Indicates Designated Course in Aquatic Resources
[Tech] Indicates Technology Elective

101 Introduction to Business [AR]
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.

102 Business Decision-Making [AR]
Introduces students to the challenge of making business decisions. The course develops students' understanding of the primary functional areas of business (management, marketing, operations, finance) and the role of the general manager. The course has two thrusts: an introduction to the core vocabulary and analytical tools appropriate to the functional areas, and development of students' analytical, presentation, small-group management, and self-management skills. Prerequisite: BSAD 101. Three credits.

221 Introductory Financial Accounting [AR]

An introduction to the basic concepts, principles and procedures underlying financial accounting and financial statement preparation. Required for all BBA students; a prerequisite for all 300- and 400-level financial accounting and finance courses. Second year of study or higher. Three credits.

223 Introductory Managerial Accounting [AR]
An introduction to the basic concepts of management accounting and the use of accounting information for managerial decisions. Required for all BBA students; a prerequisite for all 300- and 400-level courses in managerial accounting. Second year of study or higher. Three credits.

231 Foundations of Marketing [AR]
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.

261 Foundations of Management [AR]
Introduces students to the role and function of managers in organizations and covers the changes taking place in organizations and their environments. Topics include: the history of management thought, the changing business environment, organization structure, approaches to business strategy, communication and presentation skills. Prerequisites: BSAD 101, 102. Three credits.

Note: Not all BSAD electives at the 300 or 400 level are offered every year.

319 (419) Management of Information Technology [Tech]
A management-level overview of information systems and related planning, organizational and control issues. The course covers fundamental concepts in systems, computing and communications technology, applications, information management, systems development, internal control, and strategic uses of information technology. Third or fourth year of study. 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 problems of the business enterprise 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. 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 problems of the business enterprise 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. Prerequisite: BSAD 231. Three credits.

332 Marketing Research [AR]
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. Prerequisite: BSAD 231; and third- or fourth-year status. 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.

341 Introductory Financial Management
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. Prerequisite: BSAD 221. Three credits.

342 Cases in Financial Management
Enhances students' knowledge of the financial management topics covered in BSAD 341 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 341. Three credits.

343 Canadian Securities and Markets
This course examines the Canadian securities industry from the perspectives of both investors and registered representatives. Topics include: Canadian capital markets and the financial services industry; financial statement analysis; investment products (fixed income, equity, funds and derivatives); financing and listing regulations; taxation of security transactions; and portfolio management. The curriculum will be based on the canadian securities course offered by the Canadian Securities Institute. Prerequisite: BSAD 341. 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. Third or fourth year of study. Three credits.

356 Entrepreneurship/New Venture Development [AR]
This course uses a new venture context to examine small business and entrepreneurship, drawing on the knowledge and skills acquired in other business courses to explore new venture issues, opportunities and challenges. 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, 223, 231, 261. Three credits.

357 International Business Management
This course examines the theory and methods of doing business internationally. International Business Management involves selected aspects of globalization, international trade theory and policy, culture, the global monetary system, international operations, marketing and strategy. Prerequisites: BSAD 221, 223, 231, 261. Three credits.

358 Business and Society
An examination of the role and responsibilities of managers of public and private enterprises in dealing with social and ethical issues regarding their employees, suppliers, customers, government and society generally. Prerequisite: BSAD 261. Three credits.

361 Organizational Analysis
Introduces students to four perspectives for making sense of organizational dynamics: structural, human resource, political, and symbolic. Classes feature lectures and discussion of key ideas, and case-based application of the perspectives to gain insight into challenging work situations. Students work with peers in teams. Prerequisite: BSAD 261. Three credits.

362 Career Dynamics
Considers the concept of career in today's competitive realities. providing a framework for understanding the nature of continued learning and development throughout one's career. The course focuses on the transition from the culture of university learning (pay to work) to the culture of contributing value in an organization (work for pay), and provides opportunities to develop personal strategies and tactics for making the transition from university studies to good work. Prerequisite: BSAD 361 or permission of the instructor. Three credits.

363 (463) Human Resource Development
Describes the functions of human resource management, including personnel planning, selecting, testing, training, developing, evaluating and compensating. Prerequisite: BSAD 261.Three credits.

367 Current Challenges: Women in 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 WMNS 367. Prerequisite: BSAD 261.Three credits.

381 Operations Management [AR]
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: behavioral, quantitative, economic, and systems. Prerequisite: Third or fourth year of study. Three credits.

391 Foundations of Management Research

This course introduces students to the prerequisites for effective research in business and management. Topics include: the scientific method in management research; approaches to studying issues in management; developing conceptual models and hypotheses; defining a management thesis; conducting a literature search; evaluating research studies; and understanding the limitations of management research. 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.

Co-op Work Terms

Once admitted to the co-op program, students may choose three four-month work terms or one 12- to16-month term. Each work term provides students with valuable experience. After each term, students participate in seminars and write a report which integrates theoretical course material with the work and learning experiences.

401 Co-op Work Term I
Prerequisite: work term preparation workshops. Cross-listed as INFO 401. One credit.

402 Co-op Work Term II
Prerequisites: BSAD/INFO 401 and work term preparation workshops. Cross-listed as INFO 402. One credit.

403 Co-op Work Term III
Prerequisites: BSAD/INFO 402 and work term preparation workshops. Cross-listed as INFO 403. One credit.

405 12- to 16-Month Co-op Work Term
Prerequisite: work term preparation workshops. Cross-listed as INFO 405. Three credits.

415 Electronic Business [Tech]
Business is increasingly conducted through electronic means, often on the Internet. This presents many challenges, including technology, marketing, strategy, operations and systems issues. This course explores the current state of electronic commerce, issues arising in e-commerce, and their relative importance to the success of a business venture. Prerequisite: Third or fourth year of study. Three credits.

416 Project Management and Practice [Tech]
This course covers the factors necessary for successful management of system development or enhancement projects. Technical and behavioral aspects of project management are discussed. Prerequisite: INFO 415. Cross-listed as INFO 416. Three credits.

417 Enterprise Resource Planning: Implementation Management
A study of the management issues faced in the implementation of enterprise resource planning (ERP) systems. While the SAP system will be used as a reference point, comparisons will be drawn with other ERP systems. Three credits.

418 Topics in Information Systems [Tech]
This course will explore in detail a current topic or issue in information systems. Content will vary from year to year. Restricted to BIS and BBA/IS major students. Prerequisite: INFO 315. Cross-listed as INFO 418. Three credits.

421 Advanced Topics in Managerial Accounting
A comprehensive examination of cost accounting concepts and techniques. The course will relate cost accounting to the management system as well as to the new manufacturing environment. Topics include: job-order, process, standard, and direct costing; cost-volume-profit analysis and budgeting; linear programming; performance, and productivity measurement, transfer pricing; cost allocation and estimation using regression and learning curves. Prerequisite: BSAD 322. 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 are studied and compared. 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.

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 and Non-Profit Marketing
Focuses on instilling a customer orientation for service and non-profit organizations. Students will learn how to manage demand fluctuations, employees, and the customer mix. Prerequisite: BSAD 231. Three credits.

432 Retailing
Focuses on improving the management of retail institutions in Canada through a marketing orientation. Areas considered include the retail environment, store layout, product mix control, channel effort, and financial management. Prerequisite: BSAD 231. Three credits.

434 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. Prerequisite: BSAD 231. 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 231. Three credits.

443 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. Prerequisite: BSAD 241. 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. Prerequisite: BSAD 342. Three credits.

446 Selected Topics in Finance
Examines in greater depth the topics introduced in earlier finance courses. Topic selection is based on the interests of the instructor and students. Prerequisite: permission of the instructor. Three credits.

448 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. Prerequisites: BSAD 341, 342 or permission of the instructor. 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: 341. 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. Prerequisites: BSAD 221, 223, 231, 261. Three credits.

457 Community Enterprise Development
This course explores the relationship between entrepreneurship, innovation, and community-based economic development in a rural context. The course uses a multidisciplinary perspective to examine the impact of socio-

economic factors on a community's capacity for stimulating entrepreneurship and economic development. Students will gain practical experience in stimulating enterprise in response to negative economic circumstances. Prerequisite: BSAD 356. Three credits.

458 Research Project: Enterprise Development
Students in the enterprise development major are required to complete a field-based project. This project may be completed for or with a community-based economic development organization or as the implementation of a new venture business plan. Approved projects may be completed either during the summer after third year or during the fourth year. Restricted to enterprise development majors; equivalent to BSAD 492 for other majors. Three credits.

461 Leadership
This course will provide students with a solid understanding of the theoretical and practical aspects of leadership. Students will learn how leadership skills can be fostered, and will develop their capacities for motivating and coaching others. Prerequisite: BSAD 261. Three credits.

462 Industrial Relations
Examines the history, current structure, and future of industrial relations in Canada, including trade unions and management, collective bargaining, and contract administration. Students will benefit from guest lectures and from engaging in negotiation-simulation exercises. Prerequisite: BSAD 261. Three credits.

464 Negotiation and Conflict Management
Managers are constantly negotiating and dealing with conflict. This course will equip students with the tools to negotiate their personal and corporate objectives and to deal with and resolve conflicts in organizations. The key elements of negotiation and conflict-resolution will be learned through theoretical discussion, skill-building workshops, and negotiation and conflict resolution exercises. Prerequisite: BSAD 361. Three credits.

465 The Executive Agenda
Considers the major challenges facing executives in today's hypercompetitive business environment, and develops an agenda for success in this environment. Students will consider issues such as changing an organization to a process focus, reducing boundaries, the necessity of both leading and managing; and the importance of trust and community. Prerequisite: BSAD 361 or permission of the instructor. Three credits.

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. History is littered with examples of organizations that did not adapt well to change and were overtaken by others that did. 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.

468 Selected Topics in Leadership
This course builds on previous leadership courses. Topic selection is based on the interests of students and the instructor. In 2003-2004, the class will examine lessons in leadership drawn from literature and the arts. Prerequisites: BSAD 361; fourth-year status. Three credits.

469 Technology and Change in Organizations [Tech]
Examines recent advances in communication and information technologies in the context of today's knowledge-intensive economy. The course emphasizes the strong CEO-CIO link needed to implement these technologies effectively (become e-enabled) and make the wide-ranging behavioral and cultural changes needed for business success. Students will learn how specific companies use IT to achieve a competitive advantage. Prerequisite: Third or fourth year of study. Three credits.

471 Business Policy
Employing case studies, lectures and presentations, this course examines the formulation and implementation of corporate strategy. Restricted to seniors. Prerequisite: BSAD 314. Three credits.

472 Business, Sustainability, and Profitability [AR]
For years, business has been portrayed as responsible for much of the social inequity and environmental degradation around the world. This course explores ways in which business can be a positive force in global sustainability. From this perspective, business is the dominant organizing force with the capital, global reach, flexibility, dynamism, and self-interest to make economic, social, and environmental sustainability a reality. Prerequisite: BSAD 361. Three credits.

481 Senior Seminar on Contemporary Business Issues
The senior seminar affords a unique opportunity to discuss contemporary business topics with visiting executives. Each topic will be the focus of three seminars. The initial session will acquaint students with current literature on contemporary management challenges. In session two, a senior executive will attend the seminar, offer insights on the topic, and interact with students. Session three will examine the lessons learned. Restricted to students with senior BBA or BIS standing. Cross-listed as INFO 481. Three credits.

492 Consulting Project for Majors
Exposes students to applied research in business through completion of a consulting assignment. Required for all majors in finance, information systems, leadership studies, and marketing. Open to fourth- year honours students as a BSAD elective. Prerequisite: fourth year standing. Three credits.

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. Classroom meetings are held periodically to discuss the thesis process and to make presentations. Prerequisite: BSAD 391. Three credits over two terms.

7.6 CANADIAN STUDIES

M.B. McGillivray, Ph.D., Coordinator

Students in BA programs may count as a pair or minor (subject B) courses that have as their common characteristic substantial Canadian content. The minor must be made up of at least two subjects and not more than three, and may not include any course at the 100 level. Subjects (but not courses) drawn upon to make up such a concentration may also be used to make up other subject requirements for the BA degree. Courses acceptable for such a pair or minor are listed below. Interested students should note that the program will expand to accommodate majors, advanced majors, and honours degree requirements in the near future.

Art

ART 300	A Cultural and Intellectual History of Canada	6 credits

Economics

ECON 310	Canadian Economic History	6 credits
ECON 312	Industrial Organization	3 credits
ECON 321	Canadian Economic Problems	3 credits
ECON 330	Money, Banking and Financial Markets	6 credits
ECON 341	Regional Economics	3 credits
ECON 342	Maritime Economy	3 credits
ECON 361	Human Resources and Labor Economics	6 credits

English

ENGL 265	Canadian Poetry and Prose	6 credits
ENGL 347	African-Canadian Literature	3 credits
ENGL 367	The Canadian Novel	6 credits
ENGL 368	Canadian Poetry	6 credits
ENGL 467	Seminar on Canadian Poetry: The Poet in Atlantic Canada	6 credits

French

FREN 356	French Canadian Literature: Origins to the Révolution tranquille	6 credits
FREN 366	French Canadian Literature: Révolution tranquille to the Present	6 credits
FREN 376	Acadian Literature	6 credits

History

HIST 200	A History of Canada	6 credits
HIST 202	Western Canada: The Prairies	3 credits
HIST 204	Western Canada: British Columbia	3 credits
HIST 209	The Maritime Provinces, 1500-1950	6 credits
HIST 300	A Cultural and Intellectual History of Canada	6 credits
HIST 305	Pre-Confederation Canada	6 credits
HIST 306	Post-Confederation Canada	6 credits
HIST 307	History of Quebec	6 credits
HIST 308/ WMNS 308	Canadian Women's History	6 credits
HIST 309	The Working Class in Canadian Society	6 credits

HIST 310	Canadian Immigration and Ethnic History	6 credits
HIST 400	Seminar in Canadian History	6 credits
HIST 440	A History of Canadian-American Relations	6 credits

Political Science

PSCI 220	Canadian Politics	6 credits
PSCI 240	Business and Government	6 credits
PSCI 321	Federalism	3 credits
PSCI 322	Atlantic Canada	3 credits
PSCI 323	Parties and Elections	3 credits
PSCI 324	Provincial Politics	3 credits
PSCI 341	Canadian Public Administration	3 credits
PSCI 342	Canadian Public Policy	3 credits
PSCI 343	Law and Politics	3 credits
PSCI 344	The Politics of Citizenship and Identity	3 credits
PSCI 351	Canadian Foreign Policy	3 credits
PSCI 420	Canadian Politics (Seminar)	6 credits

Sociology

SOCI 216	Canadian Society	3 credits
SOCI 217	Race, Class, Gender, and Sex	3 credits
SOCI 230	Sociology of Education	6 credits
SOCI 290	Social Stratification	6 credits
SOCI 318	First Nations	3 credits
SOCI 321	Sociology of Atlantic Canada	3 credits
SOCI 322	The Antigonish Movement as Change and Development	3 credits
SOCI 327	Contemporary Canadian Families	3 credits
SOCI 351	Criminal Justice and Corrections	3 credits
SOCI 423	Environment and Society II: Paradigms and Politics	3 credits
SOCI 424/WMNS 424	Women and Work	3 credits

7.7 CATHOLIC STUDIES

S. Baldner, Ph.D., Coordinator

Advising Faculty	**Department of**
J. Cameron, Ph.D.	History
P. Hogan, Ph.D.	History
R. Kennedy, Ph.D.	Religious Studies
W. Sweet, D.Ph.	Philosophy
L. Turcescu, Ph.D.	Religious Studies

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 theology, history, artistic culture, literature, philosophy, and institutions associated with Roman Catholicism.

Students who major in Catholic studies must take RELS 100 as a prerequisite to the program; 24 credits from the following core courses in Catholic studies; and 12 credits from the electives listed below.

200 An Introduction to Catholic Traditions and Culture
Required for all students who major in Catholic studies. The course provides an investigation into the nature of the Church and the Roman Catholic faith. It also provides a history of the Church in four major areas: the early Church through the Trinitarian and Christological Councils; the development of the medieval Church; Reformation and Counter Reformation; the Church of the First and Second Vatican Councils. Moreover, the course looks at the liturgical celebration and sacraments. Six credits.

241 Sin and Salvation in the Catholic Tradition

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. Not offered 2003-2004.

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 in the Catholic Tradition
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. Not offered 2003-2004.

300 Classic Texts in Roman Catholicism
An interdisciplinary seminar on the works of important thinkers in the Catholic tradition such as St. Augustine, St. Anselm, Thomas Aquinas, Ignatius Loyola, Blaise Pascal, John Henry Cardinal Newman. The seminar focuses on one or two figures each year. Prerequisite: RELS or CATH 200 or permission of the instructor. Six credits. Not offered 2003-2004.

320 Science and Christianity
The course has four parts: creation and the philosophy of nature in the 13th century; Galileo and the Inquisition; evolution, the Bible, and Providence; contemporary cosmology and theology. Six credits.

330 Catholicism and the Arts
Cross-listed as ART 330. See ART 330. Six credits.

341 Catholic Social Teaching
Rooted in scripture, philosophy, and theology, Catholic social teaching 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. Prerequisites: CATH 200 or permission of the instructor or third-year standing.

The following courses may be chosen as electives to complete the program in Catholic studies.

Art

ART 141	History of Art I	3 credits
ART 412	History of Art II	3 credits

English

ENGL 207	World Masterpieces I: Classical Antiquity	3 credits
ENGL 208	World Masterpieces II: Medieval and Renaissance	3 credits
ENGL 312	17th-Century Literature	3 credits
ENGL 392/CELT 392	Medieval Literature	3 credits

History

HIST 335	Thought and Art in the Middle Ages: Monks, Scholastics, Scientists and Artists	3 credits

Music

MUSI 115	History of Music I	3 credits

Philosophy

PHIL 240	Philosophy of Religion	6 credits
PHIL 360	History of Medieval Philosophy	6 credits

Religious Studies

RELS 200	Conscience and Freedom	6 credits
RELS 243	Religion, Freedom and Revolution	3 credits
RELS 245	Religion and Modern Culture	3 credits
RELS 250	Introduction to the Bible	6 credits
RELS 265	Introduction to the Gospels	3 credits
RELS 275	Introduction to Paul's Letters	3 credits
RELS 300/NURS 330	Health Care Ethics	6 credits
RELS 363	The First Christians	3 credits
RELS 365	Spirituality in Medieval Christianity	3 credits
RELS 385	Modern Christianity	3 credits
RELS 400	Christian Approach to Sexuality	6 credits
RELS 440	Jesus	6 credits

RELS 470 Modern Theological Thought 6 credits

7.8 CELTIC STUDIES

K.E. Nilsen, Ph.D.
C.N. Parsons, MA (Hons.), Dip.Ling.

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. The department offers three years of Scottish Gaelic and two years of Irish Gaelic. The Celtic literature, history and folklore courses are taught in English and have no language requirement.

Interest in Celtic studies has grown in recent years and a number of graduates of the program have found employment in the field; others have gone on to obtain advanced degrees in Celtic.

Students may count courses in Celtic history as courses in the Department of History.

Advanced Major

Advanced majors must complete thirty-six credits in Celtic studies, including: CELT 100 or 110; 120 or 131 and 132; 200 or 210; 333 or 350; 6 credits CELT at the 400 level; 6 additional credits CELT; and a senior paper.

Honours Program

Honours candidates are required to complete: CELT 100; 120 or 131 and 132; 200; 110 or 300; 420 or 430; 490 (thesis); 27 credits CELT of which up to 12 credits may be cross-listed courses: CELT/ENGL 273, 274, 392.

Master of Arts

The Master of Arts degree may be offered in Celtic Studies. *See section 6.*

100 Scottish Gaelic
Designed for students who have no knowledge of the language, this course provides instruction in basic Gaelic grammar, phonetics, and sentence structure. Texts and recordings are used for practice in reading and conversation. May not be taken concurrent with CELT 110. Six credits.

110 Irish Gaelic
An introduction to the Irish language as it is spoken in the *Gaeltacht* or Irish-speaking districts. Students will be introduced to the basics of spoken and written Irish. May not be taken concurrent with CELT 100. Six credits.

120 Celtic Literature
Designed to acquaint students with the wide scope of Celtic literature that has survived in both manuscript and oral tradition. Selections in translation will be chosen from poetry and prose in Irish, Scottish Gaelic, Manx, Welsh, Cornish, and Breton, with a view to establishing parallels and divergences among these literatures. Six credits.

131 Celtic Civilization I
This course will provide an introduction to the Celtic peoples from earliest times to the Middle Ages. Topics will include history, language, art, literature, mythology and early Celtic Christianity. Three credits.

132 Celtic Civilization II
This course will study the Celtic languages and cultures of Scotland, Ireland, Wales, Brittany, the Isle of Man and Cornwall from ca. 1500 to the present. Topics will include music, folklore, literature, present-day revival movements and what Celtic culture means today in North America. Three credits.

200 Second-Year Scottish Gaelic
Includes selected readings of riddles, proverbs, poetry, and folktales as well as conversation and composition. Six credits.

210 Second-Year Irish Gaelic
A continuation of CELT 110, this course introduces advanced grammatical concepts and includes conversation and composition practice. Readings from modern Irish literature and folklore will be used to illustrate differences in the three major dialects. The course will include an introduction to Irish script and the manuscript tradition. Six credits.

273 Linguistics
An introduction to the study of human communication, attitudes towards language, and the phenomenon of linguistic change. Cross-listed as ENGL 273 and as the first half of ANTH 355. Three credits.

274 History of the English Language
Examines the history and development of the English language. Cross-listed as ENGL 274. Three credits.

300 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.

331 Scotland: A Celtic Realm
A study of the origins and development of the Scottish nation and the distinctive social, cultural, and religious heritage of the Scots. In the latter half of the course attention will be given to conditions in the Highlands prior and subsequent to the emigration movement of the 17th and 18th centuries. Six credits. Not offered 2003-2004.

333 The Scottish Gael: Old World and New
In the first semester, the class will study Scottish history; in term two, we will examine the Scottish diaspora in North America. Six credits.

340 Scottish Gaelic Bardic Poetry
Examines the influence and decline of the Irish classical period in the works of several major Scottish Gaelic poets of the 17th and 18th centuries, notably Mary MacLeod, Duncan Ban MacIntyre, Alexander MacDonald (MacMhaighstir Alasdair). Prerequisite: any CELT course or approval of the instructor. Six credits. Not offered 2003-2004.

350 The Folklore of Ireland and Scotland
Studies in the oral traditions of Gaelic Ireland and Scotland, including the folktale; the storyteller; folklore collectors; folksong tradition; clan legends; fairies; psychic phenomena; calendar customs. Six credits. Not offered 2003-2004.

361 Selected Topics I
An opportunity for students to explore topics not covered in other courses; content varies from year to year. Three credits.

362 Selected Topics II
A further opportunity for students to explore topics not covered in other courses; content varies from year to year. Three credits.

392 Medieval Literature
Examines the finest authors and works in Middle English, including Geoffrey Chaucer, *Sir Gawain and the Green Knight, Piers Plowman, The Pearl,* Sir Thomas Malory's *Le Morte D'Arthur,* and medieval ballads and lyrics. Cross-listed as ENGL 392. Six credits.

420 Seminar on Scottish Gaelic Immigrant Literature
A study of prose and poetry written in North America, emphasizing Nova Scotian examples, and including material from such current and historical publications as *MacTalla, Mosgladh, The Casket, Clàrsach na Coille*. Six credits.

430 Irish Bardic Poetry
Explores the Bardic tradition in Ireland, ca. 1200-1600. The class will cover Bardic schools, metrics, religious poetry, nature poetry, and eulogy. Prerequisite: any CELT course or permission of the instructor. Six credits. Not offered 2003-2004.

490 Honours Thesis
Three credits.

499 Directed Study
A directed study course in advanced topics in Celtic studies. See section 3.5. Three or six credits.

7.9 CHEMISTRY

M.A.S. Aquino, Ph.D.
J.F. Beck, Ph.D.
J.F. Cormier, Ph.D.
D. Klapstein, Ph.D.
B.V. Liengme, Ph.D.
D.G. Marangoni, Ph.D.
R. Palepu, Ph.D.
T. Smith-Palmer, Ph.D.

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 (atomic absorption, FT-infrared, multi nuclear magnetic resonance, photoelectron, ultraviolet/visible); 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 section 5.*

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 are advised to complete the physics and second mathematics requirements (see below) by the end of their second year and to take CHEM 220, 245, 265 in their second year. Potential honours students should also take CHEM 231, 232 in their second year. For the recommended course sequence, see the department's website at <http://www.mystfx.ca/people/chemist>.

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 conserned that their health may be adversely affected by a lab should consult the professor or department chair.

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 informatics (375); 6 credits electives from 330, 360, 341 and 342, 255, 321, 355, 420 or 450; 6 credits CHEM or other science; for a total of 36 credits; 391 and 491; if 330 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 111, 112 or 120)

Science electives 6 credits science electives

Arts X 12 credits in a humanities or social science discipline

Arts Y 12 credits in a humanities or social science discipline

Arts Z 6 credits in a humanities or social science discipline. Subjects X, Y, and Z must be different. One of X, Y and Z must be in humanities and another in social science.

Open electives 30 credits

Advanced Major

The course pattern for advanced major in chemistry is:

CHEM 6 credits introductory (100 or 120); 9 credits analytical (265, 360); 6 credits inorganic (245, 341); 6 credits organic (220); 6 credits physical (231, 232); 3 credits informatics (375); 6 credits electives which must include 330, 342, or 420; for a total of 42 credits; 391 and 491

Science B 12 credits in another science

Science C 6 credits of in another science (science B or C must be MATH and include MATH 111, 112 or 120)

Arts X 12 credits in a humanities or social science discipline

Arts Y 6 credits in a humanities or social science discipline

Approved electives 18 credits approved electives; unless it is taken as science B or C, these electives must include PHYS 100 or 120, and 6 credits must be from MATH 253, 254, 267, 367 with the balance from science, MATH, CSCI or PHIL 210

Open electives 24 credits

Honours

The course pattern for honours in chemistry is:

CHEM 6 credits introductory (100 or 120); 9 credits analytical (265, 360); 9 credits inorganic (245, 341, 342); 12 credits organic (220, 420); 12 credits physical (231, 232, 330); 3 credits informatics (375); 3 credits honours thesis (493); 6 credits electives (may be in another science); for a total of 60 credits; 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 111, 112 or 120)

Arts X 12 credits in a humanities or social science discipline

Arts Y 6 credits in a humanities or social science discipline

Approved electives 18 credits approved electives; unless it is taken as science B or C, these electives must include PHYS 100 or 120, and 6 credits must be from MATH 253, 254, 267, 367, the balance from science, MATH, CSCI or PHIL 210

Open electives 6 credits arts or science electives

B.Sc. with Joint Honours & B.Sc. with Joint Advanced Major Degree

Joint honours and joint advanced major degree programs are available between chemistry and each of the following: biology, computer science, earth sciences, mathematics, physics, business administration (joint advanced major only). Interested students should consult the chair of the chemistry department.

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 section 6*. 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 behavior 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. Six credits and laboratory.

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. Six credits and laboratory.

150 Fundamentals of General and 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 enrollment. Six credits and laboratory.

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. Six credits and laboratory.

221 Organic Chemistry I
The first term of CHEM 220; emphasis is on oxygenated compounds. Three credits and laboratory.

222 Organic Chemistry II
The second term of CHEM 220; topics include aromatics, reaction mechanisms and spectroscopy. Prerequisite: CHEM 221. Three credits and laboratory.

231 Physical Chemistry I
An introductory course in physical chemistry that begins with a discussion of the properties of ideal and real gases. The fundamental principles of thermodynamics (the three laws of thermodynamics) are introduced and their application to physical and chemical transformations is discussed. The course will conclude with the introduction of the chemical potential and its application to phase equilibria, ideal solutions (Raoult's and Henry's laws), and colligative properties. Prerequisites: CHEM 100 or 120; MATH 111 and 112 or 120. Three credits and laboratory.

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, chemical equilibrium, 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 laboratory.

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. Three credits and laboratory.

255 Introductory Biochemistry
The structures and properties of common organic compounds of biological interest. Areas of study include: biochemical energetics, structures and mechanisms of action of some enzymes, chemical pathways of metabolism,

mechanisms of action of certain drugs, and experimental techniques used by biochemists. Prerequisites: CHEM 221; CHEM 220 is recommended. Three credits and laboratory.

265 Basic Analytical 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. Three credits and laboratory.

321 Intermediate Organic Chemistry
A continuation of CHEM 220 which includes: addition and condensation polymerization, including some kinetics; divalent carbon compounds (carbenes); pericyclic reactions; Woodward Hoffmann rules; mass spectrometery of organic compounds; organic chemistry of sulfur, phosphorous, and silicon compounds; carbohydrates, amino acids, proteins, lipids; dyes and dyeing; mechanisms of nucleophilic substitutions. Prerequisite: CHEM 220. Three credits and laboratory. Offered in alternate years.

322 Heterocyclic Chemistry
The course consists of a survey of aromatic compounds, focusing mainly on aromatic heterocycles containing one or two heteroatoms. Synthesis, structural aspects, and chemical properties of these compounds will be examined. Some more complex special cases, including purine and pyrimidine systems, will also be included. Prerequisites: CHEM 220, 321. Three credits and laboratory. Offered in alternate years.

330 Physical Chemistry III
Continued discussion of fundamental principles embracing statistical thermodynamics, atomic and molecular structure, spectroscopic methods, and reaction kinetics. Prerequisite: CHEM 232. Six credits and laboratory.

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, and inorganic electrochemistry. Prerequisite: CHEM 245. Three credits and laboratory.

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. Prerequisite: CHEM 341. Three credits and laboratory.

355 Advanced Biochemistry
Among the topics to be covered are the natural and lab synthesis of amino acids and peptides, nucleosides and nucleotides; general synthesis of lipids; and metabolic control. Prerequisites: CHEM 220, 255. Three credits and laboratory. Offered in alternate years.

360 Instrumental Analytical Chemistry
Discussion of a variety of instrumental analytical procedures, including ultraviolet/visible, atomic, and infrared absorption methods, chromatography (HPLC, GC, IC), capillary electrophoresis, NMR, electrochemistry, and mass spectroscopy. Sample preparation, data handling, method optimization and radiochemical methods are also covered. Prerequisite: CHEM 265. Six credits and laboratory.

375 Chemical Informatics
Students will learn to use the Internet and the Scientific and Technical Information Network (STN) to find chemical information. They will then use computer applications such as Microsoft Excel (including Visual Basic) and chemistry-specific software to analyze data and produce reports. Required for, and restricted to students in, degree programs where chemistry is science A. Recommended for the first term of the junior year. Three credits and laboratory.

391 Chemistry Seminar I
Introduction to seminar techniques using topics in modern chemistry. Required for all junior honours and advanced major students, and major students in either their junior or senior year. No credit.

420 Physical Organic Chemistry and Organic Spectroscopy
Application of kinetic, thermodynamic, spectral, and molecular modeling (molecular mechanics and molecular orbital) methods to correlate the vast amount of data concerning the structure, properties, and chemical transformations of organic compounds into consistent patterns. The synergy between experiment and theory is demonstrated. Extensive use is made of computer-based modeling methods and spectroscopic investigations in assignments and experiments. Prerequisite: CHEM 220. Six credits and laboratory.

434 Colloids and Interfaces
The properties of colloids, surfaces, interfaces, and polymers will be discussed from a theoretical and an applied perspective. The course will begin with a qualitative description of the colloidal state, including the various types of colloids and their preparation and properties. Topics will include: experimental techniques used to determine colloidal properties; interfacial phenomena, including the measurement of surface and interfacial tension, the wetting of surfaces,

and contact angles; and the properties of surface active agents, charged interfaces, and the stabilization of colloidal systems. Prerequisites: CHEM 231, 232. Three credits and laboratory.

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, no laboratory.

442 Bio-Inorganic Chemistry
A survey of metal ions in biological systems. Topics include: ion pumps, oxygen carriers such as hemoglobin, metalloenzymes, nitrogen fixation, photosynthesis, biologically important trace metals, biomimetic systems and inorganic drugs. Discussion of various physical techniques used in bio-inorganic chemistry will also be included. Prerequisites: CHEM 341; CHEM 342 completed or concurrent. Three credits and laboratory. Offered in alternate years.

443 Inorganic Materials
Discussion of current areas of interest in inorganic materials research. Topics include: superconductors, magnetic and electronic materials, nonlinear optics, polymeric coordination complexes, biogenic materials, intercalation compounds and liquid crystals. Prerequisites: CHEM 341; CHEM 342 completed or concurrent. Three credits and laboratory. Offered in alternate years.

450 BioOrganic Chemistry
A discussion of isomerism and proisomerism is followed analysis of the reactions observed in the biosynthesis of amino acids and terpenoids. The dominant theme is developing and examining of reaction mechanism possibilities, the mechanisms of enzyme action based on protein structure, active site geometry and amino acid residue. Prerequisite: CHEM 220. Six credits and laboratory.

461 Topics in Instrumentation and Analysis
This course typically starts with a brief introduction to electronics, signals, noise and data manipulation. This is followed by a survey of molecules with bioanalytic applications (enzymes, immunoglobulins, avidin/biotin, cyclodextrins), and a discussion of selected bioanalytic methods and their applications in sensors. A variety of instrumentation is used in the lab. Prerequisite: CHEM 360 completed or concurrent. Three credits and laboratory.

462 Topics in Analysis and Spectroscopy
Topics typically include NMR, fluorescence, FTIR, and a survey of methods used for surface analysis. Capillary electrophoresis, mass spectrometry and flow injection analysis may also be discussed. Applications in process analytical chemistry will be covered. Prerequisite: CHEM 360. Three credits and laboratory.

491 Chemistry Seminar II
Lectures by visitors, faculty and staff, and senior honours and advanced major students on aspects of chemical science. Attendance is mandatory for all junior, senior and graduate chemistry students. The senior essays of advanced major students, and the theses of honours students form the basis of their presentations. No formal credit is given for this course, but a satisfactory completion of the senior essay and seminar presentation is a requirement 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 laboratory.

GRADUATE COURSES

591	Advanced Instrumentation I: Bioanalysis	3 credits	
593	Advanced Instrumentation II: Capillary	Electrophoresis and Ion Chromatography	3 credits
595	Nucleic Acids	6 credits	
598	Advanced Instrumentation III: Electronics	3 credits	
599	Master's Thesis		12 credits

Additional courses are available depending on the requirements and interests of the student and the availability of faculty.

7.10 CLASSICAL STUDIES

C. Byrne, Ph.D., Coordinator
S. Baldner, 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. Students in BA programs may also use classical studies as a minor.

BA with a Minor in Classical Studies

Course Requirements for the minor are: CLAS 110 or 120; CLAS 230 or 240; one of CLAS 110, 120, 230 or 240 or ENGL 206 and 207. The four-year BA degree requires one 300-level course chosen from PHIL 350, RELS 340 or RELS 345.

110 Latin I

For students with no previous knowledge of Latin, this course will teach a reading command of the language. Recommended for those interested in classical languages, literature, history, philosophy, and religious studies. Six 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.

230 Latin II

A follow-up to CLAS 110, this course includes oral work designed to enhance reading skills, and the study of hymns, poems, epitaphs, and speeches, as well as selections from the New Vulgate. Prerequisite: CLAS 110. Six 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.

↖ COMPARATIVE LITERATURE

See Modern Languages in 7.24

xe "Coady International Institute" **Education, Innovation, Action**

Named in honour of Rev. Dr. Moses Coady, the Coady International Institute represents St Francis Xavier University's commitment to social justice - in action. Unique in North America, the Coady Institute has been educating and training development professionals from around the world since 1959. Over 4,000 men and women from more than 130 countries have graduated from the Coady's campus-based programs. They come to the Coady to share experiences and learn innovative and practical ways of working with their own communities to improve their social and economic well being through active citizenship and co-operation.

Their work in areas such as health, education, environment, micro-enterprise, and human rights is helping millions of people to build brighter futures for themselves. In addition to our campus-based educational programs for development professionals, members of the Coady staff collaborate with the Faculty of Arts to offer the undergraduate program in Development Studies. Courses are also cross-listed, such as NURS 486: Community Health and Development to provide an opportunity for undergraduates to learn with international organizational leaders participating in Coady's Diploma in Community-Based Development.

Through our Global Partnerships Program, the Coady is also working on-the-ground with development organizations around the world to help them strengthen their ability to educate and train local development workers. The community leaders who attend the Coady's Diploma and Certificate programs on campus add much to the multicultural atmosphere at StFX and provide a rich resource for students interested in international issues. StFX students are welcome to visit the Coady Institute to meet with international community leaders and to access the Institute's Marie Michael Library, which houses a special collection on international development.

StFX graduates can experience living and working overseas through the Coady's Youth Internship Program. Since 1997, the Coady has provided over 80 recent university and college graduates from across Canada with the opportunity to participate in a six-month work internship with global partners in Asia, Africa, the Caribbean and South America. Not only does the internship experience improve graduates' job

prospects when they return to Canada, it provides the opportunity to see their role as global citizens by putting their learning into practice and helping others.

7.11 COMPUTER SCIENCE

M. Lin, Ph.D.
A. MacEachern, Ph.D.
E. Schuegraf, Ph.D.
M. van Bommel, Ph.D.
L. Yang, Tek.Lic.

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. 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 section 7.23.*

Students completing a program in computer science have a wide variety of options, including graduate studies in emerging areas of computer science such as 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, advanced major or honours degree in computer science must take certain core courses: CSCI 160, 255, 365, 375; MATH 111, 112, 277.

Major in Computer Science

In addition to the core requirements, students must take an additional twelve credits, which may be chosen from CSCI, MATH, or STAT, 9 of which must be in CSCI at the 200 level or above.

Advanced Major in Computer Science

In addition to the core requirements, students must take CSCI 383, 465, 475, 491; MATH 253 and a STAT course. In the case of students in the BA program, the STAT course should be taken as an approved elective. B.Sc. students should take one additional three-credit CSCI course at the 300 or 400 level.

Typical Advanced Major Pattern:

Year 1	CSCI 160; MATH 111, 112
Year 2	CSCI 255, 256; MATH 253, 277
Year 3	CSCI 365, 375, 383; STAT 231; additional CSCI courses
Year 4	CSCI 465, 475, 491; additional CSCI courses

Honours in Computer Science

In addition to the core requirements, students must take CSCI 256, 383, 385, 465, 475, 485, 491, 493; MATH 253 and a STAT course, plus nine credits chosen from CSCI, MATH or STAT.

Typical Honours Pattern:

Year 1	CSCI 160; MATH 111, 112
Year 2	CSCI 255; MATH 253, 277; STAT 231
Year 3	CSCI 365, 375, 383; additional CSCI courses
Year 4	CSCI 385, 465, 475, 485, 491, 493; additional CSCI courses

Industrial Internship Program in Computer Science

This program is designed to give students an opportunity to use their expertise in computer science, which they have gained in their first three years of study. The program is similar to a traditional co-op internship, except that the work term is 12 or 16 consecutive months, rather than several four-month terms.

Application for admission must be made in the first term of the third year; admission is restricted to students in the BA with Honours in Computer Science and the B.Sc. with Honours in Computer Science. During their internship, students are registered at StFX and enrolled in CSCI 401, 402, 403, and, optionally, 404. Upon completion of their internship, students return to StFX for their fourth year and complete CSCI 405. For further information, see the department website at <http://www.mystfx.ca/academic/mathcs/>.

Co-op Program in Computer Science

This is a five-year program leading to the BA or B.Sc. in Computer Science, with a co-operative education designation. The program is offered in conjunction with the Gerald Schwartz School of Business and Information Systems as part of the expanded classroom initiative. Students will complete three four-month work terms or one 12 to 16-month work term, while enrolled in BSAD/INFO 401, 402 and 403, or 405. After each term, the student participates in seminars and completes a reflective report which integrates theoretical course material with the work and learning experiences.

Admission is restricted to students who meet the requirements for admission to the BA or B.Sc. with honours in Computer Science. For further information, see the department website at <http://www.mystfx.ca/academic/mathcs/>.

[AR] Indicates Designated Course in Aquatic Resources

100 Introduction to Computing

An introduction to computer systems, hardware, and software, covering practical applications of computers in society. The course will use standard microcomputer software packages and access external databases to focus on information collection, analysis, and presentation. Two projects will provide the opportunity for a student to show an understanding of the concepts. Restricted to students in the Faculty of Arts, and the Departments of Human Kinetics and Human Nutrition. Six credits.

125 Computer Programming in C [AR]

An introductory programming course using C for the solution of scientific and engineering problems with special emphasis on well-structured programs. Three credits and a two-hour laboratory.

160 Computers, Programming and Data Structures

An introduction to computers, algorithms and programming using C. Topics include description of secondary storage devices and files; and introduction of linear data structures, lists, stacks, and queues with applications. Six credits and a two-hour laboratory.

235 Microcomputers in Science [AR]

An introduction to the hardware, operating systems and utilities of microcomputers. Typical microcomputer applications include word processing, spreadsheets, and database management systems. Examples and applications are taken from the sciences. Restricted to science students. Three credits and a two-hour laboratory.

254 Object-Oriented Methodologies

An overview of object-oriented concepts, languages, and applications, with object-oriented programming in C++. Software engineering principles will be examined in relationship to abstract data types using objects, event-driven processing and inheritance. Prerequisite: INFO 152. Restricted to students in information systems. Three credits and a two-hour laboratory.

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 160. Three credits and a two-hour laboratory.

256 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. Prerequisite: CSCI 255. Three credits and a two-hour laboratory.

265 Computer Systems and Assembler

An introduction to the structure of a computer system, number systems, and machine language by means of an assembler language. Prerequisite: CSCI 160. Three credits and a two-hour laboratory. Not offered 2003-2004.

335 Operations Research [AR]

The course will cover selected topics from linear programming; transportation and assignment models; networks; scheduling; inventory models; decision-making; queuing theory; forecasting and simulation. Packaged software and spreadsheets will be used. Prerequisites: MATH 112; a programming course. Three credits.

345 Computer Graphics

Covers fundamental mathematical, algorithmic, and representational issues in computer graphics, graphics programming, geometrical objects and transformations, 2-D and 3-D data description, manipulation, viewing projections, clipping, shading, animation. Prerequisites: MATH 111, 112, 253; CSCI 255. Three credits and a two-hour laboratory. Offered 2003-2004 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 256; MATH 277. Three credits. Offered 2003-2004 and in alternate years.

365 Computer Organization
This course covers basic computer architecture and instruction sets; in-depth study of the central processing unit, memory and input/output organization; and microprogramming and interfacing. Prerequisite: CSCI 255. Three credits and a two-hour laboratory.

375 Operating Systems
An overview of operating systems functions: file systems, CPU scheduling, memory management, and virtual memory. UNIX will be introduced and used in this course. Prerequisite: CSCI 365. Three credits and a two-hour laboratory.

383 Object-Oriented Programming and Design
An in-depth study of the object-oriented programming paradigm. Topics include: objects, messages, classes; inheritance, polymorphisms, encapsulation; pure and hybrid languages; object-oriented problem solving. Concepts will be practiced with C++. Prerequisite: CSCI 255. Three credits and a two-hour laboratory.

385 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 255. Three credits and a two-hour laboratory.

401 Computer Science Work Experience I
A required four-month work experience for computer science honours students admitted to the industrial internship program, this course provides an opportunity for students to develop an understanding of the work environment and the role of a computer professional. No credit.

402 Computer Science Work Experience II
A four-month work experience that provides an opportunity for students to apply computer science methodology to real-world problems. Required for students in the industrial internship program. Prerequisite: CSCI 401. No credit.

403 Computer Science Work Experience III
A four-month work experience that provides an opportunity for students to apply computer science to industrial problems. Required for students in the industrial internship program. Prerequisite: CSCI 402. No credit.

404 Computer Science Work Experience IV
An optional four-month work experience in which students will apply computer science to industrial problems. Prerequisite: CSCI 403. No credit.

405 Industrial Internship Program Seminar
In the first term of their return to full-time studies, students will complete and present a report on their work experience. Required for students in the industrial internship program. Prerequisite: CSCI 403. Three credits.

455 Parallel Computing: Architecture, Algorithms and Applications
Parallel programming techniques will be introduced as a natural extension to sequential programming. Students will develop the basic techniques of message-passing parallel programming; study problem-specific algorithms in both non-numeric and numeric domains; and gain shared memory programming and P threads to assist them in shared memory programming assignments. Topics will include: application areas such as numeric algorithms; image processing and searching; optimization. Prerequisites: CSCI 255 and 365. Three credits and a two-hour laboratory. Offered 2003-2004 and in alternate years.

465 Data Communication Systems and Networks
This course covers communication systems; environments and components; common carrier services; network control, design and management; distributed and local networks. Co-requisite: INFO 325 or CSCI 365. Cross-listed as INFO 465. Three credits and a two-hour laboratory.

467 Computer and Network Security
Covers the theory and practice of computer and network security, including cryptography, authentication, network security, and computer system security. Cryptography topics include secret key cryptography, public key cryptography, and message digests. Authentication topics include password-based, address-based, and cryptographic authentication. Network security topics include electronic mail, IP and web security. System security topics include intruders, malicious software, and firewalls. While studying the theory of network communications security, students will use and implement various algorithms. Prerequisite: CSCI 465. Three credits.

471 Topics in Computer Science
This course explores current topics in computer science, such as computer security, interface design, real-time control, and simulation. The topic for 2003-2004 will be specifications and verifications of computer systems and programs. Prerequisite: CSCI 160; MATH 277. Three credits.

475 Database Management Systems
An introduction to the theory associated with the design and implementation of databases. Topics include: database models (relational models in detail), design, normalization, SQL, and a DBMS (ORACLE). Prerequisite: CSCI 254 or 255. Cross-listed as INFO 475. Three credits and a two-hour laboratory.

483 Interactive Programming with Java
This course introduces Java Programming and its application to interactive programming for the Web. Language features and object-oriented concepts in Java will be described in depth. Topics will include: OOP programming, the basic Java language features, Thread, Exception Handling, AWT (the abstract window toolkit), Applet and Internet programming. Prerequisite: CSCI 254 or 383. One section will be restricted to students in information systems. Three credits.

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. Prerequisites: CSCI 375. Three credits and a two-hour laboratory.

491 Senior Seminar
All senior honours and advanced major candidates must perfect their presentation and writing skills. The honours thesis and advanced major research paper will constitute part of this course. No credit.

493 Senior Thesis (Honours)
Three credits.

495 Artificial Intelligence
An introduction to the core concepts of artificial intelligence, including state space, heuristic search techniques, knowledge representation, natural language processing, and expert systems. LISP and PROLOG will be used to solve problems. Prerequisite: CSCI 254 or 255. Three credits and a two-hour laboratory. Offered in alternate years; not offered 2003-2004.

7.12 DEVELOPMENT STUDIES

Coordinator:

C. Fawcett, Ph.D.	Sociology and Anthropology
J. Bickerton, Ph.D.	Political Science
M. Coyle, MA	Coady International Institute
S. Dodaro, Ph.D.	Economics
D. Gillis, M.Sc.	Human Nutrition
A. Mathie, Ph.D.	Coady International Institute
S. Vincent, Ph.D.	Sociology and Anthropology
B. Wright, Ph.D.	Business Administration

This interdisciplinary program in community-based development examines the local and global social, economic, political, and cultural contexts in which development takes place. Students will investigate the theory, philosophy, and practice of development and social justice, and learn about the Antigonish Movement.

Students may complete a BA with Joint Advanced Major or Joint Major in development studies and another Faculty of Arts subject, or they may take a minor or pair in development studies. *See sections 4.2, 4.3 and 4.4 for degree regulations.* Students interested in DEVS degree options should consult the coordinator as early as possible. Students graduating with a joint advanced major or joint major in development studies and another Faculty of Arts subject must complete ECON 100 and one of ANTH 110, SOCI 100 or PSCI 100.

Joint Major in Development Studies and a Faculty of Arts Subject

Requirements:

a) 36 credits in DEVS (subject A) and 36 credits in another Faculty of Arts subject (subject B). The program or department requirements for majors are applicable in both subjects.
   Students must complete the following:
   i) DEVS 200 — 6 credits
   ii) DEVS 300 or 400 — 6 credits
   iii) Additional DEVS core or cross-listed courses — 24 credits
   A maximum of 18 credits may be BSAD, INFO or HNU.
   iv) ECON 100 and one of SOCI 100, ANTH 110 or PSCI 100

   No more than 12 credits of cross-listed courses may be in a single subject. None of the cross-listed courses may be in the student's declared subject B. A maximum of 18 credits may be from BSAD, INFO or HNU.

b) Course Pattern
   Subject A 36 credits
   Subject B 36 credits

Pair C	12 credits
Pair D	12 credits
Electives	24 credits

Joint Advanced Major in Development Studies and a Faculty of Arts Subject

Requirements:

a) 36 credits in DEVS (subject A) and 36 credits in another Faculty of Arts subject (subject B; see definition of subject at 4.1.2) or 36 credits in a Faculty of Arts subject (subject A) and 36 credits in DEVS (subject B). The program or department requirements for advanced majors are applicable in both subjects.

Students using DEVS as subject A must complete the following:

i) DEVS 200, 300, 301, 400, 401 — 24 credits
ii) DEVS cross-listed courses — 12 credits
iii) ECON 100; one of SOCI 100, ANTH 110 or PSCI 100

No more than 12 credits of cross-listed courses may be in a single subject. None of the cross-listed courses may be in the student's declared subject B. A maximum of 18 credits may be from BSAD, INFO or HNU.

Students using DEVS as subject B must complete the following:

i) DEVS 200, 300, 400, 301 — 21 credits
ii) DEVS cross-listed courses — 15 credits
iii) ECON 100; one of SOCI 100, ANTH 110 or PSCI 100

No more than 12 credits of cross-listed courses may be in a single subject. None of the cross-listed credits may be in the student's declared subject A. A maximum of 18 credits may be from BSAD, INFO or HNU.

b) Course Pattern

Subject A	36 credits
Subject B	36 credits
Pair C	12 credits
Pair D	12 credits
Electives	24 credits

c) A senior paper is required for all advanced major students. The senior paper will be written in DEVS 401 when development studies is subject A. When development studies is subject B, the senior paper will be written for the department or program that is subject A.

Minor in Development Studies

i) DEVS 200 — 6 credits
ii) Additional DEVS core or cross-listed courses — 18 credits
No more than 6 credits of cross-listed courses may be from a single department.

Pair

i) DEVS 200 — 6 credits
ii) Additional DEVS core or cross-listed courses — 6 credits

DEVELOPMENT STUDIES CORE COURSES

200 Introduction to International Development

This course will introduce students to development theory and practice in the South and in Canada, with reference to Atlantic Canada. It will provide students with a critical framework they can use to analyze development policies, programs, trends, and impacts. Students will explore the concepts of social and economic justice as they are linked to development. Reference will be made to the Antigonish Movement and other people's movements worldwide. Prerequisite: 30 credits of university courses or permission of the coordinator; one of SOCI 100; ANTH 110; PSCI 100; ECON 100; HIST 110 or BSAD 101, 102. Six credits.

300 Globalization and Development

This course will introduce students to the factors, processes, trends, and events that are associated with globalization. It will examine the impact of globalization internationally and in the Atlantic region of Canada specifically. Students will also learn how people and communities have mobilized responses to globalization. Prerequisite: DEVS 200 or ECON 100. Six credits.

301 Internship in Development Studies

The internship is designed to help students make the link between what they have learned in the classroom and what is happening in the wider community. This experiential learning option will involve students working with a local or international development agency. The internship will be two to four months long. A job description and work plan will be developed by the student in consultation with the course supervisor and the host agency representative. Prerequisites: DEVS 200; permission of the instructor. Three credits.

400 Community-Based Development: Strategies and Practice
This course will introduce students to key strategies and methods used in community-based development. Students will be exposed to a number of participatory planning and evaluation tools and techniques used in international and domestic contexts to empower people in communities to take charge of their own development. Prerequisite: DEVS 200. Six credits.

401 Senior Seminar in Development
Students taking this course will write a senior paper that demonstrates a comprehensive understanding of the field of development and the link between the theory and practice of community-based development. The course will allow students to develop a major work that links their practical experience in DEVS 301 with in-depth theoretical work in development studies. Prerequisites: DEVS 200, 301; permission of the instructor. Three credits.

DEVELOPMENT STUDIES CROSS-LISTED COURSES

Business Administration

BSAD 231	Foundations of Marketing	3 credits
BSAD 261	Foundations of Management	3 credits
BSAD356	Entrepreneurship/NewVenture Development	3 credits
BSAD 357	International Business Development	3 credits
BSAD 457	Community Enterprise Development	3 credits
BSAD 458	ResearchProject: Enterprise Development	3 credits

Economics

ECON 211	Local and Community Development Economics	3 credits
ECON 305	Economic Development I	3 credits
ECON 306	Economic Development II	3 credits
ECON 320	Economic System	6 credits
ECON 341	Regional Economics	3 credits
ECON 342	Maritime Economy	3 credits
ECON 365	International Trade	3 credits
ECON 366	International Payments and Finance	3 credits
ECON 491	Selected Topics in Economics I	3 credits
ECON 492	Selected Topics in Economics II	3 credits

English

ENGL 247	Post-Colonial Literature	6 credits
ENGL 347	African Canadian Literature	3 credits

History

HIST 209	The Maritime Provinces, 1500-1950	6 credits
HIST 372	Imperial China	3 credits
HIST 374	20th-Century China	3 credits

Human Nutrition

HNU 200	Nutrition for a Healthy Lifestyle	6 credits
HNU 261	Introduction to Nutrition (science students only)	3 credits
HNU 262	Principles of Nutrition in Human Metabolism (science students only)	3 credits
HNU 405	Food Availability	3 credits

Information Systems

INFO 435	Introduction to Multimedia	3 credits
INFO 475	Database Management Systems	3 credits

Interdisciplinary Studies

IDS 305	Immersion Service Learning	3 credits
IDS 306	Service Learning: Theory and Practice	3 credits

Mathematics, Statistics, and Computer Science

STAT 201	Elementary Statistics	3 credits
MATH 205	Business Mathematics	3 credits

Modern Languages

FREN 215	French Language III	6 credits
FREN 220	Language and Culture	6 credits
SPAN 200	Second-Year Spanish	6 credits

Nursing

NURS 486	International Development and Health	3 credits

Philosophy

PHIL 330	Ethics	6 credits

Political Science

PSCI 250	World Politics	6 credits
PSCI 291	Violence, Conflict and Politics	3 credits
PSCI 322	Atlantic Canada	3 credits
PSCI 346	The Politics of Resource Management	3 credits
PSCI 351	Canadian Foreign Policy	3 credits
PSCI 352	American Foreign Policy	3 credits
PSCI 353	International Organizations	3 credits
PSCI 355	Global Issues	3 credits
PSCI 370	Third World Politics	6 credits
PSCI 382	International Political Economy	3 credits
PSCI 390	Politics and Society in Latin America	6 credits

Religious Studies

RELS 200	Conscience and Freedom	6 credits
RELS 215/SOCI 227	Sociology of Religion	3 credits
RESL 310	Religion in Modern India	6 credits
RELS 370	Islam in the Modern World	6 credits

Sociology and Anthropology

ANTH 220	Political and Economic Anthropology	6 credits
SOCI 300/ NURS 300	Research Methods	6 credits
ANTH 304	Principles and Methods of Fieldwork	3 credits
SOCI 305/NURS 310	Applied Methods in Social Research	6 credits
ANTH 315	Health and Medicine	6 credits
ANTH 316	Rural Communities	3 credits
SOCI 318	First Nations	3 credits
SOCI 320	Black/African Diaspora in the Americas	6 credits
SOCI 321	Sociology of Atlantic Canada	3 credits
SOCI 322	The Antigonish Movement as Change and Development	3 credits
SOCI 323	Environment and Society I: Introduction	3 credits
ANTH 335	Cultural and Social Anthropology	6 credits
ANTH 353	Law, Culture and Society	3 credits
ANTH 365	Anthropology of Development	6 credits
ANTH 418	Area and Regional Studies I and II	6 credits
SOCI 423	Environment and Society II: Paradigm and Politics	3 credits

Women's Studies

WMNS 200	Introduction to Women's Studies	6 credits
WMNS 303	Feminist Theory	3 credits

Other courses may be considered cross-listed courses with permission of the development studies coordinator.

7.13 EARTH SCIENCES

A.J. Anderson, Ph.D.
H. Beltrami, Ph.D.
L. Kellman, Ph.D.
M.J. Melchin, Ph.D.
J.B. Murphy, 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 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, behavior, 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; 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 sequences are shown below; variations in content require the permission of the department chair and/or the dean of science. *Program requirements are listed in sections 5.2 to 5.7*. Approved electives may be in any discipline normally accepted for credit for science students: BIOL, CHEM, MATH, STAT, CSCI and PHYS (including PHYS 271, 272). However, some programs have recommended electives; students should consult the department chair for details. We strongly recommend that students take French or Spanish as one of their arts electives.

Major in Earth Sciences

Required courses for the Earth sciences major are ESCI 170, 201, 202, 215, 216, 275 or 276 (non-credit); 21 additional credits ESCI. Students following the geoscience or environmental geoscience concentrations must take: CHEM 100 or 120; MATH 111, 112; 6 credits CHEM or MATH at the 200 and/or 300 level; additional ESCI, arts and elective courses as outlined in section 5.2.

Geoscience Concentration

Year 1	ESCI 170, MATH 111, 112; CHEM 100 or 120; PHYS 100 or 120, or BIOL 111, 112; 6 credits arts electives
Year 2	ESCI 201, 202, 215, 216, 245, 275 (non-credit), 285; 6 credits science B or PHYS 100 or 120; 6 credits arts electives; (6 credits science B may be: BIOL; CHEM 231, 232, 245 or 265; MATH 221; 3 credits MATH; or PHYS 241 and 3 credits PHYS)
Year 3	ESCI 301, 302, 305, 365, 366; 3 credits ESCI elective; 6 credits science B or science electives; 6 credits arts electives
Year 4	ESCI 426, 435, 446, 475, 476, 491 (non-credit), 493 or 499; 12 credits science electives from ESCI, BIOL, CHEM, MATH or PHYS

Environmental Earth Science Concentration

Year 1	ESCI 170; MATH 111, 112; CHEM 100 or 120; PHYS 100 or 120 (strongly recommended); 6 credits arts electives
Year 2	ESCI 201, 216, 246, 271, 272, 276 (non-credit), 386; BIOL 111, 112; 6 credits arts electives
Year 3	ESCI 215, 305, 365, 366, 387, 471; 6 credits science B; 6 arts electives; 6 credits science B may be BIOL 203 and 3 credits BIOL; CHEM 231, 232, 245 or 265; MATH 221; 3 credits MATH; or PHYS 241 and 3 credits PHYS
Year 4	ESCI 406, 465, 472, 475, 491 (non-credit), 493 or 499; 3 credits ESCI elective; 12 credits science electives from ESCI, BIOL, CHEM or PHYS

Geochemistry Concentration

Required courses for students in the honours and advanced major programs of the geochemistry concentration are: ESCI 170, 201, 202, 215, 216, 245, 301, 302 or 435, 305, 406, 499 (ESCI 275 and 495 are required non-credit courses); CHEM 100 or 120, 220, 231, 232, 245, 365; MATH 111, 112; PHYS 100 or 120; additional ESCI, arts and elective courses as outlined in sections 5.3 and 5.6.

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 5.4, 5.5 or 5.7. Students should consult the appropriate department chair or program coordinator. Typical programs are shown below; variations are available at the discretion of the department.

Earth Sciences with Aquatic Resources

ESCI 171, 201, 215, 216, 271, 275 or 276, 305, 366, 386, 387, 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 coordinator of aquatic resources.

Earth Sciences and Biology

ESCI 170, 201, 215, 216, 275 or 276, 271, 272, 285, 386; 27 credits BIOL; CHEM 100 or 120, 221, 255; MATH 111, 112, 231; CCSCI 235; additional ESCI, arts and elective courses as outlined in sections 5.4 and 5.7; interdisciplinary thesis and seminar.

Earth Sciences and Business Administration
Course sequence for the B.Sc. with Advanced Major in Earth Sciences and Business Administration:

Science A (ESCI)	36 credits: ESCI 170, 201, 202, 215, 216, 245, 275; 15 additional credits ESCI
Science B (MATH)	12 credits: MATH 111, 112; any 6 additional credits MATH, STAT or CSCI
Science C (CHEM)	CHEM 100 or 120 BSAD BSAD 101, 102, 221, 223, 231, 261, 341, 471; 3 credits tech-designated; 3 credits BSAD electives
CSCI	235, 3 credits
ECON	6 credits
Arts X	12 credits humanities or social science
Arts Y	6 credits
Approved electives	9 credits from BIOL, CHEM, ESCI, or PHYS

Earth Sciences and Chemistry
ESCI 170, 201, 202, 215, 216, 275 or 276, 301, 302 or 435, 305, 406; CHEM 100 or 120, 220, 231, 232, 245, 246, 341, 342, 360; MATH 111, 112, 253 or 267; 3 additional credits MATH; PHYS 100 or 120; additional ESCI, arts and elective courses as outlined in sections 5.4 and 5.7; interdisciplinary thesis and seminar.

Earth Sciences and Mathematics
ESCI 170, 201, 215, 216, 245, 246, 275 or 376, 272, 475 (for additional credits, consult the Earth sciences department chair); 36 credits MATH; CHEM 100 or 120; PHYS 100 or 120; additional ESCI, arts and elective courses as outlined in sections 5.4 and5.7; interdisciplinary thesis and seminar.

Earth Sciences and Physics
ESCI 170, 201, 215, 216, 245, 246, 272, 275 or 276, 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 111, 112, 253, 267, 367; additional ESCI, arts and elective courses as outlined in sections 5.4 and 5.7; interdisciplinary thesis and seminar.

Minor in Earth Sciences
Students will take ESCI 171 and 21 other credits ESCI.

Master of Science Program
See section 6 for admission regulations.

[AR] Indicates Designated Course in Aquatic Resources

100 Physical Geology
An introduction to the study of rocks and minerals and the materials that make up planet Earth; the roles played by water, ice and wind in shaping the face of our planet; the Earth's origin and internal structure and composition; the plate tectonic theory, crustal deformation and mountain building; resources from the Earth. Six credits, field trips and laboratory. Not offered 2003-2004.

170 Understanding the Earth
Explores the Earth around us, the processes that have shaped the past and present, implications for our future. Topics include: volcanoes, earthquakes, origin and destruction of oceans, continental drift and plate tectonics, ocean water currents, groundwater, atmosphere, weather and climate patterns, hurricanes, monsoons, tornadoes, evolution and extinction of lifeforms, planets, sun and the stars, galaxies, resources such as minerals, energy, water, the environment, greenhouse effect, global warming, ozone layer, interaction of Earth and humanity, implications for the future. Designed for Arts and Science students. ESCI 171 (first term of ESCI 170) is offered primarily to students in the Aquatic Resources (ISAR) program. Six credits.

171 Understanding the Earth I
The first term of ESCI 170 is offered for students in the ISAR program, or with permission of the instructor. Three credits.

172 Understanding the Earth II
The second term of ESCI 170. Prerequisite: ESCI 171 or permission of the instructor. Three credits.

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. Prerequisite: ESCI 100 or 170; CHEM 100 or 120 (concurrent with permission of the instructor). Three credits and laboratory.

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, ternary and quaternary phase diagrams. Prerequisite: ESCI 201. Three credits and laboratory.

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 100 or 170. Three credits and laboratory.

216 Earth History
An overview of current theories on the evolution of planet Earth from its origin some 4.6 billion years ago up to the present. Changes in the distribution and character of continents and ocean basins, mountain ranges, continental glaciers and other features of the Earth's surface are traced and discussed in the light of plate tectonic theory. Concurrently, an overview of the evolution of plant and animal life as revealed by the study of fossils will be presented. Prerequisite: ESCI 100 or 170 (concurrent with permission of the instructor). Three credits and laboratory.

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 100 or 170. Three credits and laboratory.

246 Quantitative Methods in Earth Science
This course is intended to familiarize students with modern analytical techniques used in geosciences and to provide them with the theoretical and quantitative background necessary for further study in Earth sciences. Topics include applications of multivariate analysis and spectral analysis techniques. Prerequisites: ESCI 100 or 170; MATH 111 and 112; permission of the instructor. Three credits and laboratory.

271 Environmental Earth Science [AR]
This course will focus on the relationships between Earth surface processes and human activities. Topics include atmospheric processes and contamination; soil formation, degradation and erosion; an introduction to surface water and groundwater resources and pollutant transport in aquatic environments, as well as a critical examination of pollution and waste issues. Prerequisite: ESCI 100 or 170. Three credits and laboratory.

272 Global Change and the Climate System [AR]
This course will examine the global climate system. Processes that contribute to climate change will be examined in the context of both its natural variability and anthropogenic impact. Paleoclimates, greenhouse warming, ice ages and ocean-atmosphere interaction will be discussed. Prerequisite: ESCI 100 or 170. Three credits and laboratory.

2 73Health andthe Environment
Understanding the relationship between our environment and our health is a significant challenge for current and future generations. There is clear evidence that environmental agents play key roles in the development of many common illnesses and conditions. Most of these environmental agents are the result of human interferences in the natural processes and fluxes of elements within the planetary system. This course will explore many aspects of this feedback-loop between human health and the planet's health. Three credits.

2 74HealthImpacts of Global Change
There are many environmental issues with planetary-scale implications that are changing the way the Earth System works. This course will delve into some of these issues, as well as explore the causes, effects and health implications of global environmental change. Topics to be discussed include: Global warming, loss of ozone layer, aerosols, toxicity of greenhouse gases, overpopulation, genetics-environment interactions, changes to the hydrological cycle, and the use of chemicals to improve food production. Three credits.

275 Geological Field Methods
An introduction to field techniques; geological mapping on small and large scales; stratigraphic and structural interpretations. Aerial photographs, topographic and geophysical maps will be used where appropriate. This course involves elementary surveying techniques, systematics of hand specimen rock and mineral identification, and a 10-day introductory field camp, normally at the end of second year. The camp is held in collaboration with Acadia University. Prerequisites: ESCI 202, 215, 216. No credit.

276 Environmental Earth Science Field Course
This is a field and laboratory course which introduces field techniques in environmental earth sciences, including sampling, collection, analysis and interpretation of climatological, geochemical, biogeochemical, hydrological, geophysical and surficial geological data. Spatial variability in natural physical and chemical processes will be examined, field sampling techniques and tools will be introduced, and laboratory and computer-aided analysis of data

will be covered. Changes to natural systems as a result of human activities will be examined where possible. The course is held over a 10-day period in May. Prerequisites: ESCI 246, 271, 272. No credit. Not offered 2003-2004.

285Paleontology: 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. Prerequisite: ESCI 100 or 170 or BIOL 111, 112 or permission of the instructor. Cross-listed as BIOL 285. Three credits and laboratory.

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 laboratory.

302 Genesis of Metamorphic Rocks
An advanced treatment of the concepts of metamorphism: determination of pressure, temperature and fluid conditions of metamorphism; application of chemical equilibria and thermodynamic principles to metamorphic rocks; Schreinemaker's methods of phase diagram construction; activity and chemical potential diagrams; effect of bulk composition or metamorphic mineral assemblages; mixed volatile equilibria, equilibrium and disequilibrium metamorphic textures; kinetics of crystal growth; determination and rates of metamorphic reactions, relationship between metamorphism, deformation and geothermal gradient; variations of metamorphism through geological time; pressure-temperature-time relationships. Prerequisites: ESCI 201, 202. Three credits and laboratory. Not offered 2003-2004.

304 Sedimentary Petrology
Covers the description, classification and interpretation of sedimentary rocks using hand specimens and thin sections, introduction to the origin, geochemistry and diagenesis of sedimentary rock including siliciclastics, carbonates and other chemical sediments; organic matter in sediments; and sedimentary rocks as sources of or reservoirs for hydrocarbons, coal or other resources. Prerequisites: ESCI 201, 215. Three credits and laboratory. Not offered 2003-2004.

305 Geochemistry of Natural Waters [AR]
Covers geochemistry of natural waters and the interaction of elements in natural materials, aqueous and atmospheric geochemistry, global cycles, weathering processes, and natural redox reactions and stable isotope geochemistry. Application of thermodynamic principles to geochemistry. Prerequisites: CHEM 100 or 120; ESCI 100 or 170; or ESCI 171 and AQUA 100. Three credits and laboratory.

365 Geomorphology and Quaternary Geology
Covers landform processes and development; glaciation and glacial deposits; slopes and mass movements; drainage basin form and process; quaternary stratigraphy and paleoecology. Prerequisite: ESCI 170. Three credits and laboratory. Not offered 2003-2004.

366 Hydrology [AR]
A study of natural freshwater cycling in watersheds. The course will focus on the processes controlling soil water, stream flow, lake circulation, groundwater flow and the exchange of water between these natural reservoirs and the atmosphere. Applications of chemical tracers to hydrology will be covered. Also included will be an introduction to aspects of human interaction with these systems, including flood hazards, water resource usage and contamination. Prerequisites: ESCI 100 or 170; or ESCI 171 and AQUA 100. Three credits and laboratory.

386 Oceanography [AR]
An introduction to the physical and chemical characteristics of the oceans; properties of ocean water; oceanic currents and circulation; waves and tides; physical and chemical marine resources. Prerequisites: ESCI 100 or 170, or ESCI 171 and AQUA 100, or permission of the instructor. Three credits and laboratory.

387 Coastal Oceanography [AR]
Topics include: major features and processes of coastal and near-shore environments, including methods of study; sediments, waves, beaches, tides, mudflats, marshes, estuaries, deltas, barrier islands; erosion, sedimentation; limestone coasts and reefs; environmental aspects of coastal development; sea-level changes, coastal erosion, sedimentation and pollution. Prerequisites: ESCI 100 or 170; ESCI171 and AQUA 100. Three credits and laboratory. Not offered 2003-2004.

406 Advanced Environmental Geochemistry [AR]
An in-depth study of aqueous and atmospheric chemical systems. Topics include: environmental pollution, and the causes, effects and control of contaminants in the environment. Prerequisite: ESCI 271, 305 or permission of the instructor. Three credits and laboratory. Not offered 2003-2004.

426 Ore Petrogenesis
Covers classification, petrology, ore mineralogy, and mode of occurrence of metalliferous mineral deposits. Laboratory stresses familiarity with the large and small-scale characteristics of mineral deposits and interpretation of the controls of ore formation. Prerequisites: ESCI 215, 301, 245; ESCI 302, concurrent if necessary. Three credits and laboratory.

435 Advanced Structure and Tectonics
Topics include: regional structures; mechanics of deformation; geometric analysis; practical interpretation of single and polyphase deformation; structural interpretations of ore zones; overview of tectonic processes and their relations to brittle and ductile deformation; tectonic principles and dynamics; tectonic elements, zones and terranes; the origin and development of orogenic belts; comparison of Phanerozoic, Proterozoic and Archean tectonics. Prerequisite: ESCI 245. Three credits and laboratory.

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. Explores the aspects of sedimentary rocks and sequences that control their potential as sources or reservoirs of hydrocarbons, coal and other resources. Prerequisites: ESCI 202, 215, 245. Three credits and laboratory.

455 Fossil Fuels
Explores advanced topics in the origin, classification and development of petroleum and coal resources. Covers exploration strategies, reserve estimation, hydrocarbon provinces worldwide. Includes a large seminar component. Prerequisites: ESCI 304, 446. Three credits. Not offered 2003-2004.

465 Hydrogeology [AR]
Covers the principles and applications of groundwater and groundwater flow, including Darcy's Law, steady-state and transient flow conditions, flow nets, aquifer testing and groundwater resource evaluation. The role of groundwater in the hydrologic cycle is explored, focusing on natural groundwater systems, their interaction with surface waters, and the physical processes controlling groundwater pollution. Prerequisites: ESCI 305; ESCI 366 or permission of the instructor; MATH 111, 112. Three credits and laboratory.

471 Geographic Information Systems
Geographic information systems are used to store, process and retrieve spatial data. Students will use this technology to analyze geographic data. Emphasis is placed on the nature of geographic information, and on methods of supporting geographic data representation, analysis and modeling. Topics include: the nature of spatial data; map projections and projection conversions; map coverage; spatial computing using overlay techniques; linking of other applications; and modeling in GIS. Prerequisites: INFO 130 or CSCI 235; MATH 111, 112 or 205 or permission of the instructor. Winter term. Cross-listed as INFO 374. Three credits.

472 Ocean-Atmosphere Interactions [AR]
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 behavior of large-scale ocean-atmosphere interactions. Prerequisites: ESCI 246, 271, 272; PHYS 100 or 120; MATH 111, 112. Three credits and laboratory.

475 Geophysics
An introduction to principles and classical applications concerning the physical properties of Earth materials. Topics on pure geophysics include inversion theory and applications, non-linear dynamics and time series analysis. Prerequisites: PHYS 100 or 120 (PHYS 120 is strongly recommended); MATH 111, 112. Three credits and laboratory.

476 Advanced Geological Field Methods
A seven-day field camp in an important geological area held in late summer in collaboration with Acadia University, followed by structural and petrographic analysis, seminars and report writing during the fall term. Prerequisites: ESCI 245, 275. Three credits and laboratory.

485 Advanced Paleontology
Covers advanced topics in evolution and extinction, paleoecology, biostratigraphy and/or micropaleontology. Large seminar, field and laboratory component. Prerequisite: ESCI 285. Three credits and laboratory. Not offered 2003-2004.

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
For advanced major and 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

501 Special Topics in Petrogenesis of Igneous Rocks
502 Special Topics in Petrogenesis of Metamorphic Rocks
506 Special Topics in Geochemistry
526 Special Topics in Ore Deposits
535 Special Topics in Tectonics
545 Special Topics in Structural Geology
546 Special Topics in Sedimentology and Basin Analysis
565 Special Topics in Hydrogeology
569 Advanced Quantitative Methods in Earth Sciences
571 Special Topics in Earth Systems Science I *
572 Special Topics in Earth Systems Science II
575 Special Topics in Geophysics
576 Field Research Methods in the Earth Sciences
585 Special Topics in Paleontology
586 Special Topics in Climatology
591 Research Methods in the Earth Sciences
599 Thesis

Additional courses are available depending on the requirements and interests of the student and the availability of faculty.
* In cooperation with the Centre for Geographic Sciences (COGS), Nova Scotia Community College. See the department chair for additional COGS courses that may be applicable to the graduate program.

7.14 ECONOMICS

J. Amoako-Tuffour, Ph.D.
S. Dodaro, Ph.D.
S. El-Sheikh, Ph.D.
M. Gerriets, Ph.D.
R. Martinez-Espiñeira, Ph.D.
B. Hebb, MA

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. Economics students can complete a minor in business administration.

Programs of study must be approved by the department chair. Program requirements are outlined below.

BA Major Program

See program regulations in section 4.2. Department requirements are:
a) ECON 100, 221, 251;
b) 24 credits ECON with 18 at the 300 or 400 level.
Other subjects and electives should be chosen in consultation with the department chair.

BA Advanced Major Program

See degree regulations in section 4.4 and 4.4.1. Degree requirements are:
a) ECON 100, 221, 222, 251, 252, 490;
b) 6 credits of calculus;
c) 12 credits ECON at the 300 or 400 level.
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, 221, 222, 231, 261, and six credits of BSAD electives.

BA Honours Program

See degree regulations in section 4.6. Degree requirements are:

a) ECON 100, 221, 222, 251, 252, 370, 490; 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. MATH 100 may not count as part of the honours concentration, but may be used as an elective.

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 4.6.1 and the relevant department regulations in section 7.* 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 Political Science
BA Honours in Economics and History
BA Honours in Economics and Mathematics and Computer Science

When economics is the primary subject, **not** the subsidiary subject, students are required to complete:

a) ECON 100, 221, 222, 251, 252, 370, 490;
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 100, 221, 222, 251, 252;
b) normally 18 credits of ECON electives with at least 6 credits at the 300 or 400 level;
c) ECON electives may include ECON 49 with approval of the department chair;
d) A course in quantitative methods (ECON 271; STAT 201, 224, 231 or ECON 370) is strongly recommended.

Additional requirements:

Honours in Economics with a subsidiary in History or in History with a Subsidiary in Economics

Normally the student will enroll in at least 9 credits from ECON 230, 310, 342, 350.

Honours in Economics with a subsidiary in Mathematics and Computer Science

Students must include ECON 412, 471 as ECON electives.

Honours in Mathematics and Computer Science with a subsidiary in Economics

ECON 412, 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 and Advanced Major

In conjunction with the Department of Business Administration, the Department of Economics offers joint honours and advanced major programs in business and economics. *See sections 4.4, 4.6 and 4.7 for degree regulations.*

B.Sc. Advanced Major in Economics

See degree regulations in section 5.3. Degree requirements are:

a) ECON 100, 221, 222, 251, 252, 370, 490;
b) 12 credits ECON electives, including 6 at the 300 or 400 level;
c) a minimum of 12 credits in MATH including 6 credits of calculus.
d) 18 credits of approved electives are normally taken in science subjects (12 credits must be beyond the 100 level);
e) PHIL 210 is recommended.

B.Sc. Honours in Economics

See degree regulations in section 5.6. Degree requirements are:

a) ECON 100, 221, 222, 251, 252, 370, 471, 411, 412, 490 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 six credits of calculus.
d) The 18 credits of approved electives are normally taken in science subjects (12 credits must be beyond the 100 level).

e) PHIL 210 is recommended.

Note: ECON 100 is a prerequisite for all other courses. Students lacking other prerequisites may request department approval to enroll in a course.

[AR] Indicates Designated Course in Aquatic Resources

100 Introductory Economics
An introduction to economic concepts and methodology, this course examines pressing problems and issues in the Canadian economy but of relevance to other economies as well. Students are introduced to alternate economic systems; the workings of the market; the theory of production and costs; the role of the government; the role of money; components of the national economy. Attention is paid to inflation, unemployment, international trade, price distortions, and to national policies, such as fiscal and monetary policy, trade policy, and the regulation of prices, that are put in place to deal with them. Six credits.

211 Local and Community Development Economics
Beginning with the notion of community and 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 key issues in the emergence and location of economic activity, and approaches to local and community economic development and planning. Three credits.

221 Intermediate Macroeconomics I
This is the first of two half-courses on intermediate macroeconomics. Students will examine the structure of, and behavior underlying, contemporary national economies with emphasis on the policies developed to gear them towards the public interest. This course focuses on the Keynesian and classical portrayals of the closed economy for explaining what determines national income, employment, unemployment, prices, inflation, and the interest rate. Three credits.

222 Intermediate Macroeconomics II
This sequel to ECON 221 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 behavior. Questions of unemployment, inflation, interest rates, the government budget, economic growth and macroeconomic policies are examined in their international setting. Prerequisite: ECON 221. Three credits.

230 Western Economic History
Examines the origin and nature of the modern economy by tracing the evolution of European and North American economies from the late 15th century to the present day. Six credits. Not offered 2003-2004.

241 Canadian Economic Policy and Problems [AR]
This course will analyze economic policy issues and questions in the Canadian economy from an economist's perspective. Students will investigate such topics as pollution, education, health care, globalization, dating and marriage, price controls, privatization, unemployment, poverty and welfare. Other topics will reflect student interest. Current events will also be discussed. Three credits.

251 Intermediate Microeconomic Theory I [AR]
An introduction to the basic concepts of modern 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.

252 Intermediate Microeconomic Theory II [AR]
An extension of ECON 251, this course covers price determination in monopoly, monopolistic competition, and oligopoly models. Factor pricing, capital investment over time, externalities, and public goods are discussed. The use of microeconomics as a tool in decision-making is illustrated. Prerequisite: ECON 251. Three credits.

271 Quantitative Methods in Economics
This course introduces students to some of the elementary quantitative methods used in the analysis of economic data. Topics include: basic types of economic data; graphical approaches to solving economic problems; linear and non-linear representations of economic behavior; models in economic analysis; index numbers; hypothesis testing, correlation, and linear regressions. In a weekly laboratory, students will use software (Excel, SHAZAM, TSP, SPSS) to analyze economic data. Prerequisite: permission of the instructor. Three credits. Not offered 2003-2004.

281 Environmental Economics [AR]
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: property rights; externalities; public goods; benefit-cost analysis; environmental valuation; policies for environmental regulation; ozone depletion; biodiversity; and sustainability. Students will apply economic

concepts to such environmental issues as air and water pollution; toxic and hazardous substances; waste disposal and recycling; the use of water and land. Three credits.

305 Economic Development I
Starting with an overview of the present state of the world, this course explores economic development; measurement problems; alternate, traditional, and new theories of growth; approaches to development; sustainable development; the industrial versus the agricultural sector; development planning; and the role of government. Credit may be earned for only one of ECON 300, 305. Three credits.

306 Economic Development II
This course deals with specific topics in economic development including: income distribution; population and human resources (covering both education and health); urbanization and rural-urban migration; labor markets and unemployment; gender issues; saving and taxation; foreign aid and transfer; the debt problem and structural adjustment; and new issues arising in the international economic environment. Recommended prerequisite: ECON 305. Credit may be earned for only one of ECON 300, 306. Three credits.

310 Canadian Economic History
A study of the Canadian economy from the time of the first European contact to the post-war period. Topics include: the forces which determined the timing and extent of settlement and development in regions of Canada; the role of tariff and transportation policy in shaping the Canadian economy; the response of the Canadian economy to the good times of the wheat boom period and the hardships caused by instability between the wars; the impact of foreign investment; and changing tariff and transportation policy in the post-war period. Six credits.

312 Industrial Organization
The general subject matter is the organization and operation of the enterprise sector of the Canadian economy. Regulation of business by government and the role of the crown corporation are discussed. Prerequisites: ECON 251, 252. Three credits.

320 Economic Systems
An analysis of the relationships among economic theory, the economy, politics and social institutions in the context of contemporary economic systems: capitalism, socialism, and communism. The course considers the emergence, evolution and malfunction of these systems in light of the experience of Japan, Sweden, Canada, the former Soviet Union, Poland and China. The recent experience of countries such as Poland and China in moving towards a market economy is critically assessed. Six credits.

330 Money, Banking and Financial Markets
A study of economic principles that can be used to analyze and explain how money, financial institutions and markets affect the functioning of an economy. Topics include: the necessity for and nature of money; the importance of the payment system; the fundamentals of interest rates; the role of households as financial managers; the economic role and operation of major financial institutions and markets; the causes and consequences of financial innovation; the demand for and supply of money; and the goals and process of monetary control. Six credits.

341 Regional Economics [AR]
A study of the economic theory used to analyze the distribution of economic activity across regions. The theory is applied to Canada with emphasis on regional disparities in the Atlantic provinces. The course also discusses the role of government policy in altering the distribution of economic activity across provinces. Three credits.

342 Maritime Economy [AR]
An overview of the historical and contemporary dimensions of the Maritime economy. The course first traces the development of the Maritime economy with emphasis on the evolution of regional disparities. It then examines the current economy and the economic and political forces that are now generating change. Three credits.

350 Schools of Political Economy
Economists such as Paul Samuelson, Milton Friedman, John Kenneth Galbraith and contemporary Marxists analyze the economy in strikingly different ways. This course explores the foundations of these streams of contemporary thought from the time of Adam Smith. Prerequisites: ECON 221, 251. Six credits.

361 Human Resources and Labor Economics
The course analyzes the essential elements of the labor market: labor demand and labor supply, and their interaction to determine wages, employment and unemployment. Topics include: fertility, education, regional wage disparities, income maintenance schemes, wage discrimination, the unemployment insurance program, unions and collective bargaining, and the distribution of wealth. Prerequisite: ECON 251. Three credits.

365 International Trade
This course deals with the theory of international trade and its policy implications. Topics include: the notion of comparative advantage; the gains from trade; the terms of trade; trade and growth; trade and economic development; commercial policy (including tariff and non-tariff barriers, effective protection, and trade liberalization); economic

integration (with emphasis on NAFTA and the EC); migration and trade in service; and intellectual property rights. Prerequisite: ECON 251. Three credits.

366 International Payments and Finance
Topics include: the balance of payments; the foreign exchange market and the exchange rate; the functions of the foreign exchange market; approaches to explaining the balance of payments (especially the monetary, elasticity and absorption approaches); open economy macroeconomics; fixed and flexible globalization of financial markets; capital flows and multinational corporations and the international monetary system. Prerequisites: ECON 221, 251; ECON 365 is recommended. Three credits.

370 Econometric Methods [AR]
An application of the scientific approach to economic and business phenomena for forecasting and policy design. Basic statistical concepts are developed for estimating and testing various economic models, including static and dynamic models, and recursive and simultaneous systems. Attention is devoted to model specification, multicollinearity, autocorrelation and cointegration, and heteroscedasticity. Prerequisites: MATH 111, 112 or permission of the instructor. Six credits. Offered 2003-2004 and in alternate years.

381 Natural Resource Economics [AR]
Examines the role of natural resource industries in the Canadian and world economies, including minerals and fossil fuels, forest resources, fish and game, and water resources. The course introduces students to the use of economic tools in analyzing resource issues. Topics include: welfare and inter-temporal issues involved in the use of resources; conservation of resources; ownership and property rights issues in resource use and management; resource taxation in Canada; and the nature of resource markets. Prerequisites: ECON 251; MATH 111. Three credits.

391 Public Finance I
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 251 or equivalent. Three credits.

392 Public Finance II
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 251 or equivalent. Three credits. Not offered 2003-2004.

411 Advanced Macroeconomics
An advanced treatment of macroeconomic theory and policy, including such unresolved issues as stabilization policies in a small open economy such as Canada. Prerequisites: ECON 222; MATH 111, 112; ECON 471 or permission of the instructor. Three credits. Offered in alternate years; not offered 2003-2004.

412 Advanced Microeconomics
An advanced treatment of microeconomic 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. Prerequisites: ECON 251, 252; MATH 111, 112 or ECON 471; or permission of the instructor. Three credits. Offered in alternate years; not offered 2003-2004.

471 Mathematical Economics
Introduces students to mathematical reasoning in economics and business, enabling them to understand current professional literature and to minimize math anxiety. The course covers standard techniques of mathematical economics, emphasizing the methodology of operations research. The techniques are applied to a range of economic and business problems, including: 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 111, 112 or permission of the instructor. Three credits. Offered in alternate years; not offered 2003-2004.

490 Seminar
Designed to integrate various areas of economic knowledge into the framework of evolving economic theories, policies and institutions, and to foster the application of economic principles to current economic issues. Topics are determined to some extent by the interests of students. Prerequisites: ECON 222, 252; permission of the instructor. Six credits.

491 Selected Topics I
Course content changes from year to year and may reflect faculty involvement in a specific area of research. Three credits.

492 Selected Topics II

The specific content of the course will change from year to year and may reflect faculty involvement in a specific area of research. Three credits.

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 or six credits.

7.15 EDUCATION

Full Time
I. Bernard, Ph.D.
P. Betts, Ph.D.
D.DeCoste, M.Ed.
J.Grant, Ed.D.
J. Greenlaw, Ph.D.
J. Huber, Ph.D.
A. Jones, M.Ed.
J. MacDonald, M.Ed.
L. MacDonald, Ph.D.
R. Macmillan, Ph.D.
M. Mahody, M.Ed.
M. Meyer, Ph.D.
A. Murray-Orr, M.Ed.
S. Northfield, M.Ed.
M.Olson, Ph.D.
J. Orr, Ph.D.
D. Pushor, Ph.D.
A. Sherman, Ph.D.
J. Tompkins, M.Ed.

Part Time
G. Barker, M.Ed.
B. Campbell, MFA
R. Curtis, Ph.D.
I. Donovan, B.Ed.
A. Hawley, M.Ed.
F. MacCormack, M.Ed.
C. MacNeil, MAS
J. Meikle, M.Ed.

See section 4.12 for B.Ed. regulations and section 6 for M.Ed. and MAT regulations. Candidates are required to complete all of the courses shown below for the elementary or secondary division.

Elementary
Year 1 (E1) EDUC 411, 412, 413, 431, 433, 435, 470; 6 credits EDUC electives
Year 2 (E2) EDUC 414, 415, 416, 417, 434, 436, 468, 480; 3 credits EDUC elective
All elementary program students are required to take one of the following in their elective complement: EDUC 456, 457, 458, 469 (Drama), or 469 (Film and Media Arts). For elementary students specializing in French, one of the esthetics electives listed above will replace EDUC 415.

Secondary
Year 1 (S1) EDUC 432, 433, 435, 470; one of EDUC 421 to 428; 6 credits EDUC electives
Year 2 (S2) EDUC 434, 436, 438, 440, 480; a second curriculum and instruction course chosen from EDUC 421 to 428; 6 credits EDUC electives.

Mi'kmaq Focus
In addition to the elementary and secondary divisions, a focus on Mi'kmaq language can be achieved by earning credit for EDUC 453, 454, 455 and one of EDUC 411, 451 or 452. Students pursuing a Mi'kmaq culture focus must also complete EDUC 424.

Physical Education Specialization

A student in the elementary and secondary stream 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 457 in the fall of year one, EDUC 425A in the winter of year one, EDUC 444 in the fall of year two, and EDUC 425B in the winter of year two.

Curriculum and Instruction Courses:

411 (E1) Curriculum and Instruction in the Language Arts I
This course is designed to prepare prospective elementary teachers to teach the language arts: reading, writing, speaking, listening, and viewing. Also included is whole language 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. Three credits.

412 (E1) Curriculum and Instruction in Mathematics
This course includes an examination of the elementary school mathematics program, and of various approaches to teaching mathematics to children, with emphasis on converting these approaches into teaching strategies. Three credits.

413 (E1) Curriculum and Instruction in Science
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 (E2) Curriculum and Instruction in Language Arts II
This course is a continuation of Language Arts I. Three credits.

415 (E2) Integration of Elementary School Math and Science
This course provides an understanding of the content of elementary school math and science, and of the potential for the integration of math and science with other subject areas, and the development of a rationale and strategies for teaching through an integrated approach. Three credits.

416 (E2) Curriculum and Instruction in Social Studies
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.

417 (E2) Diverse Cultures
This course will provide students with an overview of the cultural diversity in Canadian schools and with strategies to enhance their understanding of cultural and linguistic diversity. Three credits.

421 to 428 (S1 and S2) Curriculum and Instruction in Secondary Education
Curricular and instructional concepts will be described, demonstrated, evaluated, and applied in relation to eight areas of the school curriculum:

421 English	425 physical education
422 social studies	426 music
423 mathematics	427 science
424 diverse cultures	428 French

Students 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 teachable areas of study. Each course is six credits.

Other Required Courses:

431 (E1) Principles and Practices of Elementary Education
This course emphasizes curriculum and instructional theories as they relate to the process of becoming an elementary school teacher. Topics include the role of the teacher, effective teaching strategies, lesson planning, reflective practice and classroom environment. Three credits.

432 (S1) Principles and Practices of Secondary Education
This course emphasizes the curriculum and instructional theories as they relate to the process of becoming a secondary school teacher. Topics include perspectives from educational psychology, administrative theory, curriculum theory, and instructional theory through an examination of the practice of teaching. Six credits.

433 (E1 and S1) Sociology of Education
This course will examine the social context of education in Canada. Particular emphasis will be given to contemporary structures. The relationships between educational opportunity and conditions of inequality resulting from the major societal institutions will be investigated. Three credits.

434 (E2 and S2) Philosophy and History of Education
This course examines broad philosophical and historical underpinnings of Canadian schools today and their effect on educational practice. Three credits.

435 (E1 and S1) Curriculum Planning and Instructional Strategies for the Inclusive Classroom I
This course focuses on the developing an understanding of the nature and characteristics of exceptional learners; as well as the history and development of services for children and adolescents with exceptionalities in Canadian schools. This is supported by an examination of the processes, policies and procedures collaboratively developed to support exceptional learners in the context of Nova Scotia educational settings. Three credits.

436 (E2 and S2) Curriculum Planning and Instructional Strategies for the Inclusive Classroom II
This course focuses on learning to make instruction and curriculum accessible for learners with exceptionalities in regular classrooms. Models will be presented to guide differentiated instruction. Inherent in such models are changes in content, process, product and specific learning strategies to meet the needs of exceptional learners in ways that are mindful of all learners. Emphasis will be placed on the collaborative development, implementation and evaluation of individual educational plans. Three credits.

438 (S2) Assessment of Learning
The course explores issues surrounding the assessment 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
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 and viewing) to develop their knowledge and skill of the application of these concepts when teaching in the content areas. Three credits.

Electives:

200 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. Six credits.

437 (S2) Guidance
This course focuses on the development of knowledge of interpersonal relationships and interpersonal skills required by the classroom teacher in providing guidance for his/her students. Basic principles and practices of guidance will be emphasized. Three credits.

442 Drama Applications K-12
This course is designed to provide pre-service, K-12 teachers with concepts and ideas of drama lesson plans for general or subject-specific applications; various 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.

444Outdoor Experiential Education
Students will learn strategies to encourage their pupils to achieve, appreciate, and maintain a physically active lifestyle in the outdoors, and to develop outdoor physical education programs that foster a life-long commitment to physical recreational activity that is enjoyable, challenging, and allows for self-expression and positive social interaction. Subject to final approval of the University Senate. Three credits.

446Instruction in Resource-Based Learning
Students will learn instructional methods for actively engaging students in the process of locating, managing, analyzing, organizing, adapting, evaluating and sharing information using a variety of resources and technologies. The course is intended to help pre-service teachers promote student independence, to empower them to learn in ways according to their multiple intelligences, preferred learning styles and other ways of knowing. Students learn to recognize that learning is multidimensional and continual. Subject to final approval of the University Senate. Three credits.

451 The Teaching of Writing
Familiarizes students with different theories and their implications for the teaching of writing. The course will emphasize the process approach to writing and provide students with an understanding of each stage and guidelines for its evaluation and promotion. The course will integrate theory and practice through writing assignments, evaluation of actual written samples, and development of grammar mini-lessons. Three credits.

452 The Teaching of Reading

Provides students with an understanding of current theories on the reading process concerning word recognition and reading comprehension, and their implications for teaching reading. During the course students will examine research on the development of reading skills and will acquire background knowledge in different areas of reading difficulty and ways of assessing them. The course will provide students with an opportunity to integrate theory and practice in a field-related practicum. Three credits.

453 English as a Second Language Methods
Provides student teachers with a thorough understanding of the theoretical and methodological aspects of learning and teaching a second language, focusing specifically on the learning/teaching of English (ESL). During the course students will familiarize themselves with the relevant research and will examine the prevalent theories in different ESL areas. Three credits.

454 Mi'kmaq Language Arts I
This course will focus on language acquisition theories and methodologies that support these theories. Students will examine current approaches to bilingual language learning with specific attention to reclaiming and revitalization of aboriginal languages. Emphases of this course include early literacy strategies linked to oral traditions, immersion strategies, and strategies that promote both oral and written use of the language. Students will be introduced to the different writing systems used by Mi'kmaq over time including the Smith-Francis orthography. Three credits.

455 Mi'kmaq 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 regarding 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 the seven content strands of elementary physical education, and to investigate how these content areas may be integrated with the teaching of other subjects in the elementary school curriculum. 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 various methodologies that reflect these theories. Students 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. The course emphasizes the theoretical foundations of teaching a second language. Three credits.

460 French Education II
This course combines theories of language acquisition with their practical application in the second language classroom. Specific topics include: unit planning and implementation; materials and lesson plan development in the four skill areas; cooperative 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
This course provides opportunities to develop a basic understanding of 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.

463 Elementary Assessment
In this course the limitation of traditional assessment approaches, and the premises underlying alternative assessments will be explored. Students will develop skills in using various types of authentic assessment approaches in classrooms. Three credits.

464 Environmental Education

Through this course students will be able to 1) understand that sensible practice and long-term solutions to various environmental problems require well-designed environmental education programs; 2) develop a conceptual framework and practical strategies for the development of an environmental education curriculum for grades K-12. Three credits.

465 School Law
This course provides students with a basic understanding of the Education Act, the Charter of Rights and Freedoms, other laws affecting education, teachers' contracts, and the impact all of these have on classroom practice. Three credits.

466 Foundations of Adult Education
This course will provide an historical and philosophical overview to set the stage for two basic concepts: adult learning and program planning. The course will then focus on these two dimensions and integrate ideas by means of practical application. Three credits.

467 Computers in Education
This course will cover applications of computers in education. Students will use email and browsers to access the Internet and the World Wide Web. Students will join several listserves in education and their fields of interest, and learn how to use computers to complement their teaching. A course in computer literacy and/or demonstrated knowledge of computers is normally required as a prerequisite. Three credits.

468 Teaching Mathematics in Middle Schools
Students will investigate the issues of process, content, and assessment in middle school mathematics. They will be actively making connections, communicating and reasoning mathematically and doing problems. Students will explore strategies for the development of conceptual understanding through multiple representations. Three credits.

469 Selected Topics in Education
This course provides students an opportunity to explore in detail current topics and issues in education. The specific content of the course will vary from year to year. 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 that is not available through other course offerings. See section 3.5. Three credits.

Internship:

470 (E1 and S1) Internship I
Students are placed in schools for 11 weeks of supervised practice teaching. Six credits.

480 (E2 and S2) Internship II
Students are placed in schools for 11 weeks of supervised practice teaching. Six credits.

GRADUATE COURSES

Master of Education
The requirements of the M.Ed.are given in section 6.

501 Program Evaluation
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 emphasizes reading and understanding a variety of types of 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. Three credits.

507 Qualitative Research Methods in Education
This course explores current qualitative methodologies used in educational contexts. It focuses on developing an understanding of methodologies such as phenomenology, ethnography, critical theory, narrative, and action research. Students will explore the components of a research proposal. Three credits.

513 Problems and Issues in Special Education
Current theories and practices in the education of children with special needs from pre-school through adolescence are considered. Research relevant to assessment, instruction, counseling and vocational programming practices is criticized. Proposals to modify program models are included. Three credits.

514 Children with Learning Difficulties I
This course presents an overview of the historical and philosophical approaches to teaching children with learning difficulties for the regular classroom teacher. Students will examine the learning difficulties children bring to the classroom. Three credits.

517 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. An analysis of the effectiveness of various approaches will be undertaken. 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:

520A English language arts
520B French
520C Mathematics
520D Diverse cultures
520E Science
520F Social studies
520G Physical education

Three credits each.

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:

521A English language arts
521B French
521C Mathematics
521D Diverse cultures
521E Science
521F Social studies
521G Physical education

Three credits each.

527 Principles of Learning
This course examines theories of learning and development and their implications for instruction. In addition to the general cognitive and behaviorist theories, the course will focus on the aspects of cognitive learning that are relevant to understanding learning difficulties. Three credits.

529 School and Teaching Effectiveness
An examination of the research on school and teaching effectiveness and the implications of this research for school improvement. Three credits.

532 Curriculum Theory
In this course the ideas of major curriculum theorists will be examined. The implications of each position for program development for schooling will be probed. Three credits.

533 Dynamics of Change
The course will examine the major concepts related to the successful implementation of change. The intent of this overview is to assist students in recognizing and understanding how change impacts the process of schooling. Three credits.

534 Introduction to the Foundations of Education
Students are asked to examine critically 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.

536 Program Development
Diverse theoretical bases for program development will be probed. Emphasis will be on action research as a process for program development. Three credits.

537 Philosophical Foundation of Curriculum
The objective of this course is to demonstrate that determining criteria and principles for the inclusion of subjects and modes of inquiry in the curricula of educational institutions is a philosophical task. Three credits.

538 Nature of the Reading Process
This course will examine and criticize theoretical models related to our understanding of the reading process, and will explore the contribution of the science of linguistics to the development of reading theory. Three credits.

540 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 within 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 specifically related to the roles, responsibilities, tasks, and duties of administrators in band-controlled schools. Three credits.

543 Internship
This course provides students with the opportunity for field-based experiences under the direction of a faculty member. It is intended to develop both practical and theoretical understanding and competence in a particular area of education. Three credits.

544 Cross-Cultural Issues in Education
This course engages students in the examination of issues and theories related to cultural and race relations policies and practices at all levels of the education system. Theories and ideas that have recently been voiced by various individuals and groups in this field of educational discourse will be included. 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. It will provide students with an opportunity to familiarize themselves with the relevant research and to examine the prevalent theories in different ESL areas. Three credits.

553 Psycho-Educational Assessment I
This course will review trends and practices in assessment. Additionally, critical appraisal of various types of assessment, both standardized and informal, will be undertaken. Special attention will be paid to characteristics, areas of usefulness and limitations. Three credits.

554 Psycho-Educational Assessment II
Students will learn to administer various assessments and to develop approaches to assessment in selected case studies. Administration, interpretation, and communication of assessment results will be emphasized. 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 significance to 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. Specific course content will vary from year to year. Three credits.

571 Specific Problems in School Administration
This course examines recurring and emerging problems in educational administration from the perspective of their theoretical roots. Throughout the course, students will be required to construct problems identified in the literature and in their own practice, to develop an understanding of the issues involved, to examine the theoretical assumptions influencing these problems, and to create alternative solution strategies. Three credits.

573 Professional Development and Supervision
This course addresses the role of supervision in the provision of an effective instructional program within the educational system. It focuses on human resources and the professional development process for instructional and support staff. Three credits.

575 Computers in Education

This course will provide an overview of the role of computers in education. It will explore ways of providing computer services to schools, appropriate computer curricula including computer literacy, computer science, and Internet use. Local computer coordination and management will also be explored. Three credits.

576 Specific Problems in Curriculum Development
This course will examine selected contemporary educational controversies and explore their implications for curriculum decision-making. Students will develop and critically examine current issues and problems. 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 policy construction and planning for 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.

7.16 ENGINEERING

Full Time
F. Comeau, M.A.Sc., P.Eng.
E.C. Oguejiofor, Ph.D., P.Eng.
W.R. Quinn, Ph.D., P.Eng.

Part Time
P. Doiron, P.Eng,
H. Spekkens, Ph.D.
M.E. Walsh, M.Eng., P.Eng.

Program requirements are found in section 5.11. Students must follow the program outlined below:

Year 1 CHEM 120; ENGR 121, 122, 133, 136; PHYS 120; CSCI 125; 6 credits of a writing course, normally taken from ART (history), CELT (literature or culture), ECON, ENGL, HIST, PHIL, PSCI, RELS, or SOCI/ANTH

Year 2 ENGR 221, 224, 237, 242; up to 24 credits of ENGR discipline-specific courses (see below); and up to 6 credits humanities normally from CATH, CLAS, CELT, (literature or culture), ENGL, HIST, PHIL, RELS, or language courses beyond the language acquisition level

Discipline-specific courses and elective requirements are as follow:

Biosystems	ENGR 231, 234, 235, 244; BIOL 111, 112; CHEM 221; 3 credits humanities elective
Chemical	ENGR 222, 223, 227, 233, 234, 244; CHEM 221; 3 credits humanities elective
Civil	ENGR 222, 223, 231, 233, 234, 235, 244; ESCI 216
Electrical and Computer	ENGR 222, 223, 233, 238, 244, 245, 246, 248
Environmental	ENGR 234, 244; BIOL 111, 112; CHEM 221; ESCI 170; 3 credits humanities elective
Industrial	ENGR 222, 223, 231 or 234, 233, 235, 236, 244; 3 credits humanities elective

Mechanical	ENGR 222, 231, 233, 234, 235, 236; 6 credits humanities electives
Metallurgical	ENGR 222, 223, 231 or 236, 233, 234, 235, 244; 3 credits humanities elective
Mining	ENGR 222, 223, 231, 233, 234, 235, 236, 244

Humanities electives may be taken in the following departments or programs: Catholic studies, classical studies, Celtic studies, English, history, philosophy, and religious studies.

121 Calculus I for Engineers
This course contains 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. Cross-listed as MATH 121. Three credits and 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 coordinates; sequences and series and Taylor series. Cross-listed as MATH 122. Three credits and problem session.

133 Engineering Design and Graphics I
Designed to introduce graphics as a fundamental tool in the engineering design process, to orient and motivate students by introducing them to real engineering situations and to develop skills in engineering drawing. Three credits and problem session.

136 Statics
Covers statics of particles and rigid bodies. Designed to teach the principles and application of mechanics, and also to develop an analytic approach to solving problems. Vector analysis is used extensively. Three credits and problem session.

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; power series solutions; Laplace transforms; periodic functions; applications of Laplace transforms to linear systems; Fourier series. Cross-listed as MATH 221. Prerequisites: ENGR 121, 122. Three credits and problem session.

222 Calculus III for Engineers
Extends the ideas introduced in MATH 121 to the calculus of several variables. It covers space curves, arclength, curvature; functions of several variables; 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; the divergence theorem and applications to heat flow, electrostatics and fluid flow. Cross-listed as MATH 222. Prerequisites: ENGR 121, 122. Three credits and 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. Cross-listed as MATH 223. Prerequisites: ENGR 121, 122. Three credits and 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; an introduction to linear regression; and time series analysis. Engineering applications are emphasized and statistical computer packages are used extensively. Cross-listed as STAT 224. Three credits and problem session.

227 Fundamentals of Chemical Engineering
Deals with mass and energy balances for reacting and non-reacting chemical processes. Covers 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 problem session.

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. Prerequisite: ENGR 136. Three credits and problem session.

233 Thermodynamics
Introduces the first and second laws of thermodynamics and shows how these laws are applied to the solution of engineering problems. Covers basic concepts of thermodynamics; properties of pure substances; first law of thermodynamics and its application to non-flow and steady and unsteady flow processes; entropy; second law of thermodynamics and its application to non-flow and steady and unsteady flow processes; irreversibility; availability; vapor and combined cycles. Three credits and problem session.

234 Fluid Mechanics
Study of the statics and dynamics of incompressible fluids. Describes fundamental fluid properties; fluid statics; kinematics and kinetics of ideal and real fluids; continuity, momentum and energy equations; a study of similitude and dimensional analysis; boundary layer concept; flow in pipes. Three credits and problem session.

235 Strength of Materials
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 problem session.

236 Engineering Design and Graphics II
The primary focus of this course, which is project-based, is developing the ability to carry out an engineering design. The different stages of the design process are introduced and discussed. The graphical presentation of data and some graphical analytic techniques are covered. Elementary project management concepts are introduced and used in developing a schedule for the design projects that are carried out to completion. Prerequisites: ENGR 133, 136, 231, 235; CSCI 125. Three credits and design session.

237 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 PHYS 221. Three credits and laboratory.

238 Digital Logic
This hands-on, practical course introduces digital electronics with applications to computer hardware and microcomputer peripherals. Topics include: the families of digital electronic technology; combinational and sequential logic; digital device characteristics; microcomputer interfacing; data acquisition; instrument control; and data transmission. The laboratory gives students an opportunity to design and test practical digital devices. Cross-listed as PHYS 223. Three credits and laboratory.

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 problem session.

244 Technical Communications
This course covers methods of producing engineering documents and presentations. Students will learn skills related to finding, using, and documenting engineering information sources. Three credits.

245 Data Structures and Numerical Methods
The goal of this course is to introduce the student to system analysis and software techniques. Objects, stacks, queues, multiple linked lists, searching and sorting algorithms, and their implementation in the C++ programming language are covered. Linear algebra and numerical methods are applied to engineering examples to facilitate the implementation of properly structured solutions. Prerequisites: ENGR 121, 122; CSCI 125. Three credits and problem session.

246 Circuit Analysis
Advanced circuit analysis techniques, starting with sinusoidal excitation, are covered. The concepts of phasors and complex impedance are fully developed. Mutual inductance and magnetically coupled coils are used to introduce transformer behavior and performance. Real and reactive power flow is covered prior to the introduction of balanced three-phase circuits for power distribution. Symmetrical components are introduced as a means of dealing with unbalanced networks. The concepts of grounding and harmonics are also introduced. Three credits and laboratory.

248 Electrical Engineering Design I
This course, which is project-based, introduces design methodology in electrical engineering. Topics covered include: design overview, problem decomposition, solving and planning, decision support techniques, uncertainty and time

management analysis and synthesis for implementation, technical design, design evaluation, prototype construction, troubleshooting, project communication. Prerequisites: ENGR 133, 237, 238; CSCI 125. Three credits and design session.

7.17 ENGLISH

Full Time

P.A. Black, Ph.D.
J. Boulter, Ph.D.
J. Lynes, Ph.D.
P.A. Marquis, Ph.D.
M.B. McGillivray, Ph.D.
P. Milner, Ph.D.
M.A. Moynagh, Ph.D.
R.A. Nemesvari, Ph.D.
D. Smith, Ph.D.
H. Spekkens, Ph.D.
J.O. Taylor, Ph.D.
S. Vint, Ph.D.
E. Wilputte, Ph.D.
D. Wood, MA, B.Litt.

Part Time

J. Strickler, MA

English courses are organized into six distinctive categories.

Medieval Literature

206 World Masterpieces I: Classical Antiquity
207 World Masterpieces II: Medieval and Renaissance
273 Linguistics
274 History of the English Language
373 Old English Language
374 Middle English Language
390 Chaucer
392 Medieval Literature
490 Seminar on Chaucer

Renaissance Literature

304 The Early Tudor and Elizabethan Renaissance
305 The Later Elizabethan Renaissance
310 Culture, Power, and Politics in 16th-Century English Literature
312 17th-Century Literature
340 Shakespeare
408 Seminar on Jacobean Drama
412 Seminar on 17th-Century Literature
440 Seminar on Shakespeare
480 Seminar on Spenser and Milton

18th-Century Literature

344 American Literature to1900
355 Restoration and 18th-Century Drama and Prose
356 18th-Century Novel and Poetry
460 Seminar on 18th-Century Literature

19th-Century Literature

270 The Romantic Gothic
271 Gothic Fiction

303 A Survey of Irish Literature from Its Beginnings to the Present
370 English Romantic Literature
371 Victorian Literature, 1832-1867
372 Victorian Literature, 1867-1901
377 19th-Century Fiction
444 Seminar on 19th-Century American Literature
470 Seminar on Romantic Literature
477 Seminar on Victorian Literature
483 Oscar Wilde
484 Esthetes and Decadents of the 1890s

Modern Literature

201 Science Fiction and Fantasy
209 Narrative in Fiction and Film
229 Women in English Literature
234 Children's Literature: 1865 to the Present
247 Post-Colonial Literature in English
250 Survey of 20th-Century Literature in English
317 Cultural Theory Through Popular Culture
320 Modern Poetry
329 Studies in Women Writers: Feminisms and Their Literatures
330 Studies in Women Writers: Genres, Cultures, and Contexts
347 African-Canadian Literature
350 Modern British Fiction
376 Modern American Fiction
380 Modern Drama
404 Seminar on Modern Anglo-Irish Fiction
420 Seminar on Modern Poetry
445 Seminar on Contemporary Critical Theory
450 Seminar: After Beckett
476 Seminar on Modern American Fiction

Canadian Literature

265 Canadian Poetry and Prose
347 African-Canadian Literature
367 The Canadian Novel
368 Canadian Poetry
467 Seminar on Canadian Poetry: The Poet in Atlantic Canada

Creative Writing

221 Introduction to Journalistic Writing
222 Creative Non-fiction/Memoir
231 Introduction to Creative Writing
331 Intermediate Creative Writing
431 Advanced Creative Writing

Note: Creative writing courses count towards the modern requirements.

Department Requirements

ENGL 100 or equivalent is required for entrance to all other ENGL courses.

A student should have ENGL 100 plus at least six credits at the 200 level before taking a course at the 300 level. Some exceptions apply; see course descriptions. A student must have at least 18 credits of ENGL for admission to a 400-level course.

All students seeking admission to Honours and Advanced Major programs must consult the department chair by March 31 of the second year to obtain approval for proposed course patterns, and again in March of the junior year for advice on thesis and senior seminar requirements. All such consultations will normally be completed by March 31.

Major Program

Students majoring in English must take the following courses: ENGL 100; six credits medieval or Renaissance; six credits 18th or 19th century; six credits modern or Canadian; and 12 credits ENGL electives. Major students will normally complete at least 12 credits of 200-level courses before enrolling in a 300- or 400-level course. All prospective majors should attend an advising session normally held in March.

Advanced Major Program

Advanced majors in English will take the following courses: ENGL 100, 340; a senior seminar; and 18 credits ENGL electives to include courses from three of the following categories: medieval, Renaissance, Restoration and 18th century, 19th century, and modern or Canadian. They must also write an advanced major thesis. *See section 4.4 for degree regulations.*

Honours Program

Students in the honours program in English take the following courses: ENGL 100, 340; six credits medieval literature or language; six credits 18th century; six credits 19th century; six credits in modern literature; one seminar in critical theory; nine credits ENGL electives; and a senior seminar. An honours thesis is also required (three credits). *See section 4.6 for degree regulations.*

Honours with a Subsidiary Subject

The Department of English offers an honours degree with a subsidiary subject with Celtic studies, history, modern languages, philosophy, or religious studies. *The program requirements and the course pattern are described in section 4.6.1*.

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. Only senior advanced major and honours students may enroll in senior seminars.

Note: Not all 400-level seminars are senior seminars.

100 Introductory Survey of Literature in English
A study in its historical context of literature written in English from the beginnings to 1900. Six credits.

Note: ENGL 100 or equivalent is required for entrance to all other ENGL courses.

201 Science Fiction and Fantasy
A study of the literatures of science fiction and fantasy, this course will concentrate on particular genres, themes, or authors in order to provide a focused examination of speculative literature. In 2003-2004 the class will study the work of J.R.R. Tolkien. Three credits.

203 A Survey of Anglo-Irish Literature to the Irish Renaissance of 1922
A survey of Anglo-Irish literature, poetry, drama and fiction from the 18th century to 1922 with units on Irish mythology, history, and folklore. Six credits. Not offered 2003-2004.

206World Masterpieces I: Classical Antiquity
An introduction to masterpieces in western literature, in translation, focused on ancient Greece and Rome, especially the epics of Homer and Virgil, Greek tragedy, and selections from Catullus, Horace and Ovid. Three credits.

207 World Masterpieces II: Medieval and Renaissance
An introduction to masterpieces in western literature, in translation, focused on medieval and Renaissance/early modern Europe. It will begin with the New Testament Bible and then explore authors and great works of Christian Europe, including *The Song of Roland*, *The Romance of the Rose*, Dante Alighieri, Ludovico Ariosto, and Miguel de Cervantes. Three credits.

209 (306) Narrative in Fiction and Film
This course examines the grammar and esthetics of movies, as well as their sociology and social history. It looks at the technical and esthetic demands of movies, and the changes that result from translating books into film. It examines the history and growth of Hollywood and the entertainment industry, techniques of movie production, the struggle for control of movies and audiences, the star system, censorship, and Canadian achievements in film. Six credits.

221Introduction to Journalistic Writing
This course will provide the student with background and experience in journalism. Students will learn the craft of writing news stories, feature stories, opinion pieces, and personal opinion columns. It will also introduce students to off- and on-line research techniques and on- and off-line publication. The emphasis will be on developing basic journalistic writing skills. Subject to final approval of the University Senate. Three credits.

222 Creative Non-Fiction/Memoir
This course will help students acquire the techniques and tools necessary to write creative non-fiction. This involves techniques of dialogue, character development, narration, and style similar to those employed by writers of fiction, though the result is non-fiction. Subject to final approval of the University Senate. Three credits.

229 Women in English Literature
A survey of women writers in their historical contexts. The course will involve study and discussion of poems, stories, novels, plays, and other literary forms by or about women. Cross-listed as WMNS 229. Six credits.

231 (333) Introduction to Creative Writing
This course teaches students how to write creatively in all genres (poetry, drama, prose, creative non-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. Prerequisite: ENGL 100 and portfolio demonstrating writing skills. Six credits.

234 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 include Carroll, L.M. Montgomery, E.B. White, Roald Dahl, Maurice Sendak, Judy Blume, Kevin Major, Dennis Lee, and Sheree Fitch. Six credits

247 Post-Colonial Literature
An introduction to post-colonial literature. The course may include literature from Africa, the Americas, Australia, the Caribbean, India, and the Pacific. Six credits.

250 Survey of 20th-Century Literature in English
A study of the poetry and fiction of major American, Canadian, British, and European writers. Six credits.

265 Canadian Poetry and Prose
A wide-ranging survey of writers mainly of the 19th and 20th centuries. This course begins with exploration narratives and continues to the present day. Authors may include: Sir Charles G.D. Roberts, Bliss Carman, Thomas Chandler Haliburton, E.J. Pratt, Alice Munro, Margaret Laurence, Margaret Atwood. Six credits. Not offered 2003-2004.

270 The Romantic Gothic: 19th-Century Poetry and Short Fiction
A study of gothic literature in its historical and philosophical context, this course will explore 19th-century short stories and narrative poems, as well as influential 18th-century literary sources. Authors may include: William Wordsworth, Samuel Taylor Coleridge, John Keats, Lord Byron, and Joanna Baillie. Three credits.

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*. Three credits.

273 Linguistics
An introduction to the study of human communication, attitudes towards language, and the phenomenon of linguistic change. Cross-listed as CELT 273 and as the first half of ANTH 355. Three credits.

274 History of the English Language
Examines the history and development of the English language. Cross-listed as CELT 274. Three credits.

Note: A student should have ENGL 100 plus at least six credits at the 200 level before taking a course at the 300 level. Some exceptions apply; see course descriptions.

303 A Survey of Irish Literature from Its Beginnings to the Present
An immersion program in Irish literature and culture, including film. Prerequisite: 12 credits ENGL. Six credits. Not offered 2003-2004.

304 The Early Tudor and Elizabethan Renaissance
A study of plays by Thomas Kyd and Christopher Marlowe and the major non-dramatic forms in the context of early modern ideologies and ideas. Concentration on William Shakespeare (excluding drama), Edmund Spenser, the lyric, the Ovidian epyllion and literary theory. Three credits. Not offered 2003-2004.

305 The Later Elizabethan Renaissance
A study of plays by Ben Jonson and Cyril Tourneur and of major non-dramatic forms in the late Elizabethan and early Jacobean period in the context of early modern ideologies and literary theory. Concentration on William Shakespeare's and other sonnets, Sir Philip Sidney, Edmund Spenser and Francis Bacon. Recommended prerequisite: ENGL 304. Three credits. Not offered 2003-2004.

310 Culture, Power, and Politics in 16th-Centur yEnglish Literature
A study of the relations between literary form and social energy in a period that gave rise to the major genres, including poetic anthologies, novels, epic poems, prose romances, and theatrical dramas. Works will include Castiglione's *The Courtier*, Sir Philip Sidney's *Old Arcadia*, Edmund Spenser's *Faerie Queene*, Thomas Nashe's *The Unfortunate Traveler*, William Shakespeare's *The Rape of Lucrece*, and John Donne's *Songs and Sonnets*. Prerequisite: 12 credits ENGL. Six credits. Not offered 2003-2004.

312 17th-Century Literature

A study of the Metaphysical poets, the Cavalier poets, John Milton's *Paradise Lost*, and the prose of Francis Bacon, John Donne, Robert Burton, Sir Thomas Browne, and Samuel Pepys. Several Jacobean plays will also be included. Prerequisite: 12 credits ENGL. Six credits.

317 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, movies and television with analyses of practicing cultural scholars. Prerequisite: 12 credits ENGL. Three credits. Not offered 2003-2004.

320 Modern Poetry
A survey of the major modern poets, including W.B.Yeats, T.S. Eliot, Gertrude Stein, Ezra Pound, Robert Frost, Wallace Stevens, Marianne Moore. Prerequisite: 12 credits ENGL. Six credits. Not offered 2003-2004.

329 Studies in Women Writers: Feminisms and Their Literatures
An introduction to feminist theories within historical, cultural, and philosophical contexts. An exploration of the relationship between feminist theories and literary texts that exemplify or extend them. Cross-listed as WMNS 329. Prerequisite: 12 credits ENGL. Three credits.

330 Studies in Women Writers: Genres, Cultures, and Contexts
An exploration of women's writing in its cultural context. The works studied may be determined by chronology, genre, theme, nationality, or a combination of all four. Cross-listed as WMNS 330. Prerequisite: 12 credits ENGL. Three credits. Not offered 2003-2004.

331 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 233. Subject to final approval of the University Senate. Six credits.

340 Shakespeare
An introduction to the work of William Shakespeare: poems, comedies, histories, problem plays, tragedies, Roman plays and late romances in their social, historical and literary contexts. Six credits.

344 American Literature to 1900
Emphasizing the major Puritan and transcendentalist writers, this course also examines slave narratives, pioneer journals, Indian captivity narratives, and political documents of the United States between 1620 and 1900. Prerequisite: 12 credits ENGL. Six credits. Not offered 2003-2004.

347 African-Canadian Literature
A study of African-Canadian prose, poetry, and drama in the context of contemporary literary-critical debates about canons, national literatures, voice and cross-cultural influences. Particular attention will be given to African-Nova Scotian contributions. Prerequisite: 12 credits ENGL. Three credits.

350 Modern British Fiction
Examines major British novelists of the modern and post-modern periods with emphasis on Joseph Conrad, E.M. Forster, Virginia Woolf, and Samuel Beckett. Prerequisite: 12 credits ENGL. Six credits.

355 Restoration and 18th-Century Drama and Prose
A study of several major plays and selected prose works from 1660 to the mid 18th century. Prerequisite: 12 credits ENGL. Three credits.

356 18th-Century Novel and Poetry
A study of selected novels and poetry from the major writers of the 'long' 18th century. Prerequisite: 12 credits ENGL. Three credits.

367 The Canadian Novel
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. Prerequisite: 12 credits ENGL. 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: 12 credits ENGL. Six credits.

370 English Romantic Literature
A detailed survey of the literature of the major Romantic poets, this course emphasizes close readings of poetry and prose and the historical and philosophical contexts of the Romantic Movement. Prerequisite: 12 credits ENGL. Six credits.

371 Victorian Literature, 1832-1867
A study of early to mid-Victorian literature encompassing the poetry of Emily Brontë, Alfred Lord Tennyson, Elizabeth Barrett Browning, Robert Browning, and Matthew Arnold; the prose of Thomas Carlyle; and a novel by Charles Dickens or Charlotte Brontë. Prerequisite: 12 credits ENGL. Three credits.

372 Victorian Literature, 1867-1901
A study of middle- to late-Victorian literature encompassing the prose of John Ruskin and Walter Pater; the poetry of Christina Rossetti, Dante Gabriel Rossetti, Algernon Swinburne, and Oscar Wilde; and a novel by George Eliot or Thomas Hardy. Prerequisite: 12 credits ENGL. Three credits. Not offered 2003-2004.

373 Old English Language
A study of the Anglo-Saxon language. Works will be read in the original language. Three credits. Not offered 2003-2004.

374 Middle English Language
A study of the English language between 1000 and 1500 CE. Selections will be studied in the original language. Prerequisite: ENGL 373. Three credits. Not offered 2003-2004.

376 Modern American Fiction
Examines prose writings in the American tradition since 1900 and the major literary and cultural movements in which selected texts participate. Emphasis will be placed on historical development and the shifting definition of the American canon. Prerequisite: 12 credits ENGL. Six credits.

377 19th-Century Fiction
A study of 19th-century novels beginning with Jane Austen and working through the Victorian Age by exploring the fiction of such writers as Charlotte Brontë, Emily Brontë, Charles Dickens, and George Eliot, and concluding with transitional authors such as Thomas Hardy and Henry James. Prerequisite: 12 credits ENGL. Six credits. Not offered 2003-2004.

380 Modern Drama
A survey of modern drama from Georg Buchner to Samuel Beckett. The plays are studied not as scripts but as performed. Prerequisite: 12 credits ENGL. Six credits. Not offered 2003-2004.

390 Chaucer
This course explores the major poetry and prose of this seminal figure in English literature. Six credits. Not offered 2003-2004.

392 Medieval Literature
Examines the finest authors and works in Middle English, including Geoffrey Chaucer, *Sir Gawain and the Green Knight, Piers Plowman, The Pearl,* Sir Thomas Malory's *Le Morte D'Arthur,* and medieval ballads and lyrics. Cross-listed as CELT 392. Six credits.

397 Selected Topics in Literature in English I
Three credits.

398 Selected Topics in Literature in English II
Three credits.

Notes: A student must have at least 18 credits of ENGL for admission to a 400-level course. The senior seminars are offered exclusively to senior advanced majors and honours students on a rotating basis over a period of years.

404 Seminar on Modern Anglo-Irish Fiction
The first term focuses upon the creators of modern Anglo-Irish fiction. The second term focuses upon James Joyce: *The Dubliners, A Portrait of the Artist as a Young Man*, *Ulysses* and *Finnegan's Wake*. Six credits. Not offered 2003-2004.

408 Seminar on Jacobean Drama
Provides close textual readings of representative tragic, comic, and satiric plays of the period by Ben Jonson, John Marston, John Webster, Thomas Middleton, Cyril Tourneur, John Ford, Francis Beaumont, and John Fletcher. Six credits. Not offered 2003-2004.

412 Seminar on 17th-Century Literature
An intensive study of the Metaphysical poets, the Cavalier poets, *Paradise Lost*, and the prose of Francis Bacon, John Donne, Richard Burton, and Sir Thomas Browne. Six credits. Not offered 2003-2004.

420 Seminar on Modern Poetry
A study of the work of two major modern poets. Authors will change from year to year and may include Ezra Pound and T.S. Eliot; W.B. Yeats and T.S. Eliot; Wallace Stevens and William Carlos Williams. Six credits. Not offered 2003-2004.

431 (433) 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, parodies, and imitations. Occasional guest writers. Prerequisite: portfolio demonstrating literary ability. Six credits.

440 Seminar on Shakespeare

A study of Shakespeare's works in their social and literary contexts, accompanied by comparative study of sources and analogues, topics of bibliographic and textual interest. Prerequisite: ENGL 340. Six credits.

444 Seminar on 19th-Century American Literature
A study of the major trends in pre-20th-century American literature with particular emphasis on the Puritan tradition (Jonathan Edwards, Nathaniel Hawthorne, Edgar Allan Poe, Herman Melville, and Mark Twain) and the great transcendentalist writers (Ralph Waldo Emerson, Walt Whitman, and Henry David Thoreau). Six credits. Not offered 2003-2004.

445 Seminar on Contemporary Critical Theory
A survey of the background to contemporary theory, focusing in part on earlier critics, and examining the origins of the canon. An exploration of current theories, including semiotics, structuralism, deconstruction, new historicism, modern narratology, feminist theory, and Marxist theory. Required for all honours students in addition to the senior seminar. Six credits.

450 Seminar: After Beckett
A study of the influence of Samuel Beckett on the development of modern and postmodern narrative. The first term focuses on Beckett's two trilogies of novels. The second term focuses on Beckett's influence on Alain Robbe-Grillet, Paul Auster, J.M. Coetzee, and John Banville. Six credits. Not offered 2003-2004.

460 Seminar on 18th-Century Literature
A close study of selected plays, poetry, prose and novels of Eliza Haywood, Alexander Pope and Henry Fielding. This course will examine the works in their contemporary context and by utilizing a variety of literary theories. Six credits.

467 Seminar on Canadian Poetry: The Poet in Atlantic Canada
A study of the encounter between the poetic imagination and the Atlantic region in the 19th and 20th centuries, this course examines poetry by Maritimers and Newfoundlanders of diverse backgrounds; poetic forms and their effect; the construction of images received as typically Maritime and how they engage the country's notions of itself. Authors include: Sir Charles G.D. Roberts, Bliss Carman, E.J. Pratt, Alden Nowlan, Elizabeth Brewster, Milton Acorn, Rita Joe and other contemporary writers. Six credits. Not offered 2003-2004.

470 Seminar on Romantic Literature
A study of the prose and poetry of Eliza Fenwick, Mary Hays, Mary Wollstonecraft, William Wordsworth, Samuel Taylor Coleridge, John Keats, Percy Bysshe Shelley, and Mary Shelley. The course focuses on the recent recognition of women Romantic writers and on changing critical attitudes towards Romantic literature. Six credits. Not offered 2003-2004.

476Seminar on Modern American Fiction
A study of a major theme or critical question in American prose since 1900. A special focus will be selected for each year. Possible topics will range from various representations of a specific motif (e.g., masculinity, nature) through the study of a period or school to the study of a particular ethnic tradition within the American canon. Not offered 2003-2004.

477 Seminar on Victorian Literature
A study of novelists Jane Austen, Charles Dickens, George Eliot and Thomas Hardy; or the poetry of Alfred Lord Tennyson, Elizabeth Barrett Browning, Christina Rossetti, Gerald Manley Hopkins and Oscar Wilde; and the prose of Thomas Carlyle, Matthew Arnold and Walter Pater. Six credits. Not offered 2003-2004.

480 Seminar on Spenser and Milton
A reading of Edmund Spenser and John Milton in the contexts of contemporary society and Renaissance literary theory. Six credits. Not offered 2003-2004.

483 Oscar Wilde
A study of Wilde's poetry, plays, essays, short stories and novel, *The Picture of Dorian Gray*. Three credits. Not offered 2003-2004.

484 Esthetes and Decadents of the 1890s
A study of the poetry and prose of Aubrey Beardsley, Max Beerbohm, Ernest Dowson, Lionel Johnson, Arthur Symons and others. Three credits. Not offered 2003-2004.

490 Seminar on Chaucer
Examines the major poetry and prose of this seminal figure in English literature. Six credits. Not offered 2003-2004.

496 Research Methods in English Literature
This course will teach students the basis of academic research, and prepare them for identifying and locating materials necessary for the advanced majors and honours thesis. Restricted to third- and fourth-year students in the honours or advanced major programs. Three credits.

497 Advanced Major Thesis
Advanced major students write a thesis as part of the senior seminar. *See sections 4.6 g and 4.4 d.* Three credits.

498 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 three-credit course in the senior year. The thesis must be submitted no later than March 31 of the senior year. *See sections 4.6 g and 4.4 d.* Three credits.

499Directed 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.

GRADUATE COURSES

Master of Arts in Teaching
All courses are six credits.
512 Literary Criticism, Prose, and Rhetoric
522 The Novel and the Short Story
532 Poetry
542 The Classical Background to English Literature
552 Drama

↖ FRENCH
See Modern Languages in 7.24.

↖ GEOLOGY
See Earth Sciences in 7.13.

↖ GERMAN
See Modern Languages in 7.24.

↖ GRADUATE STUDIES
See section 6.

7.18 HISTORY

Full Time
G. Bruce, Ph.D.
J. Cameron, Ph.D.
N. Forestell, Ph.D.
P. Hogan, Ph.D.
G. Lalande, Ph.D.
P. Phillips, Ph.D.
L. Stanley-Blackwell, Ph.D.
R. Zecker, Ph.D.

Part Time
P. McInnis, Ph.D.

Department Requirements
The history department offers programs that provide breadth while permitting students the opportunity to achieve a chosen specialization. Students may count courses in Celtic history as courses in the Department of History.

Juniors and seniors taking a pair in history normally take only one course at the 200 level. Juniors and seniors taking four or more courses in history normally take only two courses at the 200 level.

Of the 36 credits required for a history major or advanced major, normally at least 24 must be obtained from StFX; of the 60 credits required for a history honours, normally at least 42 must be obtained from StFX; of the 48 credits required for a history honours with subsidiary, normally at least 36 must be obtained from StFX. The senior seminar and thesis requirement must be completed through StFX.

Major Program
Students in the major program in history follow the degree regulations established by the university for this program. *See section 4.2*. It is strongly recommended that students following the major degree program strive for balance and breadth in their selection of courses. Ordinarily, students will have some degree of concentration in either Canadian or European history. The general pattern will follow that outlined above for the advanced major program, i.e., three or

four courses in Canadian history and a combination of two or three courses in European and American history; or three or four courses in European history and a combination of two or three courses in Canadian and American history.

Advanced Major Program

Students in the advanced major program in history follow the degree regulations established by the university for this program. *See Section 4.4*. Advanced major students take a seminar, normally during the senior year, and complete a research paper under the supervision of a department member.

Department course requirements allow for concentration in either Canadian or European history. In the first case, students must take two or three courses and a senior seminar in Canadian history, and a combination of two or three courses in European and American history. In the second instance, students must take two or three courses and a senior seminar in European history, and a combination of two or three courses in Canadian and American history. The fields included in the European area are: Britain, Celtic history, Eastern Europe, medieval history, modern Europe, Germany and Russia.

Students wishing to concentrate in a field other than Canadian or European history, and who demonstrate a capacity for independent study, may request a directed study course in the area of their choice. Such requests should be referred to the department chair; see section 3.5.

Honours Program

Students in the honours program in history follow the degree regulations established by the university for this program. *See section 4.6*. The chair of the department and the dean will assist in planning and supervising the programs of individual students. Honours students will take a seminar, normally during the senior year, and complete a thesis under the supervision of a department member.

100 Western Civilization

Traces the development of western ideas and institutions as rooted in ancient Mesopotamian, Egyptian and Hebrew cultures; Greek classical civilization; Roman political behavior; the medieval centuries and their contribution to nation-state growth, intellectual and religious advance; early modern Europe and its Renaissance, religious Reformation, experiments in absolute rule, and the new sciences of the Enlightenment; and more recent shaping influences on western society, *viz*., the French, Industrial, and liberal revolutions, the growth of nationalism, communism and fascism, and the world wars. Normally restricted to first-year students. Six credits.

110 Global History Since 1300

This course will provide a thematic exploration of selected topics in global history from 1300 to the present, including the age of exploration, the rise of capitalism and class society, struggles between Europeans and colonized peoples, slavery, political revolutions and modern nationalisms. The course combines political, social, intellectual and cultural history to provide the student with a comprehensive understanding of the key non-western and western civilizations. Normally restricted to first-year students. Six credits.

200 A History of Canada

This introductory survey explores the main political, economic and social themes in Canadian history. Mandatory for history majors, advanced majors and honours. Not required for students seeking to pair history. Six credits.

202 Western Canada: The Prairies

This course examines historical developments on the Canadian prairies from pre-European contact to the present. It covers native peoples, European-native contact, exploration, the fur trade, colonization, immigration, urbanization, social reform, war, and economic depression, as well as intellectual, social and religious developments. Our coverage will be sensitive to gender, class, ethnicity, religion and regions on the prairies, as well as to issues of historical interpretation. Three credits.

204 Western Canada: British Columbia

This course examines historical developments in British Columbia from pre-European contact to the present. It covers native peoples, European-native contact, exploration, the fur trade, colonization, immigration, urbanization, industrialization, the fishery, social reform, war, and economic depression, as well as intellectual, social and religious developments. Coverage is sensitive to gender, class, ethnicity, religion and regions within BC, as well as to issues of historical interpretation. Three credits.

209 The Maritime Provinces, 1500-1950

A survey of social and economic developments including the Acadians, the migration of peoples, shipping and shipbuilding, federation with Canada, coal and steel, trade unions, religion, and education. Six credits.

214 The French Revolution and Napoléon Bonaparte

Examines what many consider the key revolution in modern European history. Topics include French society at the end of the 18th century; the toppling of the French monarchy and the Reign of Terror, the French revolutionary wars; the rise of Napoléon, his wars in Europe and catastrophic invasion of Russia; and the legacy of the revolution. Novels, historical documents and films will be examined. Three credits. Not offered 2003-2004.

220 Russia, 862-1917

A brief survey of Russian history from the early times of Kievan Rus to the emergence of Muscovy. Emphasis will be placed on the political, economic, social and cultural developments of the 18th and 19th centuries: Peter the Great and the challenge of the West; Catherine the Great and the Enlightenment; the emancipation of the serfs (1861) and industrialization; the relations between Russians and non-Russians; the revolutionary movement, World War I and the fall of the Romanov dynasty. Six credits. Not offered 2003-2004.

230 The Growth of Western Society
The Middle Ages (300-1400 CE) forged many vital institutions, attitudes, and accomplishments we take for granted today. This course will examine the Stone Age-Roman prelude; early medieval heroic kings; solidification of the English, French, and German-Italian landscapes; the contributions of faith and literacy; the medieval mentality, including mistreatment of marginals such as Jews. 12th-century Europe saw the birth of nation-states, parliaments, civil rights; German imperialism; Italian city-state governments; talented rulers such as Henry II, Louis IX, and Frederick II; technological, commercial, and urban revolutions; health and medical progress; and increased forces of disorder (crime, heresy, plague, war). Six credits.

242 The United States Before 1865
A survey of the US from colonial times to the Civil War. Topics include: Aboriginal beginnings; Atlantic migrations; colonization; religious thought and institutions; the colonies' role in the British Empire; the War of Independence; territorial expansion and frontier experience; the birth and extension of the party system; slavery; sectionalism; the Civil War (1861-65). Three credits.

244 The United States After 1865
A survey of the US from the Reconstruction era to the present. Topics include: the Civil War and its aftermath; industrialization and urbanization; immigration and ethnicity; the two world wars and the US rise to world power; the Great Depression and the New Deal; 20th-century cultural and political antagonisms; the struggle for Black civil rights; the Cold War and the Vietnam War; the Watergate scandal. 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 labor, 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. Not offered 2003-2004.

260 Europe in the 19th and 20th Centuries
A survey of European history from the French Revolution to the present, which covers the political, economic, social, intellectual, and cultural affairs of major European states. Six credits. Not offered 2003-2004.

275 Modern Japan
Explores the motivations, policies, obstacles and achievements of Japan's economic, social, political and cultural modernizing experience in the 19th and 20th centuries. Topics include: the coming and impact of the West; the fall of the Shogunate; the restoration of the Meiji emperor (1868); the first priorities of the new imperial regime; Japanese imperialism; the economic depression of the 1930s; fascism and the road to World War II; World War II in the Pacific; the economic miracle following the war and Japan's role in international politics after 1945. Six credits.

280 A Survey of British History Since 1485
This is a survey course dealing with the political, social and economic changes in society from the period of Tudor rule to the 20th century, including Britain's empire and relationship with Europe. Six credits. Not offered 2003-2004.

2 95 European History, 1350-1750
This course will explore European history in the centuries from the coming of the Black Death and the Italian Renaissance up to the Enlightenment. This period saw many developments that mark it out as modern: the beginnings of urbanization, the rise of the nation state, the development of imperialism and new theories of racism, the scientific revolution. Yet it was also a period in which most people still lived as peasants, working land in much the way that they had for centuries. It was a period that saw the first true "information revolution"; but it was one in which most people still held ideas that seem to us "superstitious." In many respects, this tension between the new and the ancient came to shape the direction of European society into the modern era. Through a combination of lectures and primary source readings, some of the major themes we will examine include: humanism and the revival of antiquity; the Black Death; the rise of the nation state and new theories of governance; religious division and reform; science and learning; the printing revolution and the rise of literacy; the beginnings of imperialism and colonialism; slavery and racism; the daily life of men and women; popular religion and the European witch hunts. Six credits.

300 A Cultural and Intellectual History of Canada
This course is an historical analysis of Canadian culture (literature, art, and architecture), and the intellectual forces that have shaped Canadian society. Cross-listed as ART 300. Six credits. Not offered 2003-2004.

307 History of Quebec

This course traces the political, economic, social and cultural development of Quebec from the 16th century to the present. Special attention will be devoted to the key debates that have shaped historians' interpretations of Quebec's past. Six credits. Not offered 2003-2004.

308 Canadian Women's History
This course examines the history of women in Canada from the 16th century to the present. Particular attention will be paid to class, racial, ethnic and regional variations of women's experience. The course will explore changes and continuities in the status of women, gender ideologies, women's role in the family, women's paid and unpaid work, access to education, religious participation and involvement in social reform and other political movements. Cross-listed as WMNS 308. Six credits.

309 The Working Class in Canadian Society
Explores the development of the Canadian working class with a focus on the 19th and 20th centuries. This course will increase students' awareness and appreciation of the social conditions that united working men and women in a quest for political and economic justice. Topics will include an examination of the historical accomplishments, as well as the shortcomings, of both organized and unorganized labor and the role of the state in the development of Canadian society. Six credits.

310 Canadian Immigration and Ethnic History
Through an examination of immigration, ethnic group experience, and multicultural issues, this course explores the making of the Canadian multicultural mosaic. It has a national focus and concentrates largely on the 19th and 20th centuries. The course demonstrates the central contribution of immigrants to the formation of Canada while introducing debates about immigration and refugee policy, minority rights, equality of opportunity, racism, citizenship and official multiculturalism. Students will look at Canada through the eyes of immigrants and ethnic groups, and examine the host society's policies and practices toward them. Six credits.

311 History of Canadian Diplomacy Since 1945
This course will examine the nature of Canada's diplomatic relations in the post-Second World War era. Through a combination of lectures and in-depth discussions of assigned readings students will learn the historic strengths and weaknesses of Canada's efforts to establish a unique place for itself within the world community independent of the influence of the United States of America. Three credits.

312 Transition and Decline in Rural Canada
This course will examine the significant decline of rural Canada in both population and influence throughout the century between 1850 and 1950. Through a combination of lectures and in-depth discussions of assigned readings, students will learn how dramatic innovations in technology and transportation and the flourishing of the industrial capitalist economy combined to transform Canada from a nation which drew millions of immigrants whose primary desire was to establish themselves on the land, to one where the countryside was abandoned by equal numbers of millions. 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. Not offered 2003-2004.

325 Eastern Europe, 1848-1989
Covers the Ottoman, Austro-Hungarian, Russian and German empires; modernization and nationalism; World War I and the emergence of new states; the failure of democracy (1918-39); World War II; the people's democracies (1945-89) 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: Tito in Yugoslavia (1948), Hungary (1956), Czechoslovakia (1968), Poland (1980-81); the revolutions of 1989. Six credits.

330 Medieval Society and the Individual
This course examines the realities of personal existence in the Middle Ages, decisions made in the face of those realities, and the progress and tensions that ensued. We will explore the traits, treatment, contributions, and fate of major social groups: the nobility; family; children; women in theory, law, and reality; the intellectual; the medieval villager; medieval merchants; the artist; the saint; the city and the city-dweller; the writer; and the medieval elderly. Six credits.

335 Thought and Art in the Middle Ages: Monks, Scholastics, Scientists and Artists
This course will examine the Greco-Roman educational curriculum and its impact on medieval culture; Greek philosophical problems that influenced the Middle Ages and the efforts of the earliest church fathers, as well as St. Augustine, Boethius, and Scotus Erigena, to reconcile ancient thought and Christianity; early Anglo-Irish wandering saints; the transmission of western culture; monastic life and learning; the cathedral schools and the world of John of Salisbury; 12th-century revivals of humanism and logic; new growth in law and theology; the development of the universities; progress in science; achievements in art and architecture. Six credits. Not offered 2003-2004.

346 American Social Movements, 1865-1945

This course examines the triumphs and failures of selected social movements in the post-Civil War through New Deal era of U.S. history. At various moments, it was activism by grassroots organizations that nudged the U.S. in a crucial new direction. Students will explore the nature of protest; disobedience and its effectiveness in the late 19th and 20th centuries; populism; women's suffrage; radical pacifism; crafts-based and industrial unionism; and the unemployed peoples' councils of the Great Depression. Three credits.

347American Social Movements, 1945-Present
This course examines the triumphs and failures of selected social movements from the New Deal era to the present day. At various moments, it was activism by grassroots organizations that nudged the U.S. in a crucial new direction. Students will explore the nature of protest; disobedience and its effectiveness in the mid to late 20th century; counter-movements against progressive actors; unionism; McCarthyism; civil rights; Black power; anti-nuclear activism; homeowners' and anti-busing movements (the white rights backlash against civil rights progress); the Moral Majority; and the anti-globalization movement. Three credits.

361 Renaissance Europe
Three credits. Not offered 2003-2004.

362 European Fascism
Three credits. Not offered 2003-2004.

363Reformation 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; the Reformation in Eastern Europe; women, witchcraft and the Reformation; social unrest and popular revolt; the Counter-Reformation: the Jesuits and the Council of Trent; the wars of religion within the Holy Roman German Empire and in France; Philip II and his Grand Project; the rivalry between Spain and England; the Thirty Years' War (1618-48); the historiography of the Reformation. May be taken as credit in religious studies. Three credits.

364 The Holocaust
Explores the history and legacy of the destruction of the Jews of Europe during World War II. Topics include historic anti-semitism, the rise of the Nazis, euthanasia, the ghettos, the death camps, Jewish and non-Jewish resistance, the role of ordinary Germans, the establishment of Israel, the 1960s Auschwitz trials, Canadian prosecution of World War II criminals, and present-day controversy over the Holocaust memorial in Berlin. Films, memoir literature, and historical documents will be examined. Three credits. Not offered 2003-2004.

369 European Social History Since 1750
This course explores the transformation of Western Europe from traditional hierarchical order to modern, urban, industrial society. Topics include: the social impact of the Industrial Revolution, class tensions and social conflicts in the 19th century, and societal change as a result of World War I and World War II. Six credits. Not offered 2003-2004.

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. Three credits. Not offered 2003-2004.

374 20th-Century China
Covers the revolution of 1911; warlordism; World War I and the May Fourth Movement; Sun Yatsen, Chiang Kaishek and the Guomindang; Mao Zedong and the Chinese Communist Party; World War II (1937-45); the civil war (1945-49); the profound economic, social, cultural and political transformations of Communist China under Mao Zedong and Deng Xiaoping. Three credits. Not offered 2003-2004.

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 social, economic, political, religious, and diplomatic developments during this period. Three credits.

387 Stuart Britain
Beginning with the reign of James I in 1603 and ending with the death of Queen Anne in 1714, this course will examine one of the most turbulent periods in British history. Students will explore the causes and consequences of the English Civil War and the revolutions of the 17th century. Three credits.

400 Seminar in Canadian History
The course will examine important periods of growth and change in Canadian history, the tensions created, and the questions raised by such growth and change. Six credits.

440 A History of Canadian-American Relations
An examination of selected topics focusing on the central theme of coexistence in North America. Six credits. Not offered 2003-2004

460 Seminar in Modern European History
Explores major developments in 19th- and 20th-century European history. The themes and topics chosen each year will reflect to some degree the interests of the professor and the students. Six credits.

Note: Although a seminar in medieval European history is not offered, the department may make arrangements for students who wish to write a thesis in that field.

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.

7.19 HUMAN KINETICS

L. Bilek, Pae.D.
J. Boucher, Ph.D.
D. Burke, Ph.D.
M. Gallant, M.Sc.
R. Rasmussen, Ph.D.
H. Stanish, Ph.D.
A. Thompson, Ph.D.
D. Vossen, Ph.D.

The normal sequence for the four human kinetics programs majors are shown below:

BA in Human Kinetics with Major in Kinesiology

Year 1	HKIN 105, 115; 6 credits each of arts subjects A and B; 12 credits arts/science electives
Year 2	HKIN 205, 215, 236; 3 credits HKIN elective; BIOL 251, 252; 6 credits each of arts subjects A and B
Year 3	HKIN 301, 365, 376, 396; 6 credits HKIN electives; 12 credits arts subject A
Year 4	6 credits from HKIN 331, 332, 352, 353, 354; 12 credits HKIN electives; 6 credits each approved electives and open electives

BA in Human Kinetics with Major in Pre-Education

Year 1	HKIN 105, 115; 6 credits each of arts subjects A and B; 12 credits arts/science electives
Year 2	HKIN 205, 215, 236; 3 credits HKIN elective; BIOL 251, 252; 6 credits each of arts subjects A and B
Year 3	HKIN 365, 376, 385, and 3 activities; 6 credits HKIN electives; 12 credits arts subject A
Year 4	HKIN 425, 426, and 3 activities; 6 credits from HKIN 331, 332, 352, 353, 354; 3 credits HKIN elective; 6 credits each approved elective and open elective

Candidates must follow the degree regulations in section 4.10. See section 4.10 for the definition of arts subjects group 1 and 2.

B.Sc. in Human Kinetics with Major in Kinesiology

Year 1	HKIN 105, 115; 6 credits each of science subjects A and B; 6 credits each of arts subject X and Y
Year 2	HKIN 205, 215, 236; 3 credits HKIN elective; BIOL 251, 252; 6 credits science A; 6 credits Arts X
Year 3	HKIN 301, 365, 376, 396; 6 credits HKIN electives; 12 credits science A
Year 4	6 credits from HKIN 331, 332, 352, 353, 354; 12 credits HKIN electives; 6 credits each approved electives and open electives

B.Sc. in Human Kinetics with Major in Kinesiology and Minor in Health Sciences

Year 1	HKIN 105, 115; CHEM 100; BIOL 111, 112; Arts X: ENGL 100; Arts Y: PSYC 100 or SOCI 100
Year 2	HKIN 205, 215, 236; 3 credits HKIN elective; BIOL 251, 252; CHEM 220; 6 credits Arts X or Arts Y
Year 3	HKIN 301, 365, 376, 396; 9 credits HKIN electives; CHEM 255; PHYS 100
Year 4	6 credits from HKIN 331, 332, 352, 353, 354; 9 credits HKIN electives; BIOL 315; 6 credits each approved electives and open electives

B.Sc. in Human Kinetics with Major in Kinesiology and Minor in Nutrition

Year 1	HKIN 105, 115; BIOL 111, 112; CHEM 100; 6 credits each of Arts subject X and Y
Year 2	HKIN 205, 215, 236; 3 credits HKIN elective; BIOL 251, 252; 6 credits Arts X; 6 credits approved electives

Year 3 HKIN 301, 365, 376, 396; 3 credits HKIN elective; CHEM 221, 255; HNU 145, 261, 262
Year 4 HKIN 446, 466, 475; BIOL 315; HNU 363; 12 credits HNU electives; 3 credits open elective

B.Sc. in Human Kinetics with Major in Pre-Education

Year 1 HKIN 105, 115; 6 credits each of science subjects A and B; 6 credits each of arts subject X and Y
Year 2 HKIN 205, 215, 236; 3 credits HKIN elective; BIOL 251, 252; 6 credits science A; 6 credits Arts X
Year 3 HKIN 365, 376, 385, and 3 activities; 6 credits HKIN electives; 12 credits science A
Year 4 HKIN 425, 426, and 3 activities; 6 credits from HKIN 331, 332, 352, 353, 354; 3 credits HKIN elective; 6 credits each approved electives and open electives

Candidates must follow the degree regulations in section 5.8.

BA and B.Sc. in Human Kinetics with Advanced Major and Honours

See *sections 4.10.1, 4.10.2, 5.8.1, and 5.8.2 for requirements.*

B.Sc. Joint Advanced Major in Human Kinetics and Biology

For entrance requirements, see section 1.3.e. For admission and degree requirements, see section 5.4.

The course pattern for the joint advanced major is:

Science A (BIOL or HKIN)	42 credits
Science B (HKIN or BIOL)	36 credits
Science C (MATH 111, 112)	6 credits
CHEM 100	6 credits
PHYS 100	6 credits
Arts subject X	12 credits
Arts subject Y	6 credits
Open elective	6 credits

Students should consult the chairs of the respective departments for required and elective courses in BIOL and HKIN.

Note: HKIN 105, 115, and 205 are restricted to human kinetics students. Other HKIN courses are open to non-human kinetics students with permission of the professor and the department chair.

105 and 205 Activities I and II

Each activity is one credit. Students must take six activities over two years, normally three per year, one in each of the three blocks (Fall, Winter, Spring) in which the activity is offered. Level I activities are prerequisites for Level II activities. An activity may be taken only once. Three activities have time blocks to be arranged (TBA).

Students enrolled in the pre-education major must choose six additional activities, three activities in each of the third and fourth years:

Fall Adapted physical activities, basketball I, educational dance, fitness, football, rugby, soccer, squash, track & field, and weight training

Winter Badminton I, badminton II, basketball I, basketball II, fitness, folk dance, hockey I, gymnastics, handball, movement education, racquetball, squash, volleyball I, and volleyball II

Spring Badminton I, fitness, folk dance, gymnastics I, hockey II, racquetball, squash, volleyball, and weight training

TBA Gymnastics II, national coaching certification program (NCCP), and outdoor education camp.

115 Principles of Human Movement

This course provides an introduction to the field of human kinetics. The functional and psychosocial aspects of human movement form the core components of this course. Topics include: physical activity, physical fitness, active living, nutrition, stress, heart health and weight management. Three credits and laboratory.

215 Introduction to Motor Learning and Control

An introductory analysis of motor behavior and motor control, with emphasis on theories underlying the acquisition and performance of fine and gross motor skills. Three credits and laboratory.

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. Three credits and laboratory.

226 Personal Health and Wellness

This multidisciplinary course addresses topics relevant to personal health and lifestyle choices, including psychological health, nutrition, physical activity, ergonomics, dieting, obesity, drugs, sexuality, and death. Three credits.

236 Foundations of Sport and Exercise Psychology

This course provides an understanding of the basic concepts and principles of sport and exercise psychology, and how they apply to counseling, teaching, coaching, and fitness instruction. Three credits.

26 2 PerformanceEnhancing Supplements
Elite atheletes constantly strive to maximize their personal exercise potential to accomplish short- and long-term goals, surpass their competitors, and win events. This drive to succeed has fueled the development of several performance-enhancing resources. Tools intended to improve athletic performance are referred to as "ergogenic aids" and involve nutritional, pharmacological, physiological, biomechanical, and psychological factors. Each of these factors has many subcategories. The purpose of this course is to provide a detailed description of the nutritional supplements used in sport and present peer-reviewed scientific literature to determine the efficacy of each supplement covered. As well, the ability of these supplements to enhance or impare performance will be covered along with the potential hazardous side-effects associated with usage. Prequisites: HKIN 115. Three credits.

301 Elementary Statistics
This course teaches statistics for students in health sciences. Topics include: descriptive statistics; data collection, tabulation, and presentation; measures of central tendency and variability; binomial, normal, and chi-square distributions; estimation of parameters and tests of hypothesis; simple linear regression and correlation; introduction to a statistical computer package. Acceptable for credit in the Faculty of Arts only. Cross-listed as STAT 201. Three credits.

321 Advanced Care and 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: BIOL 251; HKIN 222. Three credits.

331 The Sociology of Sport
Provides students with a social interpretation of sport in Canadian society. Emphasis will be given to the culture of sport and its relationship to other societal institutions such as the mass media and education. Attention will be given to the connection between sports and socialization and to the role of sports in cultural values such as fitness, entertainment, and consumerism. Prerequisite: SOCI 100. Cross-listed as SOCI 233. Three credits.

332 Gender in Sport and Physical Activity
An analysis of gender in sport and physical activity in Canada from a woman-centred viewpoint. Cross-listed as WMNS 332. Three credits.

352 Historical Foundations of Sport and Physical Activity in Canada
An overview of issues and topics related to the history of sport Canada. Using the forces of class, 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.

353 Philosophical Foundations of Sport and Physical Activity
Explores nature, meaning and significance of sport and physical activity. Students will be introduced to logic and then be provided with the opportunity to discuss and evaluate various arguments issues arising within and surrounding sport. Topics include: relationship between sport, game, play and physical activity, the dumb jock stereotype, the dehumanization of athletes, seeking the zone, and the joy of sport. Three credits.

354 Ethics and Sport
An introductory philosophical inquiry into proper conduct in sport. Students will discuss and evaluate arguments focused on important ethical issues arising within and surrounding sport. Topics include: fair play, cheating, good/bad sportspersonship, performance-enhancing substance use, women in sport, and violence in sport. Three credits.

365 Exercise Physiology
An in-depth study of the acute responses and chronic adaptations to exercise by the muscular, cardiovascular, and respiratory systems, as well as the energy delivery systems utilized during exercise and the nutrition necessary for exercise and sport. Prerequisites: BIOL 251, 252. Three credits and laboratory.

376 Biomechanics
Cross-listed as BIOL 376; see BIOL 376. Three credits and laboratory.

385 (465)Adapted Physical Education
An introduction to the design and implementation of physical activity programs for individuals with disabilities. Topics include: terminology, strategies for inclusive programming, assessment, advocacy, and attitudes toward disability. An overview of specific disabilities is included. Three credits and practical experience. Credit may not be earned for both HKIN 385 and 395.

392 Exercise Metabolism
Examines the response and regulation of the human cardiovascular, respiratory, and acid-based systems to acute and chronic exercise. Topics include: the prescription and physiological effects of training with emphasis on aerobic and anaerobic energy systems, and strength training. Students are exposed to the techniques for human tissue collection and analysis using UV-V spec, fluorometry, HPLC, and GC-MS. Prerequisites: HKIN 365; BIOL 111, 112; CHEM 100 is recommended. Three credits and laboratory.

395 Physical Activity and Sport for Individuals with Disabilities
An examination of physical activity, exercise, and sport for individuals with various disabilities. Students will gain the knowledge and practical skills required to understand and promote inclusive physical activity for individuals with all disabilities. This course addresses the professional needs of students interested in pursuing the allied health profession. Three credits and practical experience. Credit may not be earned for both HKIN 385 and 395.

396 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 third- and fourth-year students; recommended for year three of the advanced major program. Three credits.

416 Advanced Motor Learning
An in-depth study of motor control in skill movement and expertise development; research problems in areas of fine motor control and learning strategies leading to peak performance. Prerequisite: HKIN 215. Three credits.

425 (316) Child Growth and Development
This course deals with the physical changes that occur during the growth period in children and adolescents. The implications of changes in structure and function as they relate to education, physical activity, and training will be discussed. Topics include anthropometric and physiological changes in bodily structures and systems and the role of environmental factors such as nutrition, disease, physical activity and training. Three credits and laboratory.

426 Health Education
This course introduces the basic concepts and topics associated with the physical, intellectual, social, emotional, spiritual, and environmental aspects of health. Emphasis will be placed upon the application of these concepts in the instruction of health to elementary and middle-year children and adolescents. Three credits.

432 Psychology of Coaching
Explores current issues pertinent to psychological practice in sport, with a special emphasis on the coach-participant relationship. Prerequisite: HKIN 236 or PSYC 100. Three credits.

435 Psychology of Motivation and Performance in Sports
An analysis of motivational factors and psychological principles with reference to sport and motor performance, and a study of motivational techniques. Three credits.

441 Organization and Administration of Physical Activity and Sport
An analysis of research relating to the theory and practice of administration in physical activities and sports with emphasis on planning, organizing, staffing, directing, coordinating, and controlling. Three credits.

445 Instructional Strategies in Human Kinetics
An analysis of the teaching-learning process, emphasizing the instructional strategies specific to the development of skilled performance in movement activities; concentration on the acquisition of knowledge and competence relating to human relations. Three credits.

446 Essentials 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 a variety of exercise activities and programs; and design and lead an exercise program for classmates. This course prepares students to become certified personal trainers through the Canadian Personal Trainers Network (CPTN). Prerequisites: BIOL 251, 252; HKIN 365. Three credits and laboratory.

456 Exercise and Fitness Evaluation
This course is designed to provide extensive practical experience in a wide range of exercise science related laboratory techniques. Theoretical knowledge of numerous fitness assessment procedures is presented to assist in interpreting data. Exercise prescription is also covered and paradigms for aerobic, anaerobic, strength, and flexibility training are discussed. The practical and theoretical components of this course will provide students with the necessary background information to pursue Certified Fitness Consultant (CFC) certification through the Canadian Society for Exercise Physiology. Prequisited: HKIN 115. Three credits and a laboratory.

466 Clinical Exercise Physiology
This course examines several conditions prevalent in our society, including: obesity, osteoporosis, cardiovascular disease and diabetes, which can be positively influenced by exercise or physical activity. The nature of the disease, methods of assessment, role of exercise in the prevention, and/or treatment and/or rehabilitation of these conditions are considered. Prerequisites: BIOL 251, 252; HKIN 365. Three credits and laboratory.

491 Senior Seminar
Lectures by visitors, faculty, staff, and senior honours students on aspects of human movement. Required for all honours students. The theses of honours 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.

493 Honours Thesis
Honours students must submit a thesis under the direction of a faculty member. Students will develop and present a draft proposal of their research project as part of HKIN 396: Research Methods. In their senior year they will finalize their research project, conduct data collection or fieldwork, and present/defend their theses as part of HKIN 491: Senior Seminar. Students must meet all department deadlines and requirements, as well as submit an acceptable thesis in order to qualify for a BA or a B.Sc. in Human Kinetics with Honours. Prerequisites: HKIN 301, 396. Three credits.

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.

7.20 HUMAN NUTRITION

D. Gillis, M.Sc., M.Ad.Ed.
P. Mazier, Ph.D.
M. Naczk, Ph.D.
A. Sullivan, Ph.D.
L.A. Wadsworth, Ph.D.

The human nutrition program combines courses in the life and social sciences, the humanities, and nutrition with practical experience in delivering nutrition and health information to individuals and communities, locally, nationally, and internationally.

Human nutrition courses prepare students for advanced studies in nutrition, medicine, food science and business; and for careers in dietetics, food service management, research and development, and education. Graduates may qualify for entrance to a Dietitians of Canada approved graduate dietetic internship program or for the StFX Integrated Dietetic Internship program.

Majors and advanced majors follow the same course sequence; however, advanced majors must complete HNU 491 and must attain a higher average (see section 5.9.1). The course pattern for the honours program is listed in section 5.9.2.

Depending upon the choice of emphasis, the human nutrition program prepares graduates for careers in areas such as dietetics, education, extension, food service management, research, and product development, or for careers as life skill workers and product specialists. Graduates may qualify for entrance to a Dietitians of Canada approved dietetic internship program (comprehensive practicum), or for graduate study in human nutrition, law, business administration, or medicine.

Students may not earn credit for both HNU 200 and HNU 261/262 or 263.

Major

The normal sequence for the major program is shown below. *See 5.9 for program requirements.*

Year 1 BIOL 111; CHEM 100; HNU 145, 185; STAT 201 or 231; 6 credits humanities electives; 6 credits social sciences electives
Year 2 BIOL 251, 252; CHEM 221, 255; HNU 146, 261, 262, 335; 6 credits arts subject for a pair
Year 3 BIOL 315; BSAD 261; 3 credits from BSAD 231, 221, 463; HNU 361, 362, 365, 385; 3 credits HNU elective; 6 credits arts subject for a second pair
Year 4 HNU 405, 475; 12 credits HNU electives; 12 credits open electives

Advanced Major

The normal sequence for the advanced major program is shown below. *See section 5.9 for program requirements.*

Year 1 BIOL 111; CHEM 100; HNU 145, 185; STAT 201 or 231; 6 credits humanities electives; 6 credits social science electives
Year 2 BIOL 251, 252; CHEM 221, 255; HNU 146, 261, 262, 335; 6 credits arts subject for a pair
Year 3 BIOL 315; BSAD 261; 3 credits from BSAD 231, 221, 463; HNU 361, 362, 365, 385; 3 credits HNU elective; 6 credits arts subject for a second pair
Year 4 HNU 405, 475, 491; 12 credits HNU electives; 12 credits open electives

Honours

The normal sequence for the honours program is shown below. *See section 5.9 for program requirements.*

Year 1 BIOL 111; CHEM 100; HNU 145, 185; STAT 201 or 231; 6 credits humanities electives; 6 credits social science electives
Year 2 BIOL 251, 252; CHEM 221, 255; HNU 146, 261, 262, 335; 6 credits arts subject for a pair

Year 3	BIOL 315; BSAD 261; 3 credits from BSAD 231, 221, 463; HNU 361, 362, 365, 385; 3 credits HNU elective; 6 credits open electives
Year 4	HNU 405, 461, 467, 475, 491, 493; 9 credits HNU electives; 6 credits open electives

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 cooking and processing, as well as issues of food quality and safety and their implications for human health. Three credits and laboratory.

146 Introduction to Food Science
An introduction to scientific concepts as a basis for understanding foods as a complex chemical system. A study of the properties of food components as they are affected by chemical and physical changes in foods; the foundations of various food preservation methods; and the principles of food evaluation by sensory and objective methods. Three credits and laboratory.

185 A Foundation for the Nutrition Professional
Students will become familiar with human nutrition philosophy, issues and problems important to human nutrition professionals, recent approaches and solutions in the field, and career possibilities for human nutrition graduates. Three credits.

200 Nutrition for a Healthy Lifestyle
Designed for arts majors, this course is an introduction to the basic concepts of nutritional science and the role that nutrition, exercise, and other lifestyle behaviors play in the promotion of human health. The first term will focus on the function of food and its role in maintaining and promoting health. The second term will enable students to become informed consumers and will examine current issues such as vegetarianism, food safety, healthy body weights, healthy eating throughout the life cycle. Not acceptable for credit for human nutrition students. Note: Students may not earn credit for both HNU 200 and 261/262 or 263. Six credits.

261 Introduction to Nutrition
Students will learn the fundamentals of the science of nutrition with emphasis on energy nutrients and vitamins, their functions, and their dietary sources, and how the body handles them from ingestion through excretion. Topics include the recommended nutrient intakes, Canadian nutrition recommendations, Canada's Food Guide to Healthy Eating, and the appropriate use of these guides. Prerequisites: CHEM 100 or 150; BIOL 111 or 105. Three credits.

262 Principles of Nutrition in Human Metabolism
Building on HNU 261, students will examine water and the major and trace minerals, their function and sources. The role of nutrition in the promotion of health and the prevention of disease will provide a framework for the course. Current topics in the field of nutrition will be discussed: energy balance, weight control, sports nutrition, controversial consumer issues and nutritional concerns throughout the life cycle, including pregnancy and lactation, the development years, adulthood and the later adult years. Prerequisites: HNU 261; BIOL 111, 251, 252, completed or concurrent; CHEM 100, 221, 255, completed or concurrent. Three credits.

263 Applied Introductory Nutrition
An application of the fundamentals of nutrition learned in HNU 261 to nursing practice. This course will increase awareness of the role of nutrition in promoting health and preventing disease. Although emphasis will be on the health benefits of optimal nutrition, nutrition-related health problems will also be discussed. Topics will include: assessment of nutritional status; the role of nutrition in growth and development and throughout the life cycle; and nutrition care after surgery and in the management of diabetes, cardiovascular disease, gastrointestinal disorders, and cancer. Prerequisites: HNU 261; CHEM 100 or 150; BIOL 111, 105, 251, 252, completed or concurrent. Three credits.

335 Communications
An introduction to the principles of human communication and the development of interpersonal, group, and public communication skills applicable to classroom, laboratory, community, and media situations. An overview of the job application process, resume assessment, and interviewing is presented. Prerequisites: HNU 145, 146, 185, 261, 262; completed or concurrent. Three credits and laboratory.

361 Clinical Nutrition I
This course is designed to provide the student with a solid foundation in assessing nutritional status, in determining appropriate nutritional care plans to meet the needs of clients/patients, and in effectively implementing and evaluating nutritional care including conventional feeding, and enteral and parenteral nutrition therapy. The role of nutrition in the prevention and treatment of specific diet-related conditions will be discussed including diabetes mellitus, obesity, and eating disorders. Prerequisites: HNU 261, 262; CHEM 100, 221, 255; BIOL 111, 251, 252. Three credits and laboratory.

362 Clinical Nutrition II
Further explores the integration of normal and therapeutic nutrition in providing nutritional care for specific disease states, including: upper and lower gastrointestinal disorders, liver disease, respiratory disorders, diabetes, and

cardiovascular disease. The role of nutrition in the etiology, pathophysiology, therapy, and prevention of selected human disease states will be discussed. Appropriate dietary and drug therapies and their interactions will be studied. Case studies will be analyzed. Discussions and clinical sessions with practicing physicians in a hospital setting will be used to observe the application of the principles of diet and drug therapy to patient care. Prerequisites: HNU 261, 262, 361; CHEM 100, 221, 255; BIOL 111, 251, 252. Three credits and laboratory.

363 Sport Nutrition
This course involves identification of the specific nutrient needs of individuals engaged in vigorous physical activity. It includes detailed descriptions of dietary macro- and micronutrient metabolism and the influence of either excess or deficiency of these nutrients on exercise performance. Prerequisites: HNU 261, 262. Three credits.

365 Community Nutrition
An introduction to the field of community nutrition and its role in health and health care. Prior knowledge of the theories and principles of normal nutrition is assumed. The processes and the theoretical foundations of nutrition education and the theories, methods and research perspectives applicable to community nutrition will be examined. The role of the community nutritionist in determining the nutrition needs of specific population groups will be discussed. Special attention will be given to factors that influence eating behavior and the processes available for planning, delivering and evaluating community nutrition services. The tools, skills and techniques necessary for development of effective change strategies will be emphasized. Prerequisites: HNU 261, 262. Three credits and laboratory.

366 Maternal and Pediatric Nutrition
A study of nutrition in the context of normal human development from pre-conception to adolescence. Emphasis is on nutritional concerns and recommended dietary practices during pregnancy, lactation and early childhood. The dietary management of common childhood concerns and adolescent eating disorders is also discussed. Prerequisites: BIOL 251, 252; HNU 261, 262 or 263. Three credits. Not offered 2003-2004.

385 Research Methods
An introduction to the research process and its application to research in human nutrition. Students will complete a research project of their choice, encompassing the major components of research activity, including literature review, hypothesis generation, data collection and analysis, and discussion. Students will use the SPSS-X computer program. Prerequisite: credit for all courses in the first two years of the human nutrition program sequence. Three credits and computer lab.

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 arts and science majors. Three credits.

415 Special Topics in Nutrition
Explores current issues and processes pertinent to community nutrition practice in Canada. Prerequisite: HNU 365. Three credits.

416 Special Topics in Foods
Introduces current topics and problems in the study of foods. The area of study will change on a yearly basis and in accordance with faculty resources. Three credits. Not offered 2003-2004.

425 Geriatric Nutrition
An examination of the special nutritional needs of the elderly with emphasis on the different needs of the various subgroups that comprise the elderly today. Prerequisites: HNU 261, 262 or 263; BIOL 251, 252. Three credits. Offered 2003-2004 and in alternate years.

445 Advanced Food Study
An experimental approach to the study of the physical and chemical properties of foods, and the chemistry of changes occurring during food processing, storage and handling. Emphasis is placed on research methods and procedures, and objective and subjective methods of food evaluation in controlled laboratory experiments. Prerequisites: HNU 145, 146; CHEM 221, 255. Three credits and laboratory.

448 Advanced Experimental Foods
An independent project involving the development of a research proposal, implementation of the project following laboratory research methods and procedure, and a written report of the project. Prerequisite: HNU 445. Three credits and laboratory.

455 Food Service: Management and Quantity Production
A comprehensive study of food management with emphasis on quantity production and service, physical facilities, and administration. Nutrition and management will be studied, with through a focus on menu planning, food safety and sanitation, purchasing and cost accounting. Practical insights will be gained through guest speakers, observation of

local food service facilities, service-learning opportunities, and problem-based learning exercises. Prerequisites: HNU 261, 262; BSAD 261. Three credits and laboratory.

461 Advanced Clinical Nutrition
A study of the mechanisms by which human cells and organs control nutrient metabolism. Topics include: the regulation of energy metabolism; the effect of organ failure on intermediate metabolism; abnormal metabolism due to inherited defects in absorption; and the utilization, transport, and metabolism of selected nutrients. The etiology and treatment of various metabolic diseases using the principles of nutrition, clinical chemistry, pharmacology, and biochemistry will be discussed. Prerequisites: HNU 361, 362; CHEM 100, 221, 255; BIOL 111, 251, 252. Three credits.

467 (367) 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 261, 262; BIOL 111, 251, 252; CHEM 255. Three credits.

475 Effecting Change
A study of change theory and its application in a variety of contexts relevant to the process of adopting healthy lifestyle behaviors. Through projects, students experience change from the perspectives of an individual, a change agent, and a professional evaluating the effectiveness of a change process. Emphasis is placed on identifying the appropriate locus for change, empowering individuals in the change process, and collaborating with others to effect change. Prerequisite: credit for all courses in the first two years of the human nutrition program sequence. Three credits.

481 Internship Practicum 1
The first of three 12-week practicum courses which introduce students to the process of integrating and documenting experiences to meet the entrance requirements for Dietitians of Canada. Following a two-week orientation, students will work with mentors in various institutional and community-based settings. Practical learning experiences will develop students' assessment and communication skills and teach them nutritional care planning, including implementation and evaluation. Prerequisites: completion of the third-year course sequence including HNU 455 with an average of at least 70; acceptance into the IDI program. Six credits.

482 Internship Practicum 2
The second of three 12-week (minimum) practicum courses to provide dietetic interns with further opportunity for integrating theory with practice in a mentored environment. Through experience in dietetic practice settings, interns will acquire competencies as required by Dietitians of Canada for entry-level practice. Building on HNU 481, interns will improve their communication and assessment skills while developing skills and becoming familiar with the full spectrum of nutritional care planning. Prerequisites: completion of the fourth-year course sequence with an average of at least 70; HNU 445, 481. Six credits.

483 Internship Practicum 3
The final 12-week (minimum) practice course of the IDI program, this course provides dietetic interns with the opportunity to fully integrate theory with practice within the mentored setting of the IDI program. Dietetic interns will continue the development of communication, assessment and implementation skills but focus on the development of evaluative skills in nutrition care planning. An increasing number of activities related to nutrition care will be undertaken in a minimally supervised fashion. Upon completion of HNU 483, interns will have completed the entry-level requirements to take the Dietitians of Canada examination for certification for practice. Prerequisite: HNU 482. Six credits.

491 Advanced Major and Honours Seminar
A critical study, including reports on and presentation of current research in areas related to human nutrition.

493 Senior Thesis (Honours)
A full-year program of research involving the use of sound methodologies to investigate a research question in the area of nutrition. An acceptable thesis based on original research must be submitted by the deadline to satisfy department requirements for a B.Sc. in Human Nutrition with Honours. 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.

7.21 INFORMATION SYSTEMS

Full Time
T. Boyle, MMS, ABD
D. Campbell, M.Ed., MBA
N. Foshay, MBA

R. MacKinnon, Ph.D.
H. Marzi, Ph.D.
M. Molinario, BBA
R. Palanisamy, Ph.D.
G. Trites, CA, CISA, FCA.

Part Time
G. Doucette, BBA
S. Lamers, BIS
C. Wright, SAP Administrator

The Department of Information Systems offers a variety of courses designed to train and educate students interested in information systems, business administration and computer science. The following degrees are offered by the Department of Information Systems:

Bachelor of Information Systems General Degree
Bachelor of Information Systems with Major or Honours in Enterprise Resource Planning
Bachelor of Information Systems with Major or Honours in Electronic Business
Bachelor of Information Systems with Major or Honours in Management Information Systems

Students should be aware that the BIS degree programs outlined in this Academic Calendar were revised effective September 2003. Students enrolled in a BIS degree program prior to the 2003 academic year follow the program in place at the time of their admission. These requirements may be found <http://www.mystfx.ca/calendar/1999-2000/welcome.html> In addition, many IS courses offered prior to September 2003 have been renumbered and/or renamed. For students enrolled in a BIS degree program prior to the 2003 academic year, an overview of the old and new course names and numbers are available at <http://www.mystfx.ca/academic/infosys/courses/changes.html>

General requirements for these degrees are in section 4.9.

Department Regulations

Certain courses are considered equivalent. See chart in section 4.1.2 for restricted courses.

Bachelor of Information Systems General Degree

The normal sequence for the general degree is shown below.

Year 1	BSAD 101, 102; ECON 100; INFO 131, 135, 151, 152; 6 credits art/science electives
Year 2	BSAD 221, 223, 231; INFO 275, 325; 3 credits INFO elective; MATH 205; STAT 201; 6 credits arts/science electives
Year 3	BSAD 261, 361; CSCI 254 or 383 with permission of the chair of the Department of Mathematics, Statistics, and Computer Science; 3 credits from CSCI 383, 455, 483, 485, 495; INFO 375; 3 credits INFO elective; 12 credits arts/science electives
Year 4	INFO 415, 416, 425, 465; 6 credits INFO electives at the 300/400 level; 6 credits open electives; 6 credits arts/science electives

The sequence above is the normal course pattern, and not mandatory. Years three and four offer flexibility in course selection. However, students should keep in mind that many courses have prerequisites and that most courses are not offered in both semesters. For more information, consult the department chair.

[Tech] Indicates Technology Elective for Students in Business

131 Computing and Business Applications
An introduction to personal and business productivity tools using microcomputers. Covers standard productivity tools such as word processing, spreadsheets, presentation software, email, Internet search tools and web page Publishing. Applications will be oriented towards business problems. Restricted to BIS and BBA students; open to others with permission of the instructor. Students will take a placement test prior to or during the first week of classes to determine enrollment in either INFO 131 or 145.Three credits.

135 (315) Information Systems Concepts
Covers the theory technological foundations of information systems. Topics include the role of information systems in organizations, management and decision-making; IS hardware and software; telecommunications and networking. Three credits.

145 Introduction to Electronic Commerce and ERP
Electronic commerce, the sale of goods or services over the Internet, presents technological, marketing, strategic, operational and systems challenges. This course introduces students to the current state of electronic commerce from an perspective as well as enterprise resource planning and its role in e-commerce. Three credits and laboratory.

151 Introduction to Programming Concepts

The course provides an introduction to programming concepts including data representation, problem analysis, algorithm development, and control structures. Structured C is used to develop solutions. Three credits.

152 Programming and Data Structures
This course furthers the student's programming knowledge and skills developed in INFO 151. Topics include data abstraction and data structures, memory addressing and pointer concepts, file manipulation and libraries. Structured C is used to design solutions for representative problems. Prerequisite: INFO 151. Three credits.

275 (475) Database Management Systems
This course introduces relational database management systems including the database environment, the relational model, relational languages (QBE and SQL) and techniques and methodologies of database analysis and design. Current micro computer DBMS software is reviewed and compared. A DBMS project is part of this course. Prerequisites: INFO 131, 135. Three credits.

325 Information Systems Hardware and Software
This course covers the fundamentals of computer hardware, software and data at the system (operating system and lower) level. The material is designed for students who will be IS professionals and must understand the components of computing in order to make knowledgeable decisions about systems. Prerequisite: INFO 152. Three credits.

335 Operations Research in Organizations
The course will cover linear programming, transportation and assignment models, networks, scheduling, inventory models, decision making, queuing theory, forecasting and simulation. Packaged software and spreadsheets will be used. Prerequisites: MATH 111 and 112 or 205; STAT 201 or 231. Three credits.

345 Introduction to Enterprise Resource Planning [Tech]
This course is an overview of enterprise resource planning (ERP) using SAP R/3. The course will discuss ERP theory, the limitations of conventional information systems, and their significance to the SAP R/3 architecture. Students will gain practical experience in navigation, master data and core functional applications of SAP R/3 (financial, human resources, and logistics). Prerequisites: INFO 135; BSAD 102. Three credits.

346 ABAP Programming Language
This course will introduce the fundamentals of the ABAP/4 programming language including the ABAP programming workbench. The basics of the ABAP programming language will be covered and students will use ABAP to apply concepts. Elementary report and dialogue programming will be examined. Students will code their own programs in tutorials. Prerequisite: INFO 152. Three credits.

347 Implementation, Configuration and Use of an Enterprise Resource System [Tech]
Provides a practical understanding of ERP systems with specific reference to SAP. The course familiarizes students with the Accelerated SAP (ASAP) implementation methodology and tools. Students will learn to configure sales and distribution functionality in the SAP implementation guide (IMG) with specific reference to the SAP condition technique. Students will also create automated test scripts using SAP's CATT (Computer Aided Testing Tool). Prerequisite: INFO 345 or BSAD 417. Three credits.

375 (476) Advanced Database Management Systems
This is an advanced database management systems course designed to extend the topics covered in INFO 275 while exploring evolving issues in database systems. Topics include: physical database design, database implementation considerations, advanced SQL (including embedded SQL) and emerging database trends (XML, data warehousing, and other topics). Prerequisite: INFO 275. Three credits.

397 Information Systems Research Methods
Increasingly, organizations employing IS technology want to know the cost and benefits of using it. Answering such questions requires knowledge and skills in the area of research methods. This course covers the basic concepts in conducting research, including formulation of the research question, definition of conceptual and observable variables, selection and implementation of the research design, data collection and analysis, and research reporting. Both quantitative and qualitative research methods will be discussed. Prerequisites: INFO 132; STAT 201 or equivalent; restricted to students in BIS honours or with permission of the chair. Three credits.

Co-op Work Terms

Once admitted to the co-op program, students may choose three four-month work terms or one 12- to16-month term. Each work term provides students with valuable

experience. After each term, students participate in seminars and write a report which integrates theoretical course material with the work and learning experiences.

401Co-op Work Term I
Prerequisite: work term preparation workshops. One credit.

402 Co-op Work Term II
Prerequisites: BSAD/INFO 401 and work term preparation workshops. One credit.

403 Co-op Work Term III
Prerequisites: BSAD/INFO 402 and work term preparation workshops. One credit.

405 12-to 16-Month Co-op Work Term
Prerequisite: work term preparation workshops. Three credits.

415 Systems Analysis
Covers systems analysis as an IT discipline and describes the role of the systems analyst in the development of computer-based information systems. The course introduces system development methodologies and key systems analysis tools and techniques, including requirements discovery methods, data and process modeling, Computer-Aided Software Engineering (CASE) tools, and feasibility analysis. Students will apply these techniques to a real-world business problem. Prerequisites: INFO 152, 275. Three credits.

416 Project Management and Practice
This course covers the factors necessary for successful management of system development or enhancement projects. Technical and behavioral aspects of project management are discussed. Prerequisite: INFO 415. Cross-listed as BSAD 416. Three credits.

418 Selected Topics in Information Systems I
This course will explore in detail a current topic or issue in information systems. Content will vary from year to year. Restricted to BIS and BBA/IS major students. Prerequisite: INFO 315. Cross-listed as BSAD 418. Three credits.

419 Client/Server and Intranets
The course will provide students with an understanding of client/server and intranet technology. It will cover client/server concepts, systems and technologies; communication networks; web-based technologies; and emerging distributed object-based systems and technologies. It will also examine state-of-the-art software tools for developing intranets. Prerequisites: INFO 152, 275. Three credits.

425 Systems Design
Building upon, INFO 415, this course provides students with the background necessary to create functional and successful information systems. The course emphasizes design tools and objectives: hardware/software evaluation and selection; productivity and quality in development, implementation, maintenance, and post-implementation review. A typical computer-aided systems engineering (CASE) tool will be employed during the course. Cases will be examined to illustrate the issues currently faced by information systems managers. Prerequisite: INFO 415. Three credits.

427 Electronic Commerce Architecture and Design
Covers the development of e-commerce architecture using system design principles, tools, and techniques. Includes decisions concerning the database, e-commerce business processes, online system interfaces and networks. The case study method will be used to deliver e-commerce concepts and at the application level, the course emphasizes creating e-businesses using programming technologies. Co-requisite: INFO 425. Three credits.

435 Introduction to Multimedia
This course provides an introduction to multimedia systems, including basic concepts, media types (text, graphics, audio, video, animation), the design process, authoring, issues regarding delivering and managing multimedia projects and future developments. Restricted enrollment. Prerequisites: INFO 151 or 152 or CSCI 160; INFO 135. Three credits.

445 Web-Based Programming
Web-based programming concentrates on methods and techniques of programming for the World Wide Web. Attention is given to the various protocols used to make browsers and servers communicate and to the web's statelessness and its implications for programming. Heavy emphasis is placed on dynamic page generation, database interfacing, and

programming tools and environments. Prerequisites: INFO 152 or CSCI 160; INFO 275; or permission of the instructor. Three credits.

446Electronic Business
Business is increasingly conducted through electronic means, often on the Internet. This presents many challenges, including technology, marketing, strategy, operations and systems issues. This course explores the current state of electronic commerce, issues arising in electronic commerce, and their relative importance to the success of a business venture. The methodology includes readings, case discussions and analysis of existing business ventures on the Internet. Three credits. Cross-listed as BSAD 415.

447Business Process Integration
Covers enterprise resource planning (ERP) systems and ERP integration in business operations. Students will gain detailed knowledge of business processes and how software (SAP) can help a company prosper by improving business processes and by providing business managers with accurate up-to-date data. Prerequisites: INFO 345 or permission of the instructor. Three credits and laboratory.

465 Business Data Communication Systems and Networks
Cross-listed as CSCI 465; see CSCI 465. Three credits and a two-hour laboratory.

481 Senior Seminar on Business Issues
Cross-listed as BSAD 481; see BSAD481. Three credits.

496Research Project for Majors
Provides students with an exposureto applied research in information systems area though completion of a consulting assignment or an extended approved research project. Restricted to those taking a major degree. Prerequisite INFO 397. Three credits.

497Senior Seminar in Information Systems Research
Provides students with an understanding of research themes and methodologies in information systems. Students will examine key issues in IS and analyze the research methodologies used to investigate and report on them. Prerequisite: INFO 397. Three credits.

498 (494) Honours Thesis
Honours students are required to prepare and submit a thesis under the direction of a faculty member. Students will develop and present draft proposals as part of INFO 397, then complete the proposal, conduct the fieldwork, present and defend their theses as part of this course. Classroom meetings are held periodically to discuss the thesis process and make presentations. Three credits over the full academic year.

499Directed Study
This course permits students of exceptional ability and motivation to pursue, on a tutorial basis, an individualized program of study on some aspect of information systems not available in other course offerings. Three credits.

7.22 INTERDISCIPLINARY STUDIES

The courses listed below combine two or more academic disciplines. IDS 100, 110 and 400 may be counted as electives only.

100 French and European Civilizations
Introduces the student to the constituent elements of French and European civilization, agriculture and business. The program, appropriate for students in business, economics, political science and languages, is a combination of language instruction; lectures on trade, European business, and the EEC; and visits to educational, historic and religious sites. This is a four-week, six-credit course offered in Lille, France. Fees include travel, accommodation, and meals.

110 Mexican Art and Culture
This is a six-week, six-credit course offered by Universidad Iberoamericana in Mexico City during summer session, which provides opportunities for study in Mexico in the following areas: art, archeology, anthropology, folklore, economics, civilization, culture, and literature.

305 Immersion Service Learning
Students who enroll in this course will carry out an extensive research project in connection with their immersion service-learning trip. Each student will work in conjunction with a faculty member who will supervise the research and assist the student to develop her or his information retrieval, research, writing, and oral presentation skills. Each student will give an oral presentation of the completed project. Three credits.

Service Learning Program
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 learn 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 in a broad range of courses and service experience.

Course-Based Service Learning
As part of their course work, students complete a variety of service options in the local community . The nature and duration of the service is determined by the professor, course content and community need. The service learning experience is supported by the instructor, who prepares students for the experience, helps them reflect on it, and integrates it into their work. Courses with a service learning component vary each year, students consult faculty and program staff regarding available courses.

Immersion Service Learning
Students become involved in intense service experiences in communities that include inner-city settings and international locations. Immersion projects, led by faculty leaders, engage student groups in educational sessions and service placements that help students understand community issues and dynamics in a development context. These experiences typically occur during the second-term recess. Students may integrate an immersion experience into their chosen course of study through research for course credit, or through IDS 305.

306 Service Learning: Theory and Practice
Students who enroll in this seminar course will be required to provide 30 hours of service with a local community organization. Through their service experience, reflection and seminar participation, students will learn about the theory and practice of service learning, as well as develop further the skills required for applying academic concepts outside of the classroom. Oral presentations will also be required. Three credits.

400 Arts IV
This seminar for juniors and seniors in honours or advanced major programs will consider selected ideas that serve as the foundation of civilization and culture. Students will learn how western civilization has been, and continues to be, shaped by insights from the humanities, the social, physical and life sciences, and the fine arts. It will analyze how change in cultures has occurred through the action of political and religious movements, and as a result of technological change, intellectual discoveries, and artistic achievements. This interdisciplinary course is taught by professors from several departments. It is intended as an integrating course that will offer students more points of contact with, and give wider significance to, their studies by pointing out the inter-connectedness of ideas and movements. Six credits.

Theatre

A student may take a maximum of six credits in THEA in the first year of study.

101Introduction to Acting I
An introduction to the art and craft of stage acting, including voice production, movement, character study and text interpretation. Students will be introduced to the language of theatre and given the opportunity to take part in *Theatre Antigonish* productions directed by professional directors. Prerequisites: permission of the instructor required. Students must submit a resume of related experience and background, or a letter of interest to the instructor. Subject to final approval of the University Senate. Three credits.

102Introduction to Acting II
This course will continue to initiate the student in different varieties stage acting, building on the skills learned in THEA 101. Scheduled for second term, the course will provide an opportunity for students to study the performance of musicals and one-act plays. An element of performance will be part of the course requirement. Prerequisite: THEA 101. Subject to final approval of the University Senate. Three credits.

111 Introduction to Stagecraft I
An introduction to some of the disciplines of technical theatre, such as: properties (design, construction and methods of acquiring), lighting (the history of lighting; introduction to lighting equipment and control boards), sound (study of equipment; resources; design of a sound-scape), and set construction (basic construction methods and materials).

Prerequisites: permission of the instructor required. Students must submit a resume of related experience in theatre or a letter of interest to the instructor. Subject to final approval of the University Senate. Three credits.

112 Introduction to Stagecraft II
This course will continue to educate the student in some of the disciplines of technical theatre, such as properties, set construction, lighting, and sound. Students will be able to specialize in two of the areas. Students will also be introduced to the basics of stage management. Prerequisite: THEA 111. Subject to final approval of the University Senate. Three credits.

7.23 MATHEMATICS, STATISTICS, AND COMPUTER SCIENCE

J. Apaloo, Ph.D.
R. Fry, Ph.D.
C. Gallant, Ph.D.
S. Khan, M.Sc.
M. Lin, Ph.D.
W. MacCaull, Ph.D.
A. MacEachern, Ph.D.
J. Quinn, Ph.D.
E. Schuegraf, Ph.D.
M. van Bommel, Ph.D.
R. van den Hoogen, Ph.D.
P. Wang, Ph.D.
L. Yang, Tek.Lic.
P. Zhou, Ph.D.

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 and Computer Science and 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. G*eneral requirements for these degrees in sections 4 and 5.*

Department Regulations
The following pairs or groups are considered so similar that a student may not receive credit for both: MATH 111 and 121; MATH 112 and 122; STAT 201, 231 and 224; MATH 221 and 367; MATH 222 and 267; MATH 223 and 253; CSCI 160 and INFO 151, 152; CSCI 100, 235 and INFO 130/132; CSCI 254/255.

MATH 100 and 205 may not be used to satisfy department requirements for advanced major and honours degrees.

The senior seminar, MATH 491, and a research paper are required for all 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 7.11.

MATHEMATICS

All students who want to pursue a major, advanced major or honours degree in mathematics must take the following core courses: MATH 111, 112, 277, 253, 267; CSCI 125 or 160.

Major in Mathematics

In addition to core requirements, a course in probability or STAT is required. This may be STAT 201 (if the degree is in the Faculty of Arts), 231 or 333.

Advanced Major and Honours Programs

Advanced Major and Honours students in mathematics may specialize in mathematics, statistics or computational mathematics. Descriptions for each specialization may be obtained from the department chair, but the following rules apply.

Advanced Major in Mathematics

In addition to core courses, MATH 254, 491 and a STAT course are required. This may be STAT 333 (recommended), 231 or 201 (if the degree is in the Faculty of Arts). Additional courses must include six credits of MATH or STAT courses at the 300 or 400 level, and six credits at the 300 or 400 level, which may be chosen from MATH, STAT or CSCI.

Advanced Major in Computational Mathematics

In addition to core courses, MATH 254, 491; CSCI 255, 256; and a STAT course are required. This may be STAT 333 (recommended), 231 or 201 (if the degree is in the Faculty of Arts). Additional courses must include nine credits from MATH 347, 367, 384, 387, 481; CSCI 235, 335, 365. Three credits may be chosen from MATH, STAT or CSCI.

Honours in Mathematics

In addition to core courses, MATH 254, 354, 366, 367 or 221, 491, 493 and STAT 333 are required. Additional courses must include at least 15 MATH or STAT credits at the 300 or 400 level, with no fewer than three credits at the 400 level.

Honours in Computational Mathematics

In addition to the core courses, MATH 254, 491, 493; STAT 333; CSCI 255, 256 are required. Additional courses are required depending on which of three specialized streams is pursued. A list of required courses is available from the department chair.

Typical Advanced Major and Honours Pattern:

Year 1	MATH 111 and 112; CSCI 160
Year 2	MATH 253, 254, 267, 277; CSCI 160 unless completed in Year 1
Year 3	STAT 333; additional MATH, STAT or CSCI courses
Year 4	MATH 491; additional MATH, STAT or CSCI courses

[**AR] Indicates Designated Course in Aquatic Resources**

MATH 100 Mathematical Concepts
This course surveys interesting and/or useful topics from diverse areas, including geometry, probability, statistics, mathematics of finance, number theory. Students will be actively engaged in a problem-solving approach to these topics that will emphasize processes such as abstraction, pattern recognition, deduction and generalization. One section will be restricted to students interested in elementary education. Acceptable for credit in the Faculty of Arts only. Six credits.

MATH 111 Calculus I
An introduction to differential calculus of a single variable, with applications to the 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. Three credits and a one-hour laboratory.

MATH 112 Calculus II
An introduction to integral calculus for functions of one variable. Topics include: the definition of 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. Prerequisite: MATH 111. Three credits and a one-hour laboratory.

MATH 121 Calculus I for Engineers
Cross-listed as ENGR 121; see ENGR 121. Three credits and problem session.

MATH 122 Calculus II for Engineers
Cross-listed as ENGR 122; see ENGR 122. Three credits and problem session.

STAT 201 Elementary Statistics [AR]
This course teaches statistics for students in business and arts. Topics include: descriptive statistics; data collection, tabulation, and presentation; measures of central tendency and variability; binomial, normal, and chi-square distributions; estimation of parameters and tests of hypothesis; simple linear regression and correlation; introduction to a statistical computer package. Cross-listed as HKIN 201. Three credits.

MATH 205 Business Mathematics
A presentation of mathematics applicable to business, including functions, modeling, linear programming, matrix algebra, and probability. Use of spreadsheets will be a fundamental part of this course. Prerequisite: INFO 131. Acceptable for credit in the Faculty of Arts only. Three credits.

MATH 221 Differential Equations for Engineers
Cross-listed as ENGR 221; see ENGR 221. Three credits and problem session.

MATH 222 Calculus III for Engineers
Cross-listed as ENGR 222; see ENGR 222. Three credits and problem session.

MATH 223 Linear Algebra for Engineers
Cross-listed as ENGR 223; see ENGR 223. Three credits and problem session.

STAT 224 Probability and Statistics for Engineers
Cross-listed as ENGR 224; see ENGR 224. Three credits and problem session.

STAT 231 Statistics for Students in the Sciences [AR]
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. The notion of statistical significance and the communication of statistical evidence are stressed, as is introduction to a statistics computer package. Prerequisite: MATH 112 or 122. Three credits and a one-hour laboratory.

MATH 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. Prerequisite: MATH 112 or 122. Three credits.

MATH 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.

MATH 267 Calculus III
Topics include: the Taylor polynomial theorem; indeterminate forms and l'Hopital's rule; improper integrals; infinite and power series and tests of convergence; parametric equations; partial differentialation; and selected concepts from multivariate differential calculus, and multiple integration. Prerequisite: MATH 112 or 122. Three credits.

MATH 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. Prerequisite: MATH 112 or 122. Three credits.

MATH 287 Natural Resource Modeling [AR]
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. Prerequisites: MATH 111, 112. Three credits. Offered 2003-2004 and in alternate years.

STAT 301 Survey Sampling Design
Topics include simple random sampling, stratified sampling, systematic sampling, cluster sampling, multistage sampling, bootstrap samples. Prerequisite: an introductory STAT course. Three credits and a one-hour laboratory. Offered in 2003-2004 and alternate years.

STAT 331 Statistical Methods [AR]
Cross-listed as BIOL 331; see BIOL 331. Three credits and a one-hour laboratory.

STAT 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 253, 267. Three credits.

STAT 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.

MATH 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; Polya's method of enumeration; finite field and

combinatorial design; graph theory. Prerequisite: MATH 277. Three credits. Offered in alternate years; not offered 2003-2004.

MATH 354 Modern Algebra I
This course introduces algebraic systems and the fundamental algebraic concepts. Applications to diverse areas such as coding theory, crystallography, circuits, logic, geometry, and graph theory will be considered. Prerequisites: MATH 254, 277. Three credits. Offered 2003-2004 and in alternate years.

MATH 361 Advanced Vector Calculus
Topics covered in this course include: vectors; vector differentiation including gradient, divergence and curl; vector integration including the Gauss and Stokes theorems. Prerequisites: MATH 222, 223 or 267, 253. Three credits.

MATH 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. Prerequisite: MATH core courses. Three credits. Offered in alternate years; not offered 2003-2004.

MATH 367 Differential Equations [AR]
Topics covered include: first- and second-order linear differential equations; systems of linear differential equations; methods of solution including Laplace transforms and series solution; introduction to nonlinear differential equations and numerical methods. Prerequisite: MATH 222 or 267. Three credits. Not offered 2003-2004. In place of this course, students may take MATH 221.

MATH 371 Modern Geometries
A brief survey of geometries including projective, affine, similarity, equiareal, Euclidean, and nonEuclidean. Emphasis is on the invariants of transformational geometry. Prerequisite: MATH 277. Three credits. Offered 2003-2004 and in alternate years.

MATH 372 Theory of Numbers
Topics include: divisibility of integers; congruences; the Chinese remainder theorem; quadratic residues and nonresidues; Gaussian reciprocity law; number theoretic functions; and the Moebius inversion formula. Prerequisite: MATH 277. Three credits. Offered 2003-2004 and in alternate years.

MATH 384 Numerical Methods
This course covers methods used to solve mathematical problems on computer systems, including mathematical background and error analysis of solutions to nonlinear equations; polynomial interpolations; integration and differentiation; quadrature methods; systems of equations and differential equations. Prerequisites: MATH 222, 223 or 253, 267; a programming course. Three credits. Offered 2003-2004 and in alternate years.

MATH 387 Mathematical Modeling [AR]
This course teaches the use of mathematical models to solve real-world problems. The modeling cycle will be practiced using problems found in the real world. Prerequisites: MATH 222, 223 or MATH 253, 267. Three credits. Offered in alternate years; not offered 2003-2004.

MATH 391 Mathematical Logic
Symbolic logic is introduced and the concepts of tautology and proof are studied. Using formal languages, propositional and predicate logic are presented, including the completeness theorem for predicate logic. Sequent style deductive systems and tableaux methods of proof are introduced. Prerequisite: MATH 277 or permission of the instructor. Three credits. Offered in alternate years; not offered 2003-2004.

STAT 435 Regression Analysis
Topics include: straight-line regression, multiple regression, variable selection, residual analysis, multicolinearity, multiple and partial correlations, analysis of covariance, logistic regression. Prerequisite: STAT 231 or 333. Three credits and a one-hour laboratory. Offered in alternate years; not offered 2003-2004.

MATH 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 2003-2004 and in alternate years.

MATH 462 Complex Variables
Topics include: complex numbers, elementary functions, series and integration, Laurent series, and residue theory. Prerequisites: MATH 221, 222 or 361. Three credits. Offered in alternate years; not offered 2003-2004.

MATH 466 Real Analysis II
Material includes: topology of Euclidean nspace; differentiation; Riemann Stieltjes integration; limits and continuity in ndimensions; differentiation of nonlinear transformations; and the implicit function theorem. Prerequisite: MATH 366. Three credits. Offered in alternate years; not offered 2003-2004.

MATH 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. Prerequisite: MATH core courses. Three credits. Not offered 2003-2004.

STAT 472 Topics in Statistics
This course will cover a selection of current statistical topics, such as sampling theory, time-series analysis, design and analysis of experiments, bootstrap methods, and multivariate analysis. Prerequisite: STAT 231 or 333. Three credits. Not offered 2003-2004.

MATH 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, 221 or 367. Three credits. Offered 2003-2004 and in alternate years.

MATH 491 Senior Seminar
All senior honours and advanced major candidates must perfect their skills in presentation and writing. The honours thesis and research papers required of advanced majors constitute part of this course. No credit.

MATH 493 Senior Thesis (Honours). Three credits.

↖ MI'KMAQ

See Modern Languages in 7.24

7.24 MODERN LANGUAGES

Full Time
M. Arpin, Ph.D.
M. Bourbeau-Walker, Ph.D.
U. Fabijancic, Doc. IIIe cycle
V. Kocay, Ph.D.
E. Langille, D. ès L.
R. LeBlanc, Ph.D.
G. Wood, DML
Part Time
N. Mendez, MA
M. Paz MacKay
C. Rancy, Doc. IIIe cycle
D. Toney, 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 students, depending on their background.

a) First time registrants who have Grade XI French or its equivalent should enroll in FREN 110. Those who have completed Grade XII French or its equivalent should enroll in FREN 115. A placement test will be administered on line, as a result of performance on this test, a student may be moved to another course.
b) Students who do not have the equivalent of Grade XI French may register in FREN 100.
c) Students with native proficiency may register in any 200-level course.

Note: The department reserves the right to place students.

Program Requirements
Candidates for the major, advanced major or honours degrees are strongly advised 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.

Major Program
A student may take a major in French by completing 36 credits in FREN (excluding FREN 100, 110), including FREN 215, 300 and at least 12 credits at the 300 or 400 level. A thesis is not required. *See section 4.*

Advanced Major Program

A student may take an advanced major in French by completing 36 credits in FREN (excluding FREN 100 and FREN 110), including FREN 215, 300 and at least 18 other credits at the 300 or 400 level. The senior seminar, FREN 491, is an additional, non-credit requirement, comprising a thesis in French of approximately 4,000 words. *See section 4*.

Honours Program

A student may take an honours degree in French by completing 60 credits in FREN (excluding FREN 100, 110), including FREN 215, 300 and at least 30 other credits at the 300 or 400 level. Twelve of the 60 credits may be taken in a related field with department permission. The senior seminar, FREN 491, is an additional, non-credit requirement, comprising a thesis in French of approximately 6,000 words. *See section 4*.

Transfer Credit for French and Spanish Summer 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 XII French. Normally, transfer credit will not be granted for courses taken five years prior to admission.
b) Students must obtain written permission from the dean prior to enrolling in an immersion course if credit is sought.
c) Immersion courses may count as electives only.

Summer Language Bursary Program

For information on the summer language bursary program contact the provincial coordinator, French language bursaries, Department of Education, Box 578, Trade Mart Building, Halifax, NS, B3J 2S9, 902-424-6646. For information on immersion courses in France during the summer contact the French Consulate, C.P. 1109, Moncton, NB, E1C 8P6, 506-857-4191. Information about either program may be obtained 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 3.19. For information about this program, see the chair or designate.

Notes:

a) A pair, a major or a minor must be in one language. A student who majors in French or completes a minor in French may also count Spanish as a pair. Other students may complete a minor in Spanish.
b) Students hoping to pursue master's or doctoral studies in the humanities or social sciences are reminded that these programs often carry language requirements.

Comparative literature

310 20th-Century Romance Literature (English Translation)

A study of the major works, in translation, of contemporary francophone and Hispanic writers. Prerequisite: one of ENGL 100, FREN 100: 110 or 115: SPAN 100; or permission of the chair. Cross-listed as FREN 310 and SPAN 310. Six credits.

335 Traditional Folklore in European Children's Literature (English Translation)

A comparative reading of European children's literature starting with Charles Perrault's *Mother Goose Tales* (1697). Emphasis will be placed on the study of the narrative structure of the classic fairy tale as immortalized by the Brothers Grimm *(Grimm's Fairy Tales)*, Hans Christian Andersen (*The Ugly Duckling, The Emperor's New Clothes*), or Oscar Wilde (*The Happy Prince*). Film adaptations may be used to study core texts. Other examples may be cited from the Celtic or Slavic cultural spheres. Prerequisite: one of CELT 120; ENGL 100; FREN 110, 115; SPAN 100; or any COML course. Three credits.

345 The Tradition of the Animal Fable in European Children's Literature (English Translation)

The majority of European animal fables, including those of Jean de La Fontaine, are derived from Aesop's succinct tales of human vices, follies and virtues. This course is an account of the influence of this tradition on European children's literature. Other important variations on the theme include Charles Perrault's *Puss in Boots.* Film adaptions may be used to study core texts. Examples of recent writing may include modern literature or other literary traditions (African or Native American) in which animals or non-humans take a human form. Prerequisite: one of CELT 120; ENGL 100; FREN 110, 115; SPAN 100; or any COML course. Three credits.

French

100 Introduction to the French Language

Designed for students who have had little or no French. FREN 100 is a credit course; however, it may be used only as an elective. FREN 100 teaches basic French vocabulary and sentence structure. The language is assimilated through a

variety of techniques, including drills, phonetics and memorization of short dialogues. Emphasis is on building oral/aural skills. Class participation is essential. Some written work and reading will be required. Six credits.

110 French Language I
Designed as the entry-level course for students who have completed at least grade XI French, this course is an intensive review of the basic structures of the French language. Weekly laboratory assignments. Six credits.

Notes:
a) The department reserves the right to refuse admission to this course to students who have not completed Nova Scotia grade XI French, or equivalent, and/or whose knowledge of French is inadequate according to the department placement test.
b) FREN 110 may not be used as credit toward a major, advanced major or honours degree. It may be used toward a minor in French, as part of a pair or as an elective. As an exception, a pair in French may be FREN 110 and 115.

115 French Language II
Designed as a follow-up to FREN 110, this course is also suggested as the starting point for prospective major, advanced major and honours students. The course is a review of more advanced grammatical and syntactical structures. It also introduces the student to the technique of writing compositions, to short literary texts and to basic elements of translation. Language lab component. Prerequisite: FREN 110 (normally with a grade of at least 60) or a good result on the placement test. Six credits.

200 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. Six credits.

215 French Language III
Focuses on complex sentence structure and writing techniques. Special emphasis is placed on the acquisition of reading skills and on literary usage. Language lab component. Required for the major, advanced major and honours degrees. Prerequisite: FREN 115 (normally with a grade of at least 60) or an exceptional result on the placement test. Six credits.

216 Survey of French Literature
A study in historical context and sequence of the most important works written in French from the year 1000 to the present. This course is strongly recommended for all majors, advanced majors and honours students in French. Prerequisite: FREN 115. Six credits.

220 Language and Culture
A study of different texts and issues relating to the francophone world, including selections from literary works, newspapers and periodicals. Emphasis is on the acquisition of vocabulary, comprehension of texts and student participation. This course is strongly recommended for the major in French. Co-requisite: FREN 115. Six credits.

225 (Francais 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 setting will familiarize students with commercial correspondence and professional telephone etiquette. Prerequisite: FREN 115. Three credits.

235 (Francais des affaires II) Business French II
Continuation of FREN 225. Introduction to the language of specialized areas of business: marketing, finance, management, as well as 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 115 or permission of the chair. Three credits.

300 French Humanism
This course gives students of French language and literature an in-depth understanding of the literary, philosophical and cultural questions that permeate French literature. Emphasis will be synchronistic, stressing similarities among works down through the centuries. The resulting portrait of a thousand-year literary tradition will highlight the French contribution to world literature and civilization. Students will be initiated into literary research and the art of the *dissertation française*. Required for major, advanced major and honours degrees in French. Pre- or co-requisite: FREN 215. Six credits.

310 20th-Century Romance Literature (English Translation)
Cross-listed as COML 310 and SPAN 310; see COML 310. Six credits.

314 Selected Topics in French Studies

A wide-ranging course introducing current topics in French. The specific content changes from year to year, and may reflect faculty involvement in a specific area of research; subjects may include children's literature, French women writers. Pre- or co-requisite: FREN 200, 215 or 220. Three credits.

315 Selected Topics in French Studies (French-Canadian Literature, 1960 to the present)
A continuation of FREN 314. Prerequisite: FREN 314. Three credits.

316 17th-Century French Literature: Literature and Society
An introduction to plays by Pierre Corneille, Jean Racine, and Jean-Baptiste Molière, to the poetic trends of the classical era, to Jean de La Fontaine's fables and to other works (novels and minor genres) by authors such as Jean de la Bruyère, Marie-Madeleine de La Fayette, and François de la Rochefoucauld. This course explores the ideologies of the *grand siècle* and introduces some of its major institutions. Six credits.

321 French Cinema
A study of France's unique contribution to the seventh art starting with the Frères Lumières' moving pictures in 1895 and covering the entire history of French cinema. Emphasis will be placed on detailed study of such masterpieces as *La Grande Illusion* and *Les Enfants du Paradis*. Prerequisite: FREN 115 or permission of the chair. Three credits.

326 18th-Century French Literature
Le Siècle des Lumières: through representative works from the principal literary genres, this course explores the ideas that shaped 18th-century philosophical thought in France. Authors will include: Pierre Augustin de Beaumarchais, Denis Diderot, Choderlos de Laclos, Alain-René Lesage, Pierre Marivaux, Baron de Montesquieu, Abbé Prévost, Jean-Jacques Rousseau, Bernardin de St-Pierre, and Voltaire (François-Marie Arouet). Six credits.

336 19th-Century French Literature
Traces the development of French literature from the French Revolution to the end of the 19th century, from Madame de Staël and François René de Chateaubriand to Stéphane Mallarmé. Six credits.

340 Introduction to Linguistics
The primary objective of this course is to make linguistics accessible and comprehensible to students who have little or no previous knowledge of linguistic concepts. The subject matter will be divided into four distinct but related parts: phonetics and phonology; morphology and syntax; semantics; the application of linguistics to the understanding and analysis of literary texts. Six credits.

346 20th-Century French Literature
A study of the literary and ideological trends in 20th-century novels, plays and poetry. Six credits.

356 French Canadian Literature: 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. Six credits.

366 French Canadian Literature: Révolution tranquille to the Present
A study of the major literary forms and authors of French Canada from the *Révolution tranquille* (ca. 1960) to the present day. Emphasis is placed on a structural and thematic approach to narrative, set against a background of cultural and ideological influences. Particular attention will be paid to the reasons behind the explosion in literary output which occurred during the 1960s and which continued through the 1970s; to the concept of *écrivain engagé*; and to more recent literary tendencies. Authors include: Yves Beauchemin, Marie-Claire Blais, Roch Carrier, Marcel Dubé, Jacques Godbout, Anne Hébert, Gaston Miron, Paul Monette, Yves Thériault, Michel Tremblay. Six credits.

376 Acadian Literature
A critical investigation of the historical, socio-cultural, linguistic and literary significance of Acadian writing. Consideration will also be given to its stylistic evolution, from oral literature to poetry, novels and short stories. Six credits.

400 Medieval and Renaissance French Literature
A study of literary genres from the *chanson de geste* and the novels of chivalry to the poetry of the *Pléiade*, with analysis of selected texts by François Rabelais, Michel de Montaigne and other authors. This course provides a literary view of the emergence of modern French culture from its medieval origins. Six credits.

456 Literary Criticism *(Roman et Société)*
The principal objective of this course is to provide an introduction to the field of French literary criticism and to illustrate by application several analytical methods based on current schools of literary criticism. After establishing a socio-historic background, the course will focus in detail on five major schools of textual analysis springing from the concepts of structuralism and post-structuralism: *narratologie, sémiotique, psychocritique, thématique,* and *sociocritique*. Three credits.

457 French Poetry from the Symbolist Movement to the Present

A study of the works 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: any 200-level French course or permission of the chair. Three credits.

491 Senior Seminar and Thesis
This course is 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. The student works under the supervision of a chosen professor who guides the selection of thesis topic, the preparation of materials and research methods, the assignment of readings, and the writing of a thesis in French of approximately 4,000 words for an advanced major and 6,000 words for an honours student. Student and professor meet once a month to review progress. Required for all advanced major and honours students in their final year of study. No credit.

German

100 First-Year German
An introduction to German language and culture, this course emphasizes spoken language and basic skills in reading and writing. German are also studied. Six credits.

200Second-Year German
A continuation of GERM 100, this introduces the student to advanced grammatical patterns and structures. Emphasis is placed on acquisition of oral and written skills. Short readings will enrich the student's vocabulary and introduce German literature. Prerequisite: GERM 100 or equivalent. Six credits.

Mi'kmaq

105 Introduction to Mi'kmaq
Introduces students to various aspects of the Mi'kmaq language: phonetics, morphology, semantics, syntax, and language acquisition. Comparisons 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 students 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.

Spanish

100 First-Year Spanish
An introduction to the Spanish language. Students will develop the ability to express themselves in Spanish, while learning the culture and traditions of the Hispanic world. Oral and written work are stressed equally. Language lab component. Six credits.

200 Second-Year Spanish
A continuation of SPAN 100 with more advanced literary readings and written assignments. Prerequisite: SPAN 100 or equivalent. Six credits.

300 Hispanic Civilization to 1800
A study of Hispanic civilization in the Iberian Peninsula and in the New World to 1800 with emphasis on the age of exploration and discovery. Students completing this course can expect to be able to read advanced texts in Spanish. Prerequisite: SPAN 200 or equivalent. Six credits.

310 20th-Century Romance Literature (English Translation)
Cross-listed as COML 310 and FREN 310; see COML 310. Six credits.

320 Hispanic Civilization, 1800 to the Present
A study of 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. The course will emphasize Spanish literature in the New World. Prerequisite: SPAN 200 or equivalent. Six credits.

7.25 MUSIC

Full Time
C. Beckwith, Artist in Residence

D. Burghardt, M.Mus.
G. Gregory Carter, M.Mus.
T. Daniels, M.Mus.
A. Genge, Ph.D.
T. O'Mahoney, M.Mus.
G. Smith, M.Mus.
P. Tynan, M.Mus.
Part Time
A. Sutherland, M.Mus.
O. Stewart-Robertson, B.Mus
Visiting Artist
David Restio

The Department of Music faculty offers a curriculum that focuses on jazz studies and contemporary music. Degrees and diplomas have traditionally been a window to graduate study and commercial applications in the field of music.

All courses offered by the Department of Music are available to any student who satisfies the prerequisite and audition requirements.

Bachelor of Arts in Music with Honours or Advanced Major

See section 4.11 for the requirements for programs with jazz concentrations.

Typical Course Pattern:

Year 1	MUSI 101, 103, 106 or 107, 117, 118, 165, 190; 6 credits arts/science electives
Year 2	MUSI 201, 203, 206 or 207, 219, 222, 265, 290; 6 credits arts/science electives
Year 3	MUSI 306 or 307, 315 (115, 116), 335 (435), 395; 18 credits arts and science electives
Year 4	MUSI 406 or 407, 415, 416, 495; 18 credits arts/science electives

Bachelor of Music with Honours

Typical Course Pattern:

Year 1	MUSI 101, 103, 106 or 107, 117, 118, 165, 190; 6 credits arts/science electives
Year 2	MUSI 201, 203, 206 or 207, 219, 222, 265, 290; 6 credits arts/science electives
Year 3	MUSI 304, 306 or 307, 315 (115, 116), 325, 335 (435), 365, 390; 6 credits arts/science electives
Year 4	MUSI 406 or 407, 415 (302), 416 (400), 420 (425), 465, 490; 6 credits arts/science electives

Diploma in Jazz Studies

See section 4.11.5 for program requirements.

Typical Course Pattern:

Year 1	MUSI 101, 103, 106 or 107, 117, 118, 165, 190; 6 credits arts/science electives
Year 2	MUSI 201, 203, 206 or 207, 219, 222, 265, 290; 6 credits arts/science electives

Graduate Diploma

See section 4.11.6 for program requirements.

The minimum grade requirement of 60 listed below applies only to students enrolled in the degrees BA Mus. Jazz, B.Mus. Jazz, and BA with Advanced Major in Music.

101 Structure of Music I
This course covers the fundamentals and basic concepts of music theory and notation. 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
Participation in the StFX University Concert Choir and the StFX University Vocal Jazz Choir provides students with an opportunity to develop basic vocal fundamentals, including sound production, diction, language usage, and sight reading, through the rehearsal and performance of selected music relevant to the given ensemble. Three credits over the full academic year.

107 Instrumental Ensembles: Includes Big Band, Combos, and Percussion Ensembles
This course will introduce the basic fundamentals of ensemble performance. Proper instrumental balance and function within an ensemble will be addressed. Sight-reading is an essential skill for any performer. Methods of properly negotiating passages of music on sight will be stressed. Students will be expected to prepare concert materials outside of the rehearsal format. Prerequisite: successful audition. Three credits over the full academic year.

117 History of Popular Music
A survey course detailing the development of popular music since 1945. Topics include jazz, songs related to the jazz experience, blues, pop, rock and contemporary music. Three credits.

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.

165 Jazz Styles and Literature
An introductory course in improvisational style from 1900 to the present. Extensive listening and viewing will be required. Essays will be required based on the reading list. Three credits.

190 Applied Performance I
This course provides students with instruction on a major applied instrument or voice. Functional piano skills are also covered. Six credits.

195 Applied Performance I A
This course provides students with instruction on a major applied instrument or voice. Functional piano skills are also covered. Enrollment is restricted to students in the BA with Major in Music. Three credits.

201 Structure of Music II
A study of chromatic harmony and advanced modulation and counterpoint. Includes harmonic analysis of appropriate music. Prerequisite: MUSI 101 with a minimum grade of 60. Three credits.

203 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.

206 Vocal Ensemble
A continuation of MUSI 106. Three credits over the full academic year.

207 Instrumental Ensembles
A continuation of MUSI 107. Prerequisite: successful audition. Three credits over the full academic year.

219 Celtic Music
An historical and musical survey of Celtic music focusing on the Cape Breton and Scottish traditions. The curriculum includes frequent lectures and in-class performances by world-renowned Celtic scholars and musicians. Three credits.

222 The Business of Music
What a career musician needs to know about the music business. Topics include copyright applications, music publishing, arts management, grant writing, and the recording industry. Guest lecturers will enhance the curriculum. Open to non-music students with permission of the instructor. Students in BSAD and BIS may count this course as an arts/science or open elective only. Three credits.

265 Jazz Styles and Literature: The Bebop Era
A course in the analysis of the players, particularly Thelonious Monk, Miles Davis, Charlie Parker, and Dizzy Gillespie, and their innovations which brought the music to its present maturity. Three credits.

290 Applied Performance II
This course provides students with instruction on a major applied instrument or voice. Functional piano skills are covered. Six credits.

295 Applied Performance II A
This course provides students with instruction on a major applied instrument or voice. Functional piano skills are also covered. Restricted to students in the BA with Major in Music. Three credits.

304 Small Ensemble Arranging
Combines jazz arranging and orchestration with writing assignments for small ensembles. Prerequisite: MUSI 203 with a minimum grade of 60. Three credits.

306 Vocal Ensemble
A continuation of MUSI 206. Three credits over the full academic year.

307 Instrumental Ensembles

A continuation of MUSI 207. Prerequisite: successful audition. Three credits over the full academic year.

315 History of Music I
An overview of musical styles and forms from the Middle Ages to the 19th century. This course addresses the broad spectrum of musical contributions that allowed for the development of Western music. 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.

335 Music Technology
This course introduces the basic technology used to notate and edit music. Students will also be introduced to standard industry practices for the production of commercial music. Three credits.

365 Jazz Styles and Literature
An in-depth study of the tenor saxophonist in jazz music with emphasis on John Coltrane, Sonny Rollins, and Wayne Shorter, as well as the modernists they influenced. The second term will be devoted to an analytical view of the Avant Garde Movement and the 3rd stream. Three credits.

375Contemporary Songwriting I
An in-depth study of the greatest popular songwriters and their music from the mid-1900s to the present. Artists include Bob Dylan, The Beatles, The Beach Boys, The Rolling Stones, Stevie Wonder, Joni Mitchell, Steely Dan, Paul Simon and Sting as well as contemporary artists such as Radiohead, Coldplay, Chantal Kreviazuk and Beck. Prerequisite: general knowledge of basic music theory. Three credits.

376Contemporary Songwriting II
A continuation of MUSI 375, this course puts into practice the various lyrical and musical devices analyzed and discussed in Contemporary Songwriting I. Students are required to compose lyrics and music in the styles of the aforementioned artists and are encouraged to assimilate these techniques in writing new song material. Prerequisite: MUSI 375; general knowledge of basic music theory. Three credits.

385 Selected Topics I. Three credits.

386 Selected Topics II. Three credits.

390 Applied Performance III
This course provides students with instruction on a major applied instrument or voice. Students in the B.Mus. degree program will write a thesis as a component of this course. Six credits.

395 Applied Performance III A
This course provides students with instruction on a major applied instrument or voice. Functional piano skills are also covered. Three credits over the full academic year.

406 Vocal Ensemble
A continuation of MUSI 306. Three credits over the full academic year.

407 Instrumental Ensembles
A continuation of MUSI 307. Prerequisite: successful audition. Three credits over the full academic year.

415 History of Music II
A survey of the techniques employed in 19th- and early 20th- century music. This includes analysis of the form and harmonic content of selected works. Special consideration will be given to works and events that lead to the transformation of musical language into 20th-century models. Prerequisite: MUSI 315 with a minimum grade of 60. Three credits.

416 History of Music III
A study of modern composition techniques, including analysis of selected contemporary music. Prerequisite: MUSI 415 with a minimum grade of 60. Three credits.

420 Advanced Arranging/Orchestration
Combies analysis of contemporary composers with orchestration for ensembles. Prerequisite: MUSI 304 with a minimum grade of 60 or permission of the instructor. Six credits.

465 Jazz Styles and Literature
An examination of the E.C.M. explosion of the 1960s, 70s, and 80s, and modern European influences. Three credits.

490 Applied Performance IV
Provides students with instruction on a major applied instrument or voice. A final recital is required. Six credits.

495 Applied Performance IV A
This course provides students with instruction on a major applied instrument or voice. A final recital is required. Three credits over the full academic year.

499 Directed Study
In consultation with the department, students may undertake a directed study program in an approved area of interest. See section 3.5. Six credits.

7.26 NURSING

S. Adamson, B.Sc.N.
M. Alex, MN, RN
E. Arbuthnot, MN, RN
D. Beiswanger, B.Sc.N, RN
S. Bowman, B.Sc.N., RN
C. Cameron, M.Ad.Ed., RN
A. Chisholm, B.Sc.N., RN
M. Chisholm, B.Sc.N., RN
J. Cormier, MN, RN
L. Farrell, B.Sc.N., RN
Y. Fraser, B.Sc.N., RN
A. Gillis, Ph.D., RN
H. Graham, MN, RN
P. Hansen-Ketchum, MN, RN
P. Hawley, MN, RN
W. Jackson, Ph.D.
M. Kennedy, RN
B. MacDonald, MS, M.Ed., RN
C. MacDonald, B.Sc.N., RN
E. MacFarlane, M.Ad.Ed., RN
A. MacIsaac, M.Sc., RN
M. MacLellan, MN, RN
M.MacNeil, B.Sc.N., RN
E. McGibbon, RN
J. Mosely, B.Sc.N., RN
C. Mrazek, MN, RN
A. Murdock, B.Sc.N., RN
J. Rogers, B.Sc.N., RN
K.Saulnier, B.Sc.N., RN
J. Shaw, Ph.D., RN
B. Sproull-Seplaki, M.Sc.N., RN
B. Sutherland, B.Sc.N., RN
C. Venedam-Marchand, B.Sc.N., RN

Faculty in Sydney:
J. Bailey, B.Sc.N. RN
E. Buffet, MN, RN
C. Currie, B.Sc.N., RN
O. Griscti, MN, RN
B. Jacono, M.Sc.N., RN
J. Jacono, Ph.D., RN
E. Kennedy, MN, RN
C. MacPhee, B.Sc.N., RN
C. McIsaac, M.Ed., B.Sc.N., RN
S. Profit, M.A.Ed., RN

Bachelor of Science in Nursing

The normal sequence of courses is listed below. *See section 5.10 for program requirements.*

Year 1	BIOL 105, 115; CHEM 150; NURS 105, 115, 125; PSYC 100; RELS 120
Year 2	BIOL 251, 252; NURS 205, 215, 225, 235, 245, 260; NURS 250 (intersession); HNU 261, 263
Year 3	NURS 300 or 310, 305, 315, 345, 355, 330; 6 credits arts/science electives
Year 4	NURS 405, 415, 425, 493, 491; 9 credits open electives; 6 credits arts/science electives

B.Sc.N. with Advanced Major

The normal sequence of courses is the same as above, except:

Year 4 NURS 405, 415, 425, 491, 493, 499; 9 credits open electives; 3 credits arts/science elective

B.Sc.N. with Honours

The normal sequence of courses is the same as above, except:

Year 3 NURS 300/SOCI 300

Year 4 NURS 405, 415, 425, 493, 491, 496, 498; 3 credits NURS elective; 6 credits open electives; 3 credits arts/science elective

105 Conceptual Model for Nursing

Focuses on nursing as a profession and its historical evolution to the present. Theoretical and philosophical bases of nursing are explored, with a focus on Orem's self-care theory. The role of the professional nurse is explored. Factors that influence contemporary nursing, such as legal and ethical issues, health care reform, and changing health care priorities are discussed. This course introduces the philosophy and framework for nursing at StFX. Three credits.

115 Health Promotion and Learning

Explores the concepts of health and wellness, health promotion, and learning within a framework of self-care theory. This course covers lifestyle issues and health behavior within the context of the wider socio-cultural, economic, political and ecological issues which determine health. This course provides opportunities for students to reflect upon theories of health and wellness behavior and its determinants and consequences; to develop interviewing and health assessment skills with a selected client; to develop skills in facilitating client learning about health and helping clients grow towards more positive wellness. Prerequisite: NURS 105. Three credits.

125 Introduction to Nursing

Provides a foundation for nursing practice with an introduction to the theory and practice of nursing skills and techniques. The nursing process and Orem's theory of self-care are used as organizing frameworks for the course. The focus is on selected skills appropriate to meet the needs of individuals with self-care deficits. Classroom instruction and supervised clinical practice are integral components of this course. Three credits over the full academic year.

Note: Second-year courses pursue a common theme: community health with a focus on health problems and programs as they relate to the needs of individuals of all age groups within the family and the community. Students will begin NURS 425 in the second term of their second year.

205 Community Health Nursing

This course explores community health nursing practice in the context of a health care system that is undergoing change. The major themes of this course are community assessment; population-focused nursing practice; and population health, including epidemiology and health determinants. Three credits.

215 Community Mental Health Nursing

This course provides students with a comprehensive approach to the practice of mental health nursing. The emphasis will be on self-awareness, communication, critical thinking, and a holistic approach in applying the nursing process to care. Attention will be drawn to common stressors, and the impact of the interrelationship among mind/body/spirit in precipitating these responses. The role of nurses in promoting mental health will be discussed. Legal and ethical issues and a framework for ethical decision making will be presented. The practice component of the course will consist of communication labs. Three credits.

225 Community Parent-Child Nursing

This course explores the role of the nurse in promoting the health of the child-bearing and child-rearing family in the community. The course will focus on normal developmental processes in the context of family, community and society. Trends and issues, theory, research and current literature related to the health and wellness of families, human sexuality, child growth and development, and parenting will be discussed. Community resources for the parents and children will be explored. Three credits.

235 Introduction to Pharmacology

This six-week course provides an overview of the basic science of drugs. The properties of major drug families will be reviewed via a prototype and an emphasis on basic pharmacological principles. The focus throughout this course will be on the application of knowledge to client care and client education. The acquisition of skills to understand medication prescriptions and accurately calculate drug dosages is an expected course outcome. A passing grade in this course is a prerequisite for NURS 250.

245 Healthy Aging

This course provides the opportunity to apply the nursing process to an older adult population. While the focus is on maintaining wellness and maximum functioning, other issues related to disease and disability prevention are addressed. Attention is given to identifying normal aging changes and other physiological concerns, as well as to issues of psychological and social functioning. Interaction with an older client provides an opportunity to examine how older adults define and promote their own health. Three credits.

250 Nursing Practice I
An intersession course (May-June) with learning experience in selected clinical settings. Prerequisite: NURS 235. Six credits.

260 Development Psychology
Cross-listed as PSYC 260; see PSYC 260. Six credits.

275 (425) Comprehensive Health Assessment
This theory and practice course focuses on a systematic assessment of a client's health status and the normal functions and findings related to various body systems. The emphasis of practice is on developing the assessment skills necessary to carry out a comprehensive examination of body systems, for the purpose of identifying self-care requisites. A practicum is provided in the nursing practice and lab settings. The course has two sections: part one is taught in the second term of the second year, and part two in the first term of the fourth year. Three credits.

Note: Third-year courses focus on the nursing needs of the family and are organized around the developmental stages of the life cycle, and various situational crises that a family may experience.

300 Research Methods
Focuses on testing theories used in nursing and related disciplines. Particular attention is paid to the movement from theoretical statements to testable hypotheses. The course covers the many phases of the research enterprise, from designing studies to analyzing data with an SPSS computer program, to writing up the final research. Cross-listed as SOCI 300. Six credits and laboratory.

305 Nursing of Adults I
This course focuses on the nursing care of adults. It considers the main health problems encountered during adulthood and includes conditions such as cardiovascular, respiratory, and hematological health deviations. This course involves six hours per week of classroom instruction and 12 hours of nursing practice per week for six weeks. Three credits.

310 Nursing Research Methods
Cross-listed as SOCI 305; see SOCI 305. Six credits.

315 Nursing of Children
This course is based on the philosophy and principles of family-centred care, promotion of self-care for child-bearing families, and promoting family-centred social changes and family empowerment. Students will explore how children and families cope with illness in childhood and adolescence, and what nursing interventions children and families find helpful. A wide range of pediatric illness conditions is presented. This course involves three hours of classroom per week for 12 weeks; and 12 hours of nursing practice per week for six weeks. The nursing practice has both an illness and wellness focus and utilizes both acute care and community settings. Three credits.

330 Legal and Ethical Issues in Nursing Care
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. Cross-listed as RELS 300. Six credits.

345 Mental Health Nursing
This course provides students with a comprehensive approach to mental health aspects of nursing practice. Topics include: stigma and mental illness; anxiety, depression; psychosis, mania; mental health difficulties associated with food and eating; traumatic stress; substance and gambling dependency; dementia. Each issue will be considered from a socio-cultural, political, economic, historical, and biophysical perspective; and students will explore principles of social justice, as well as ethical and legal aspects of mental health care. A weekly three-hour workshop is combined with 11 hours per week of mental health practice for a six-week period during the term. Three credits.

355 Perinatal Nursing
This course is based on the philosophy and principles of family-centred health care, promotion of self-care for child-bearing families, and promoting family-centred social changes and family empowerment. Students explore the philosophical, cultural, physiological, psychological, and spiritual dimensions of childbirth, postpartum adaptation, lactation, and infant care. The focus of the course is on understanding normal, healthy perinatal and neonatal experience, with an introduction to perinatal and neonatal complications. This course involves six hours per week of classroom instruction and 12 hours of nursing practice per week for six weeks. 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 WMNS 365. Three credits.

399 Co-operative Service Learning
This elective, independent nursing practice course is designed for third-year nursing students. The experience will occur in a receptive institution, where registered nurses practice, and where students are accepted as learners with the

knowledge, skill and experience common to B.Sc.N. students at the third year level. The expected outcome is that students will acquire confidence and independence, and opportunities to practice previously acquired psychomotor nursing skills, while gaining experience working as a member of the health care team.

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 II
A nursing practice and theoretical course designed to provide the senior nursing student with opportunities to render comprehensive care, including adults who are experiencing, or who are at risk for, selected complex health problems. Students participate in the selection of a variety of nursing practice experiences that enable them to apply the nursing process in acute care, community, and home settings. Three credits.

415 Nursing of Adults III
A theoretical and nursing practice course designed to provide the student with opportunities to render comprehensive nursing care to individuals experiencing common health problems. Students will consider current research; develop their leadership and management skills; plan, implement, and evaluate an independent experience of their choice in any setting or country that meets requirements. At the end of the program, students will participate in a consolidated nursing practice experience. Prerequisite: NURS 405. Three credits.

483 Palliative Care
Provides an overview of the 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, the concepts of self-care and health promotion as they relate to quality of life issues will be included in the course. This class is offered in a distance delivery format. Three credits.

486 International Development and Health
The objective of this course is to introduce a holistic understanding of health in the context of development. Health concepts and issues are examined within a social, political, economic and cultural framework. Models and case studies focus mainly on community health in developing countries, but examples are also drawn from the Canadian context. An interactive, seminar-style approach is used to help students understand concepts and develop strategies for improving the health of communities. Restricted enrollment. Open to non-nursing students. Three credits.

488 Challenges in Aging
This advanced nursing course focuses on holistic care of the older client, and may be used as an open or nursing elective by junior, senior, and post-RN students. The content incorporates nursing and sociological perspectives on aging within an interdisciplinary context. Current gerontological issues and trends are explored and implications for nursing are discussed. Nursing advocacy in this field is examined. Includes an integrated nursing practice component. Offered on campus as well as in distance delivery format (DNUR 488). Prerequisite: NURS 245. Three credits.

491 Trends in Health Care
A senior nursing course which examines the evolution of health care as an organized service with emphasis on the development of, and challenges to, nursing education and practice. While its specific focus is the Canadian health care system, the course provides exposure to the international scene, particularly health conditions and needs in the developing world. The course is designed to facilitate independent inquiry, and involves the student in consultations, and in a search of relevant literature. Three credits.

493 Leadership and Research in Nursing
Examines nursing theories and management models, and leadership concepts and theories. Qualitative research methodologies are reviewed, with emphasis on their usefulness in exploring specific nursing problems. The focus throughout the course is on the importance of the scientific foundations of nursing as a research-based practice. Three credits.

496 Senior Honours Seminar
A full-year seminar course devoted to the theoretical, methodological, and presentation issues involved in preparing an honours thesis. Six credits.

497 Nursing Informatics
Focuses on the knowledge and skills necessary to ensure that computers impact positively on the nursing environment and delivery of patient care. Students learn computer concepts and terms, and examine how computers can enhance nursing practice, education, administration and research. Trends and issues related to the use of computers in nursing are explored. Emphasis is placed on management strategies for harnessing computer technology to support the nursing profession. Three credits.

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.N. 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 Directed Study and Practice
This course 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

Patsy MacDonald, M.Ad.Ed., RN, Coordinator

Bachelor of Science in Nursing for Registered Nurses

See section 5.10.4 for program requirements. All courses are offered through the distance delivery format except for NURS 497. 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 manual.

DNUR 115 Health Teaching and Learning
In contrast to health protection 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 health behavior. Three credits.

DNUR 135 Contemporary Issues in Nursing
The foundation for all subsequent nursing courses, this course 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.

DNUR 201 Community Mental Health I
Provides a comprehensive introduction to the application of mental health nursing principles to specific clinical disorders. The practice component includes the application of the nursing process in nursing situations. A subsequent elective course, DNUR 202 builds on the foundations of practice explored in DNUR 201. Three credits.

DNUR 202 Community Mental Health II
Examines the theory of and concepts in mental illness, treatment regimens and nursing interventions. This course introduces the application of mental health nursing principles to specific clinical disorders, building on the foundations of practice explored in DNUR 201. Three credits.

DNUR 205 Community Health Nursing
Explores the role of the community health nurse in the context of a changing health care system. Topics include: population health; primary health care; community assessment; epidemiology and demography; environment and ecology; cultural competence; ethics; community as partner. Three credits.

DNUR 230 Nursing of Women, Children, and Families
Using a population health approach, this course examines the social, economic, cultural, and political perspectives that affect the health and health care of women, children, and families, both locally and globally. Students will explore selected issues in illness prevention, wellness promotion, and care during illness. Includes a community-based practice component. Three credits.

DNUR 245 Aging and the Older Adult
This course covers the process of growing older with relevance 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.

DNUR 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.

DNUR 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. Cross-listed as RELS 300. Six credits.

DNUR 405 Nursing of Adults I
A theoretical and practice-based course exploring chronic health issues related to violence; immune system dysfunction; cancer; and other selected issues. 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.

DNUR 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. Includes a leadership practice experience. Three credits.

DNUR 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.

DNUR 483 Palliative Care
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. Three credits.

DNUR 485 Parish Nursing
Using the Miller model, this course introduces the practice of parish nursing, and examines the knowledge, skills, and attitudes needed by parish nurses in communities, churches, and health-related organizations. Three credits.

DNUR 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. Integrated nursing practice component. Also offered on campus. May be used as an open or NURS elective by third or fourth year B.Sc.N. students or and post-RN students. Three credits.

DNUR 494 Leadership and Management in Nursing
Examines nursing leadership theories and management models, and their relationship to client care and practice management. Career planning and management will also be explored. Three credits.

NURS 497 Nursing Informatics
Focuses on the knowledge and skills necessary to ensure that computers impact positively on the nursing environment and delivery of patient care. Students will explore computer concepts and terms; how computers can enhance nursing practice, education, administration, research; trends and issues related to the use of computers in nursing; management strategies for harnessing computer technology to support the nursing profession. Three credits.

DNUR 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.

7.27 PHILOSOPHY

S. Baldner, Ph.D.
C. Byrne, Ph.D.
E.A. Carty, M.Litt.
D. McDermid, Ph.D.
L. Groarke, Ph.D.
W. Sweet, D.Ph.

What is the purpose of our existence? How do we discover the principles which guide, or 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 to human life. The study of philosophy also introduces students to the main currents of intellectual history, provides a basis for critical understanding of their own ideas, and develops analytical reasoning skills.

PHIL 100 is normally a prerequisite for advanced courses. Exceptions are:

i) PHIL 210 (no prerequisite);
ii) PHIL 330 and 331, to which students are admitted with either PHIL 100 or junior standing or permission of the department; and
iii) other courses at the discretion of the department.

Students planning the advanced major or honours degree in this field are required to consult the department chair about their program of study. *See sections 4.2, 4.3, 4.4, 4.5 and 4.6 for degree regulations.* The department offers an honours degree with a subsidiary subject; *see section 4.6.1*.

100 Introductory Philosophy
An introduction to the study in philosophy which looks at a number of major thinkers 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.

210 Philosophy of Science
An examination of the methodology of the positive sciences, including the logic of scientific discovery and experimental test, the confirmation of hypotheses, and the nature of scientific explanation. Six credits.

230 Philosophy of Human Nature
A philosophical examination of what it means to be human. Topics may include: whether we possess free will; how the mind and the body are related; the nature of death and the possibility of survival/immortality; the nature of personal identity; skepticism and the reliability of our basic cognitive faculties; the limits of human knowledge; the function of art and its relation to human existence; egoism and the possibility of altruism; and the 'meaning of life.' Readings will be drawn primarily from historical sources, and may include the following authors: Plato, Aristotle, Epictetus, Augustine, Aquinas, de Montaigne, Descartes, Hobbes, Hume, Schopenhauer, Kierkegaard, Nietzsche, Freud, de Beauvoir, Sartre, and Camus. Six credits.

240 Philosophy of Religion
Defines the philosophy of religion, including: different concepts of God with emphasis on the Judeo-Christian concept; grounds for belief and disbelief in God; and problems such as human destiny, evil, religious language, faith and revelation, and verification. Six credits.

270 Philosophy and Literature
This course examines selected philosophical themes as they occur in world literature. Issues such as the nature of tragedy, the conflict of existence and meaning, and the relation of the unconscious to philosophy and literature will be considered. Six credits.

281 Aesthetics
Is beauty in the eye of the beholder? Is it necessary to 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. Three credits.

310 History of Modern Philosophy
A review of the intellectual developments of the Renaissance relevant to philosophy is followed by a study of René Descartes and his rationalist successors. British empiricist thought is traced in Locke, Berkeley, and Hume. An introduction to the critical philosophy of Kant. Six credits.

320History of German Idealism
In the 19th century, the dominant movement of German philosophy found expression in the idealistic movement. Such philosophers as Kant, Fichte, Schelling, Hegel, and Schopenhauer were united in the belief that the structure of reality and the basic categories that we use to understand it had a common origin and development. Out of this belief came new conceptions of science, history, theology, and politics. This course will explore the development and consequences of these ideas through the study of major figures in this movement. Six credits.

330 Ethics
Ethics or moral philosophy is a study of the meaning and means of living a truly human life. The major ethical theories will be examined and applied in our decisions on contemporary questions of euthanasia, abortion, capital punishment, drug use and abuse, marriage and the family, human sexuality, liberation movements, contracts, work and wages, war and peace. Six credits.

331 Ethical Theories
Equivalent to the first term of PHIL 330, 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. May not be taken by students who have credit for PHIL 330. Three credits.

332 Contemporary Moral and Social Issues
This course builds on PHIL 331 to introduce students to the philosophical discussion of a number of contemporary moral and social issues such as freedom of speech and censorship, assisted suicide and euthanasia, equality, abortion,

and affirmative action, legalization of the non-medical use of drugs, famine relief and the duty to alleviate suffering, punishment and capital punishment. Prerequisite: PHIL 331 or the first half of PHIL 330. Three credits.

334 Ethics Applied to the Professions
This course applies the theories studied in PHIL 331 to ethical issues that arise in the professions, such as conflicts between professional obligations and personal values; the rights of clients, patients and consumers; affirmative action; abortion; assisted suicide and euthanasia; the social responsibilities of corporations; behavior in the workplace and sexual harassment; and issues of economic and social justice. Recommended for students in business administration and nursing, as well as those with an interest in careers in law, medicine or government. Prerequisite: PHIL 331 or the first half of PHIL 330. May not be taken by students who have credit for PHIL 330. Three credits.

340 Logic
The course will be prefaced by a study of Aristotelian syllogistic logic. A standard account of propositional logic, and of first order predicate logic (with identity), will constitute a major part of the course. Inductive logic will also be covered. Six credits.

351 Socrates and Plato
Topics include the nature of Socratic dialectic, Socrates' responses to the pre-Socratic philosophers, and Plato's contributions to ethics, political philosophy, metaphysics, and epistemology. 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. 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: St. Augustine, Boethius, St. Anselm, Abelard. Principal problems: faith and reason, knowledge, human knowledge of God, evil, providence, free will, immortality of the soul, universal, ethical principles. The course ends with an introduction to the most important medieval Islamic and Jewish thinkers: Avicenna , Averröes, Maimonides. Three credits.

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: St. Bonaventure, Thomas Aquinas, Duns Scotus, William of Ockham. Principal problems: faith and reason, knowledge, human knowledge of God, evil, providence, free will, immortality of the soul, universals, ethical principles. Three credits.

371 Social and Political Philosophy
This course 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 freedom and respect for equality conflict? Do human beings have rights that everyone should respect? Is it ever morally allowable to disobey or rebel against the state? Texts will be selected from the classical and medieval, modern, and contemporary periods, but topics will focus on issues of current interest. Three credits.

372 Philosophy of Law
This course 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 legal limits should there be on human freedom? What are the justifications and aims of punishment? Texts to be studied will be selected from the classical and medieval, modern, and contemporary periods, including works in liberal, libertarian, Marxist, and feminist thought. Three credits.

380 Existentialism and Phenomenology
Examines 19th- and especially 20th-century philosophical ideas in continental Europe. A look at the philosophical antecedents of existentialism and phenomenology will be followed by an intensive discussion of the writings of major figures in these movements: Kierkegaard, Sartre, de Beauvoir, Marcel, Merleau-Ponty, Husserl, Hannah Arendt, and Heidegger. Six credits.

390 Contemporary Anglo-American Philosophy
A study of the work of some leading 20th-century philosophers in the English-speaking world, notably Russell, A.J. Ayer, Wittgenstein, Searle, and Rawls. Six credits.

450Seminar in Ethics, Political Philosophy and the Philosophy of Law
This course will examine fundamental issues in political philosophy and the philosophy of law. The specific issues to be studied may vary, but will be selected from such topics as the state and society, rights and duties, justice and equality, freedom and punishment, the moral basis of political obligation, and the concept of law. The course will include both classical and contemporary authors. Six credits.

460 Seminar in Metaphysics and Epistemology

The topic for this year is materialism. In particular, we will consider arguments for and against what is today the most widely-held version of this position, non-reductive materialism. In the first term, we will consider the historical discussion of materialism found in Plato's *Timaeus*, Aristotle's *Metaphysics*, and works by Aquinas, Descartes, and Hume. In the second term, we will consider works by 20th-century philosophers, concentrating on contemporary versions of non-reductive materialism and its application to questions such as freedom and determinism, the relation between mind and body, and personal identity. This course is open to third- and fourth-year students from any department. Prerequisite: Two previous courses in philosophy or permission of the instructor. Six credits.

489 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, the quality of the analysis, and the literary calibre of the final version. Restricted to honours students. Three credits.

7.28 PHYSICS

C.P. Adams, Ph.D.
D.L. Hunter, Ph.D.
N. Jan, Ph.D.
Y.N. Joshi, Ph.D.
D.A. Pink, Ph.D.
P.H. Poole, Ph.D.
M.O. Steinitz, Ph.D.
B. Wallbank, Ph.D.

Physics deals with the fundamental properties of matter and energy. Physicists explore phenomena both in detail and through statistical or average results, to create precise descriptions of the way in which systems behave. Physics courses stress analytical thinking and problem solving, while trying to communicate the excitement of discovery and the beauty of physics. The physics program prepares students for graduate study in science, engineering, meteorology, oceanography, and business administration; for professional programs such as medicine, dentistry, law and education; and for careers in science, business, and industry.

The physics department offers honours, advanced major, and major programs; joint advanced major and honours programs combining physics with mathematics (mathematics or computer science concentration), geology, chemistry, or biology; and a joint advanced major in physics and business administration. Students interested in these programs, or in combining a physics degree with the engineering diploma, should consult the relevant department chairs. Since physics depends upon mathematics, most of the programs described below require at least four mathematics courses.

Major Program

See section 5.2 for degree regulations. The typical program outlined below may be varied with approval of the chair.

Year 1	PHYS 120; MATH 111, 112; CHEM 120 or 100; 6 credits arts electives; 6 credits open electives
Year 2	PHYS 221, 224, 241, 242; MATH 267, 367; 6 credits arts electives; 6 credits open electives
Year 3	PHYS 223, 271, 301; MATH 253, 254; CSCI 125; 6 credits arts electives; 6 credits open electives
Year 4	PHYS 272, 302, 303; 6 credits arts electives; 15 credits open electives

Advanced Major Program

See section 5.3 for degree regulations. The typical program outlined below may be varied with approval of the chair.

Year 1	Same as major program
Year 2	PHYS 221, 224, 241, 242; MATH 253, 254, 267, 367; 6 credits open electives (CSCI 125 recommended)
Year 3	PHYS 301, 302, 322, 323; MATH 361; 12 credits open electives; 3 credits approved elective
Year 4	PHYS 303, 344; 6 credits from 223, 324, 342, 343; 6 credits arts electives; 12 credits open electives

Honours Program

See section 5.6 for degree regulations. The typical program outlined below may be varied with approval of the chair.

Year 1	PHYS 120; MATH 111, 112; CHEM 120 or 100; 6 credits arts electives; 6 credits open electives
Year 2	PHYS 221, 224, 241, 242; MATH 253, 254, 267, 367; 6 credits from CSCI 125, 160 or arts electives. Some changes to the suggested second-year program may occur after the Academic Calendar is printed.
Year 3	PHYS 301, 302, 303 or 324, 322, 323, 342, 343, 344; MATH 361, 462 or 481 (PHYS 342 may be deferred to year 4)
Year 4	PHYS 422, 443, 444, 475, 476, 493; MATH 481 or 462; 6 credits arts elective; 3 credits open elective

Honours students of superior academic standing will be encouraged to enrich their programs by taking up to one additional course each year.

100 General Physics
An introduction to mechanics, heat, electricity, magnetism, waves, optics and modern physics. The course includes some applications of physics to biological problems. Recommended for students in the life sciences program. Six credits and laboratory.

120 General Physics
An introduction to mechanics, electricity, and magnetism. This course makes extensive use of calculus. It is intended for students considering further study in any of the physical sciences, mathematics, computer sciences, and engineering. An attempt is made to coordinate the course with MATH 111 and 112, 120 and CHEM 120; students are recommended to take these courses concurrently. Six credits and laboratory.

130 The Implications of Physics
A descriptive course intended for arts students. The main objectives are to de-mystify science and to impart a willingness to analyze the features and problems of modern life in a quantitative manner. Topics may include: nuclear power; heat and insulation; flow of water, electrons and blood (implications for designing people and houses); waves for hearing and seeing; radiation; is it all relative? how small is smallest? the structure of solids; the transistor; the periodic table and the consequences of everyone wanting to be iron; metallurgy as the history of civilization; the elementary particle zoo; star-gazing; ultrasonic examination of babies and submarines. Six credits. Not offered 2003-2004.

170 Understanding the Universe
A study of the universe at a fundamental level, this course teaches the basic concepts of physics using computer graphics and mostly non-mathematical techniques (though some simple arithmetic and algebra may be used). Topics include: the quantum description of nature; the complex behavior of gases, liquids and solids; stars, black holes, galaxies; electrical conduction; lasers; superconductivity; biophysics. Closed to B.Sc. and engineering students. Six credits.

221 Electric Circuits
Cross-listed as ENGR 237; see ENGR 237. Three credits and laboratory.

223 Digital Electronics
Cross-listed as ENGR 238; see ENGR 238. Three credits and laboratory.

224 Optics
Topics include: the nature of light; combinations of oscillations in space and time; wave propagation; geometrical optics; aberrations; optical instruments; diffraction; interference; the resolving power of instruments. Three credits and laboratory.

241 Mathematical Physics: Oscillations and Waves
Complex numbers, ordinary differential equations, partial differential operators, partial differential equations and Fourier series are introduced in 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. Other partial differential equations of physics are considered in less detail. Three credits.

242 Classical Dynamics I
The course covers conservative systems and potential energy; central forces; angular momentum; Kepler's laws; orbital transfers: systems of particles, variable mass systems, collisions, and centre of mass frame; generalized coordinates and forces; Lagrange's equations; constraints; Hamilton's principle and equations. Three credits.

271 Astronomy: The Solar System
Topics include: the evolution of the solar system, sun, planets, planetoids, comets, meteors, and solar wind. Open to science students as a free elective and to arts students with permission of the instructor. Three credits. Offered 2003-2004 and in alternate years.

272 Astronomy: The Stellar System
Topics include: stellar evolution, supernova, quasars, pulsars, neutron stars, black holes, the universe, our galaxy, and cosmology. Recommended prerequisite: PHYS 271. Open to science students as a free elective and to arts students with permission of the instructor. Three credits. Offered in alternate years; not offered 2003-2004.

301 Modern Physics: Introduction to Relativity and Quantum Physics
Topics include: special relativity; introduction to quantum physics; atoms and molecules. Three credits and laboratory.

302 Modern Physics: Properties of Matter
The course covers kinetic theory; thermodynamics; fluids and solids. Three credits and laboratory.

303 Modern Physics: Subatomic Physics and Cosmology
Topics include: nuclei; elementary particles; concepts of general relativity; cosmology. Three credits.

322 Electromagnetic Theory I
This course elaborates on the basic theory covered in PHYS 120. It deals in more detail with electrostatic fields in vacuum and in dielectric materials, and magnetic fields in non-magnetic materials. Six-week laboratory. Three credits.

323 Electronics
An introduction to electronic devices and circuits. Devices and topics discussed include diodes, bipolar junction transistors, field effect transistors, linear models, single stage amplifiers, operational amplifiers, and digital circuits. Three credits and laboratory.

324 Lasers and Modern Optics
This course provides an introduction to the theory and operation of lasers and their application. 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; and stimulated Raman scattering. Three credits and laboratory.

342 Classical Dynamics II
Topics include: calculus of variations; Hamilton's principle and equations; non-linear dynamical equations; van der Pol's equation; orbits; limit cycles; graphical analysis; fixed and periodic orbits; bifurcations; the transition of chaos; symbolic dynamics; chaos; Sarkovskii's theorem; Newton's method; fractals; the Julia and Mandelbrot sets. Six-week laboratory. Three credits.

343 Quantum Mechanics I
Covers electron double-slit and Stern Gerlach experiments; states as vectors, measurable quantities as operators in a linear vector space, eigenstates and eigenvalues; the process of measurement, superposition of eigenstates; Schrödinger's equation, applications; orbital and spin angular momentum, applications; time-independent perturbation theory, applications. Six-week laboratory. Three credits.

344 Thermal Physics
Explores configurations and states, entropy, laws of thermodynamics, Boltzmann distribution, Helmholtz free energy and partition function, blackbody radiation and Planck's distribution; chemical potential and Gibb's distribution, ideal gases: classical, Fermi, Bose; heat and work; Gibb's free energy, enthalpy. Six-week laboratory. Three credits.

422 Electromagnetic Theory II
This course, a continuation of PHYS 322, deals with the electric and magnetic fields of moving electric charges, Maxwell's equations, and the propagation and radiation of electromagnetic waves in various media. Six-week laboratory. Three credits.

442 Mechanics of Continuous Media
The mechanics of continuous distributions of matter include hydrodynamic and wave-like motions. This course covers Newtonian, Lagrangian and Hamiltonian formulations of wave motion in an elastic medium; emphasizes mathematical techniques; explores applications to acoustics and geophysics; and stresses similarities to optics, EM radiation, transmission line phenomena, and quantum mechanics. Three credits.

443 Quantum Mechanics II
Topics include: state vectors, density operator; finite unitary transformations, infinitesimal transformations; generalized uncertainty relations; the Schrödinger, Heisenberg, and interaction pictures; angular momentum coupling; perturbation theory: time-independent (degenerate case) and time-dependent; tensor operators, the Wigner-Eckart theorem, recognizing symmetries; identical particles; scattering. Six-week laboratory. Three credits.

444 Statistical Mechanics
Covers probabilities in classical and quantum systems: Poisson distribution and Gaussian deviations; phase transitions and critical phenomena: classical and phenomenological theories, approximate methods. Applications may include random walks, percolation, magnetic models, and recent research topics in statistical physics. In computer labs, students will work on computer-simulation projects begun in class. Six-week laboratory. Three credits.

471 Astrophysics
A directed study. See section 3.5. Three credits.

473 Topics in Biophysics
This course is concerned with biological and model membranes. Topics include: molecular components such as lipids, proteins (polypeptides) and sugars (polysaccharides); molecular interactions, especially anisotropic and short-range forces (e.g., dipolar interactions and hydrogen bonds); statics (e.g., phase transitions, phase separation) and dynamics (e.g., diffusion, internal lipid and protein motion) of membranes; cell surfaces (e.g., lipopolysaccharides) and receptors; larger scale mechanical properties of membranes. Six-week laboratory. Three credits. Not offered 2003-2004.

474 Computational Physics

This course is concerned with computational modeling of a wide variety of systems relevant to physics, physical chemistry, and engineering. There is emphasis on the use of deterministic and stochastic methods; and on the connections that can be drawn among widely different phenomena from underlying similarities revealed through the modeling process. A number of topics, both from the text and from other sources, will be selected. Emphasis will be placed on the practical aspects of implementing simulations and analyzing the results. Applications will include numerical integration of neural networks and spin glasses. Six-week lab. Three credits.

475 Atomic and Molecular Physics
Covers the one-electron atom; radiation and radiative transitions; the Pauli principle and atomic shell structure; atomic spectroscopy; molecular binding and molecular spectra; scattering theory; electron spectroscopy; resonance and ionization by electron impact. Three credits and laboratory.

476 Solid State Physics
An introduction to the theory of solids and important experimental results. Topics include: crystal structure; diffraction methods; lattice vibrations; the behavior of electrons in metals; magnetism; superconductivity; and current topics of special interest. Three credits and laboratory.

477 Linear Systems and Information Theory
Three credits.

478 Nuclear Physics
Three credits.

491 Physics Seminar
All students in the fourth year of a physics program are required to attend department seminars as scheduled. No credit.

493 Honours Thesis
Three credits.

GRADUATE COURSES

The following are offered by directed study to students in the M.Sc. program.

500	Atomic and Molecular Spectroscopy	6 credits
510	Low Energy Scattering	6 credits
515	Quantum Theory	3 credits
520	Advanced Spectroscopy	6 credits
535	Quantum Theory II	3 credits
545	Mathematical Physics I	3 credits
555	Statistical Mechanics	3 credits
565	Many Body Theory and Its Application	3 credits
575	Group Theory and Its Application	3 credits
585	Mathematical Physics II	3 credits

Additional courses are available depending on the requirements and interests of the student and the availability of faculty.

7.29 POLITICAL SCIENCE

J. Bickerton, Ph.D.
P. Clancy, Ph.D.
S. Dossa, Ph.D.
Y. Grenier, Ph.D.
R. Haddow, Ph.D.
J.F. Harrison, Ph.D.
S.K. Holloway, Ph.D.
Y.C. Xu, Ph.D.

Department Regulations
Normally, all courses above the 100 level, except PSCI 240, require PSCI 100 as a prerequisite. Students who wish to register in courses at the 300 level or above should have 12 credits in PSCI or permission of the instructor.

Major and Joint Major Programs
See sections 4.2 and 4.3 for degree regulations. Candidates for the major degree should choose their courses in consultation with a member of the political science department, and they must have their major form approved by the

department chair. Students will normally concentrate in two areas within the discipline, and have a minimum of 18 credits at the 300 level or above. Majors are encouraged to include PSCI 399 in their course pattern.

Advanced Major Program

See section 4.4 for degree regulations. Candidates for a degree with advanced major in political science must choose their courses in consultation with the chair or with a supervisor assigned to them by the department. All students will take PSCI 100, 399 and at least one seminar course as part of their program. Students will normally concentrate in two areas within the discipline, and have at least 18 credits at the 300 level or above, including PSCI 399 and a seminar.

Honours Program

See section 4.6 for degree regulations. Candidates for the degree with honours in political science require credit for PSCI 100, 200, 220 or 240, 399, a seminar, a thesis and 27 other credits in PSCI. Non-Canadian students may, with permission of the department, substitute another course for PSCI 220 or 240. Students will normally have at least 24 credits at the 300 level or above, including PSCI 399, 499 and a seminar.

Honours with a Subsidiary Subject

See section 4.6.1 for program requirements.

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 timetable prior to registration.

[AR] Indicates Designated Course in Aquatic Resources

100 Politics, Power and Culture: An Introduction

An introduction to the nature, varieties and uses of political power in contemporary society and the state. Some major topics considered are: political ideology, movements and pressure groups, parties and elections, identity politics and international conflict, with an emphasis on Canada. Six credits.

200 History of Political Thought

An introductory survey of the western tradition of political thought as it reflects persistent concern with questions of justice, political obligation, the origin of law and the purpose of government. Thinkers to be studied include Plato, Aristotle, Augustine, Aquinas, Machiavelli, Hobbes, Locke, Rousseau, Burke, and Karl Marx. Six credits.

210 Comparative Politics

The course provides an introduction to comparative and/or regional politics as a field of study, and prepares students for upper level courses in this field. It examines the evolution and diversity of governments in developing and developed states in Europe, Asia, Africa, and Latin America. Six credits.

220 Canadian Politics [AR]

An examination of government and politics in Canada. Issues and topics include the Constitution, federalism, Canadian political institutions, political culture, parties and elections, interest groups. Six credits.

230 American Politics

An introductory survey of US politics with a focus on ideological and socio-economic contests, state structure and its links with American society, and the formation and nature of public policy. Six credits.

240 Business and Government [AR]

The course examines the historical roots and the current contours of the business-government relationship. While the focus is on Canada, conditions in other advanced capitalist states are also considered. Topics include the mechanisms of business power, state intervention in the modern economy, the micro-politics of business, and a survey of state policies affecting business interests. Six credits.

250 World Politics [AR]

Examines the nature of the international state system. The course explores the political, military, cultural, economic and ideological factors affecting the behavior of states and international organizations in world politics. Six credits.

291 Violence, Conflict and Politics

A critical analysis of the theoretical and strategic justification of violence in politics in the West and the Third World. Liberal opposition to violence and the radical defense of revolutionary violence will be considered in some detail in the context of concrete historical and contemporary cases. Three credits.

292 Selected Topics

This course introduces current topics and problems in political science. Course content may change yearly, depending on faculty availability. Students should consult the department chair for the current topic. Three credits.

295 Religion and Politics

Cross-listed as RELS 295. Three credits.

301 Liberalism and Its Critics

A critical study of the historical development of liberal political theory, its basic concepts and its limitations in a multicultural age. Theorists considered may include: J.S. Mill, L.T. Hobhouse, John Rawls, Jeremy Waldron, Joseph Raz, Charles Taylor, Michael Sandel, Will Kymlicka. Three credits.

302 Marx and the Marxists
A systematic criticism of 19th-century industrial capitalism, encompassing ethical, historical, economic, and revolutionary perspectives. The course examines the use of Karl Marx's work by revolutionaries and critics of liberalism in the 20th century. Three credits.

303 Contemporary Political Arguments
An analysis of the claims of contemporary cultural and moral arguments on politics in liberal-democratic societies. Topics include: racism, feminism, ecology, corporatism, nationalism, democracy, and the legitimation crisis of the modern state. Three credits.

310 European Politics
Examines a variety of theoretical and empirical issues in comparative politics, including: patterns of social and economic development; politics and social structure; party systems, strategies and conflict; the origins and development of the modern state; and patterns of state policy. Six credits.

311 The European Union
The course will deal with 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. Three credits.

312 Art and Politics
Cross-listed as ART 312; see ART 312. Three credits.

321 Federalism [AR]
This course examines the theory and practice of federalism, with a focus on Canadian federalism. Topics include theories of federalism, comparative federal systems, intergovernmental relations, fiscal arrangements, federal-provincial diplomacy and constitutional reform. Three credits.

322 Atlantic Canada [AR]
A course on government and politics in the four Atlantic provinces in the modern age. Regional development and dependence are the basic themes within which federal-provincial relations, fiscal and administrative changes, development policies, political culture, and party systems are examined. Three credits.

323 Parties and Elections
This course is concerned with parties, elections, voting behavior and public opinion in Canada. Topics include party and electoral systems, intra-party politics and political personnel, party financing, representation and policy development, the campaign process, polling, and voting behavior. Three credits.

324 Provincial Politics
The course is a comparative study of the differing political cultures, institutions, behavior and public policies of the Canadian provinces. Explanations for provincial similarities and differences are sought in the varying social and economic structures and political histories of the provinces. Three credits.

330 Comparative Nationalism
An analysis of the historical origins of nationalism and of its central concepts and justifications. Both western and non-western nationalisms will be analyzed in a comparative context. Nationalism in France, Canada, Bosnia, Israel-Palestine, the United States, and the United Kingdom, among others, will be considered, with generally three cases in each academic year. Cross-listed as SOCI 375. Six credits.

341 Canadian Public Administration [AR]
The focus of this course is Canadian public administration. Topics include: organizational theory applied to the public sector, the origins and social function of bureaucratic institutions in Canada, cabinet organization, federal-provincial administrative relations, budgeting, and human resource management. Three credits.

342 Canadian Public Policy [AR]
This course examines contemporary public policy issues in Canada, including economic and social policy, the environment and culture. The course begins with a survey of major contemporary theoretical debates in the study of public policy. Three credits.

343 Law and Politics [AR]
The course will consider the role of the courts in politics, with particular attention to Canada. Possible topics include: recent constitutional developments, the impact of the Charter of Rights, the judicialization of politics, philosophy of law, and strategic litigation. Three credits.

344 Citizenship and Identity

This course examines various aspects of Canadian citizenship and identity, as well as the rise of new social movements. Topics include the relationship between federalism and nationalism, aboriginal rights, multiculturalism, citizen politics, and social movements. Three credits.

345 Women and Politics
This course is intended as an introduction to the study of women and politics in Canada. It is comprised of three main parts: feminist political thought and the Canadian 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. Cross-listed as WMNS 345. Three credits.

346 The Politics of Resource Management [AR]
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 include: preservation and conservation strategies, crown rights and systems, co-management regimes, environmental assessment techniques, commodity marketing schemes and sustainable development policies. Three credits.

351 Canadian Foreign Policy [AR]
This course is designed as a general historical survey of Canadian external interests, external policy-making processes, and contemporary themes and issues. 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. Three credits.

353 International Organizations
A study of the development and role of international organizations in world politics. Topics include: the history and evolution of international organizations, the effects of international law on state behavior, and the extent to which international cooperation has been effective in resolving global problems. Three credits.

355 Global Issues
This course investigates the state's supremacy and its capacity to manage a variety of global issues such as: transnational flows of goods, services, money, and ideas; the continuing problem of poverty in the developing world; the phenomenon of failed states in the post-Cold War period; global environmental issues; international concerns with human rights; weapons proliferation; terrorism and other forms of transnational crime; and the rise of transnational social activist groups. Three credits.

360 Russian Politics
Between 1989 and 1991 European communist regimes collapsed. This course explores the reasons for the collapse, and the pursuit of political and economic alternatives to state socialism in the Russian Federation. Students are encouraged to develop their own project, examining the manner in which forms of ownership, constitutional developments, party formation, political personalities, and domestic and international pressure influence events in Russia's developing system. Six credits.

362 Contemporary China
A study of the origins and development of the gradual but revolutionary political and economic reforms in China since 1978, with emphasis on the changing roles of the Communist Party, the central bureaucracy and local governments, the military, the emerging entrepreneurial class, and the 80 million members of the overseas Chinese community. Three credits.

370 Third World Politics
A critical introduction to the political economy of new nations. Topics include: the impact of colonization; theories of development and dependency; the role of the state; the debt crisis and the IMF; north-south dialogue; and prospects for democracy in the Third World. Two case studies drawn from Asia, the Middle East, and Africa will be considered in detail. Six credits.

381 Japan and the East Asian Region
Examines a world power in its regional context and the diplomatic interaction of Japan, China, and the US in the world's fastest growing economic centre. The course also focuses on Japanese domestic politics and Japanese interaction with China, Korea, the Philippines, and other Asian developing countries. Three credits.

382 International Political Economy
This course will focus on the economic foreign policies of the major powers and especially the developed capitalist states. Among the questions posed by this course: how do economic developments influence the rise and fall in relative status of major powers? What are the politics of international trade, investment, and monetary regimes among the core states? Three credits.

390 Politics and Society in Latin America

This course will give students a broad historical background to Latin America and then focus on six nations or subsystems: Argentina, Brazil, Chile, Mexico, Cuba, and Central America. Topics will include: human rights, the role of the Catholic Church, the military, the USA and Canada in Latin America, economic development, and revolutions. Six credits.

399 Research Methods and Statistics
This course is designed to introduce research methods and related controversies in the field of political science today. Students will gain an understanding of the uses of basic statistics and the computer in political science research. The tools learned in this course will broaden employment opportunities and/or offer an introduction to post-graduate research methods. Aimed at the basic level, the course requires no prior mathematics or computer skills. Three credits.

400 Political Theory (Seminar)
Six credits.

420 Canadian Politics (Seminar)
Six credits.

450 International and Comparative Politics (Seminar)
Six credits.

491 Topics in Political Science I (Seminar)
Three credits.

492 Topics in Political Science II (Seminar)
Three credits.

499 Directed Study
See section 3.5**.** Six credits.

7.30 PSYCHOLOGY

Full Time
A.Bigelow, Ph.D.
G.Brooks, Ph.D.
T.Callaghan, Ph.D.
K.denHeyer, Ph.D.
R. Duncan, Ph.D.
J.Edwards, Ph.D.
P.Henke, Ph.D.
K. Hennig, Ph.D.
C. Lomore, Ph.D.
K. MacLean, Ph.D.
P. McCormick, Ph.D.
G. McGuire, MA
J.McKenna, Ph.D.
E. Pencer, Ph.D.
M.Watt, Ph.D.
E. Wright, Ph.D.

BA Major Program

Candidates must follow the degree regulations in section 4 and complete:

i) PSYC 100;
ii) one of PSYC 210, 220, 225 or 230;
iii) 12 PSYC credits at the 300 or 400 level;
iv) 12 additional PSYC credits.

BA Advanced Major Program

Candidates must follow the degree regulations in section 4 and complete:

i) PSYC 100, 290; at least 6 PSYC credits at the 400 level;
ii) PSYC 391, 491;
iii) a senior research paper;
iv) a total of 36 PSYC credits.

BA Honours Program

Candidates must follow the degree regulations in section 4 and complete:

i) PSYC 100; one of PSYC 210, 220, 225 or 230; PSYC 290, 300, 390;
ii) 6 credits at the 400 level;
iii) PSYC 391 and 491 (non-credit) and PSYC 490, the honours thesis;
iv) 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 300.

B.Sc. Program

Candidates must follow the degree regulations in section 5 and should note the following:

a) PSYC courses are considered science courses only when they are taken as part of an advanced major or honours subject in the B.Sc. program;
b) B.Sc. advanced major and honours degree programs must include BIOL 111, 112 (101, 102); CHEM 100; MATH 111, 112; and twelve additional credits in science courses (excluding PSYC);
c) for the B.Sc. advanced major program, the 18 credits of electives approved by the department must 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.

Note: PSYC 100 is a prerequisite for all other courses in psychology except PSYC 290, 390.

100 Introduction to Psychology

A survey of the major topics of psychology as well as an introduction to the methodology of psychological research. There is a subject pool as part of the introductory psychology course; students are normally expected to be involved with ongoing research in the department by participating in experiments as subjects during the course of the academic year. Six credits.

210 Learning

A review of the research programs in both 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 behaviorism and its limitations; biological constraints on learning and social cognitive learning. Laboratory work is included. Recommended for students considering graduate work in clinical psychology. Prerequisite: PSYC 100. Laboratory 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. Laboratory 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. Laboratory component. Six credits.

230 Brain and Behavior

An introduction to behavioral neuroscience, including an analysis of the anatomical, physiological, and biochemical mechanisms underlying behavior. Recommended for students considering graduate work in clinical psychology. Prerequisite: PSYC 100. Laboratory component. Six credits.

240 Social Psychology

This course deals with relationships among individuals and the effect of those relationships on behavior and personality. Topics may include: aggression, altruism, conformity, attributions, and attitudes. Laboratory work is included. Prerequisite: PSYC 100. Six credits.

260 Developmental Psychology

The study of major environmental and maturational influences and their relationship to the growing person. Laboratory component. Cross-listed as NURS 260. Six credits.

290 Statistics and Research Methods

An introduction to methods used to collect and analyse data in psychology. Topics covered in lectures and labs include research ethics, measurement, design, descriptive statistics, hypothesis testing, and inferential statistics including correlation and regression, z-tests and t-tests, basic anlaysis of variance, and non-parametric procedures such as chi-square. The use of statistical software is emphasized. Six credits.

300 History and Theory of 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. Prerequisite: honours standing or permission of the chair. Six credits.

310 Health Psychology
This course provides an introduction to key issues in health psychology. In adopting a bio-psychosocial approach the course will examine the ways in which biological, psychological and social factors interact to affect health. Restricted enrollment. Prerequisite: 12 credits PSYC (PSYC 210 is recommended). Six credits.

345 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, and the relationship between language and social identity. This seminar course consists largely of student presentations. Restricted enrollment. Prerequisite: 12 credits PSYC. Six credits.

350 Psychology of Personality
This lecture course will examine the empirical and theoretical psychological literature dealing with the nature of the normal personality. Methods of research in this field will also be considered. Prerequisite: 12 credits PSYC. Six credits.

360 Psychology of Gender
This lecture course explores the development of gender roles as well as the psychology of women and men. Prerequisite: 12 credits PSYC. Cross-listed as WMNS 360. Six credits.

370 Abnormal Psychology
Examines current perspectives and research on the various classes of psychological abnormality. Each student will carry out extensive library research on one type of disorder. Courses in learning, brain and behavior, and personality form a useful background for this course. Prerequisite: 12 credits PSYC. Six credits.

375 Applied Psychology
This is a wide-ranging lecture course in which psychological aspects of many different areas of life are considered. Prerequisite: 12 credits PSYC. Six credits.

380 Forensic Psychology
This lecture and seminar course will focus on the relationship between psychology and law. Course content will include the history of the relationship between psychology and law; basic concepts in criminal justice and the study of crime, and the nature of offending from a psychological perspective. Prerequisite: 12 credits PSYC. Six credits.

385 Selected Topics in Psychology I
This course introduces current topics and problems in psychology. The specific content of the course changes on a yearly basis. Prerequisite: 12 credits PSYC. Three credits.

386 Selected Topics in Psychology II
This course introduces current topics and problems in psychology. The specific content of the course changes on a yearly basis. Prerequisite: 12 credits PSYC. A continuation of PSYC 385. Three credits.

390 The Treatment of Data in Psychological Research
An examination of intermediate and advanced statistical procedures for the psychology researcher, with emphasis on the use of statistical software packages. Lectures and laboratory sessions cover topics such as factorial analysis of variance; mixed designs; contrasts and comparisons; power; multiple regression and correlation (MRC); the MRC approach to factorial and mixed designs; and multivariate analysis. Prerequisite: PSYC 290. Six credits.

391 Junior Seminar
The purpose of this non-credit course is to assist students in choosing a career, gaining admission to graduate or professional school, and carrying out their thesis or senior paper research. Attendance at colloquia and guest lectures relevant to the discipline of psychology is a course requirement. Prerequisite: junior standing in an advanced major or honours program in psychology.

420 Cognition and Perception
An examination of topics in perception and cognition, including pattern recognition; attention; memory; and cognitive skills such as reading skill acquisition. The course includes lectures, seminars and laboratory work. Prerequisites: PSYC 220 or 225; advanced major or honours standing or permission of the chair. Six credits.

430 Behavioral Neuroscience
This is a lecture, seminar, and laboratory course in which current topics in the field of behavioral neuroscience will be considered. Laboratory component. Prerequisites: PSYC 230; advanced major or honours standing or permission of the chair. Six credits.

440 Advanced Social and Personality Psychology

An examination of topics in experimental social psychology, and consideration of the overlap between social psychology and studies in personality. Content is partially determined by student interests. The course includes lectures, seminars, and a research component. Prerequisites: PSYC 240 or 350; advanced major or honours standing or permission of the chair. Six credits.

460 Advanced Developmental Psychology
An examination of topics in developmental psychology from various theoretical perspectives and in terms of empirical evidence. The course includes lectures, seminars and laboratory work. Prerequisites: PSYC 260; advanced major or honours standing or permission of the chair. Six credits.

490 Honours Thesis
Prerequisites: PSYC 390; honours standing in psychology. Three credits.

491 Senior Seminar
The purpose of this non-credit course is to assist students in choosing a career, gaining admission to graduate or professional school, and carrying out thesis or senior paper research. In addition to receiving instruction on the various components of thesis production, students will present their thesis proposal orally in the autumn term and their completed research in the spring. Attendance at colloquia and guest lectures relevant to the discipline of psychology is a course requirement. Prerequisite: senior standing in an advanced major or honours program in psychology.

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.

7.31 RELIGIOUS STUDIES

A.Ahern, Ph.D.
R.Kennedy, Ph.D.
B.MacDonald, Ph.D.
M.Y. MacDonald, D.Phil.
L. Turcescu, Ph.D.

Religious Studies grew out of the field of theology in North America during the 1950s and 1960s in response to religious pluralism, ecumenism, and secularization. Students are introduced to the religions of the world as well as to new religious groups. Recognizing its place in a university that has been shaped by the Catholic tradition, the Department's course offerings are weighted towards the Christian tradition, paying close attention to Roman Catholicism. Although students are able to complete a major, advanced major or honours degree in Religious Studies, the courses are intended for a broad range of undergraduate students who wish to examine the religious answers to the major questions about human existence.

Students planning a major, advanced major, or honours degree in religious studies must consult the department chair. The department offers an honours degree with Celtic studies, English, history, modern languages, philosophy or psychology as a subsidiary subject. *See sections 4.2, 4.4, and 4.6 for regulations*. Further information on the department and its regulations is available in the department handbook.

100 Introduction to Christianity
The course investigates the place of Christianity among the great world religions with special focus on its relationship to Judaism and Islam. It includes detailed consideration of the Bible, the history of Christianity, beliefs, and practices. The course also examines Catholicism, Orthodoxy, and Protestantism and provides an overview of the various forms of modern Christianity. Contemporary issues such as social justice, women's leadership, evangelicalism, apocalypticism and spiritual renewal will be discussed. Six credits.

110 An Introduction to World Religions
An introduction to the study of religion will be followed by a detailed consideration of the history, sacred literature, beliefs, practices, institutions, and contemporary situation of a number of religious traditions: Hinduism, Buddhism, Taoism and Confucianism, Shinto, Judaism, Christianity and Islam. Six credits.

120 Religion, Spirituality, and Health
This course introduces students to concepts of religion and spirituality as they relate to health and healing throughout the life span. The links among religion, spirituality, and health are examined in relation to wellbeing and distress. Beliefs from various world religions are discussed for their influence on individual, familial, communal, and environmental health. Recommended for students in the nursing program. Six credits.

200 Conscience and Freedom

This course is an introduction to basic Christian ethics. The concepts of conscience and freedom will receive attention in a variety of contexts: the first half of the course will study them in light of the history of Christian ethics; the second half will be devoted to the use of these concepts in discussions of social justice, war and peace, and sexual morality. Six credits.

210 The Bible and Film
This course examines the impact of the Bible on one of the most important types of modern artistic expression and aspects of popular culture: film. Students will be introduced to major biblical themes. In addition, students will learn how knowledge of the Bible can assist in analysis of modern culture and can shed light on the important human issues that are treated in film. Such themes as creation, redemption, election, messiah-ship, charisma and tradition will be discussed. The course will examine both films that do and films that do not have explicit religious content. 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 structure, and the impact of pluralism and globalization on religion today. Prerequisite: SOCI 100 or ANTH 110 or RELS 100 or 110. Cross-listed as SOCI 227. Three credits.

225 Cults and New Religious Movements
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. Prerequisite: SOCI 100 or ANTH 110 or RELS 100 or 110. Cross-listed as SOCI 226. Three credits.

253 Introduction to the Hebrew Bible or Old Testament
This course is designed for students who wish to begin a systematic study of the Hebrew Bible or Old Testament. The course can also serve as the background for a study of the New Testament, important archeological data and historical background. Each book studied will be placed in its historical and literary context and related to information will be provided about the date, authorship, theological content of each book studied. The purpose of the course is to acquaint students with the content and major themes of the biblical books and to familiarize them with important contemporary scholarship. (RELS 253 and 255 replace RELS 250.) Three credits.

255 Introduction to the New Testament
The course is designed for students who wish to begin a systematic study of the New Testament. Important archeological data and historical background, each book of the New Testament studied will be placed in its historical and literary context and related to information will be provided about the date, authorship, and theological content of each book studied. The purpose of the course is to acquaint students with the content and major themes of the New Testament and to familiarize them with important contemporary scholarship. (RELS 253 and 255 replace RELS 250.) Three credits.

265 Introduction to the Gospels
The course will examine the four canonical gospels with the help of the critical methods of source, form and redaction criticism. In light of recent research, the following topics will be given special attention: the kingdom of God; parables; the quest for the historical Jesus. Three credits.

275 Introduction to Paul's Letters
The course will consist of a literary and historical study of the letters ascribed to Paul in the New Testament. Attention will be given to recent research on Paul and Judaism; Paul and the Law; the Pauline churches. Three credits.

295 Religion and Politics
This course enables students to explore both the impact of religion on politics and the influence of 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 be used to examine the interaction between the state and Christianity, Islam, Hinduism, and Judaism, as well as the influence of religion on citizenship, education, the party system and various social issues. Cross-listed as PSCI 295. Three credits.

300 Health Care Ethics
Cross-listed as NURS 330; see NURS 330. Six credits.

310 Religion in Modern India
An examination of religious movements and personalities in 19th- and 20th-century British India, including Rammohun Roy, Bal Gangadhar Tilak, Sri Ramakrishna, Vivekananda (Narendranath Datta), Mahatma Gandhi, and Rabindranath Tagore. The course will consider various manifestations of continuity and change in the Hindu religious tradition, and examine the socio-political dimensions of religion in contemporary India. Six credits. Not offered 2003-2004.

323 Mary and the Identity of Women
This course examines the role of Mary in the New Testament and the development of ideas concerning her status as Mother of God. Depictions of Mary in art and literature throughout history and in various cultural contexts will be considered. Students will explore how images of Mary have both shaped and reflected the identity of women throughout the ages. The continuing devotion to Mary in the modern world, including ongoing interest in Marian shrines, apparitions, and movements will be discussed. Cross-listed as WMNS 323. (RELS 323 and 325 replace RELS 320.) Three credits.

325 Early Christian Women
The course investigates women's participation in early Christian groups from the time of Jesus' ministry to the 6th century CE. Christian women's lives will be examined in light of the experiences of women in Jewish and Greco-Roman societies. New Testament and other early Christian writings, which reflect responses to women and ideas about women will be analyzed. The work of feminist interpreters of the Bible and early Christianity will be considered throughout the course. The relevance of the material for such contemporary issues as women's leadership and violence against women will be discussed. Cross-listed as WMNS 325. (RELS 323 and 325 replace RELS 320.) Three credits.

340 Archeology of the Ancient Near East
Cross-listed as ANTH 360, see ANTH 360. Six credits. Not offered 2003-2004.

34 1 Christians in Dialogue with other Christians
Christians are to be united in faith, and yet there are divisions in Christianity. What are the doctrinal, historical and political issues still dividing Orthodox, Catholic, and Protestant Christians? What concrete measures have been taken in the contemporary theological landscape towards the restoration of Christian unity? All of these will be studied in light of both official documents of various Churches and contemporary grassroots movements. Three credits.

345 The Bible and Archeology
The course examines the archeology and texts, especially the Bible, which are used to reconstruct aspects of the social, economic, and religious life (from courtier to commoner) of ancient Israel and Judah. In considering pertinent artifactual and textual evidence from ca. 1300 BCE to 100 CE, the course will show that the relationship between archeological and biblical evidence represents a question that must be treated with precision. No in-depth knowledge of archeology or the Bible is required. Cross-listed as ANTH 360. Six credits.

350 The History of Ancient Israel and Judah
This course will help students understand the history of ancient Israel and the Old Testament in its historical context. It will begin with a brief introduction to the Old Testament and Hebrew Scriptures and their modern study. Special emphasis will be given to geography, culture, and historical milieu that gave rise to the Old Testament and Hebrew Scriptures. The history of ancient Israel and Judah from their origin to the fall of Jerusalem in 70 CE will be traced, and all major persons and events of ancient Israel and Judah will be treated. Six credits. Not offered 2003-2004.

355 Current Issues in Biblical Archeology
In many histories of ancient Israel and Judah, the biblical narratives are given priority. However, many scholars question the possibility of reconstructing the social world of ancient Israel using the Bible as the principal source. They look at other ancient Near Eastern texts and documents, and to archeology, anthropology and sociology to examine the culture, society, and history of ancient Israel. This course will consider current debates on the place of biblical narratives, other ancient texts, and archeology in the study of ancient Israel and Judah. Three credits. Not offered 2003-2004.

363 The First Christians
This course explores the development of Christianity from its beginnings in the first century to its acceptance as the official religion of the Roman Empire in the fourth century. Students will learn about early Christian beliefs and practices, and will explore the challenges faced by the first Christians in their daily lives. Specific topics include community organization, persecution, martyrdom, Gnosticism, and women in the church. (RELS 363 and 365 replace RELS 360.) Prerequisite: one of RELS 100, 110 or 120. 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. (RELS 363 and 365 replace RELS 360.) Three credits. Not offered 2003-2004.

370 Islam in the Modern World
This course will focus on the social and political dimensions of contemporary Islam. The current Islamic revival will be viewed within the context of renewal and reform in Islamic history. The course will include a number of case studies (including Saudi Arabia, Iran, Egypt, and Pakistan), and will examine such issues as the reassertion of Islam in politics, the phenomenon of Islamic fundamentalism, and the status of women in today's Islam. Six credits. Not offered 2003-2004.

383 Reformation Christianity
A history of Christianity during the Reformation period. The course pays close attention to the transformation during this time of new Christian groups into the Anglican, Presbyterian, Mennonite, Baptists and Lutheran churches. Topics include Luther and Calvin, critical events, prominent Protestant women, and new creeds. (RELS 383 and 385 replace RELS 460). May be taken as credit in history. Prerequisite: One of RELS 100, 110, or 120. Three credits.

385 Modern Christianity
This course delves into the history of Christianity in North America from the colonial period to the 20th century. It covers revivalism, mission activity, the ecumenical movement, the charismatic movement and the birth of new Christian churches. Other topics include the social gospel, the feminist movement within the churches, and the impact of Vatican II on North American Catholicism. (RELS 383 and 385 replace RELS 460.) Prerequisite: one of RELS 100, 110, or 120. Three credits. Not offered 2003-2004.

398 Religion and Violence
Contrary to an old belief, in our time religion seems to be increasingly connected with violence, rather than peace. This course attempts to understand why this is the case and whether there is an inherently violent element in religion, which has passed unnoticed until now. The course will use as its guide the thought of one of the foremost contemporary religious anthropologists and philosophers, Rene Girard. The analyses will take us through Greek, Roman, Jewish, Christian and Islamic religions as a way to find the religious underpinnings to concepts such as sacrifice, scapegoating, lynching, and global violence. Three credits.

400 Religious Approaches to Sexuality
Topics include Judeo-Christian teachings on sexuality, marriage, celibacy, including the Reformation and the Protestant positions; chastity in the formation of conscience; responsible parenthood; the constitution of the Church in the modern world and *Humanae Vitae*; pre-marital sex; divorce; abortion. Six credits.

440 Jesus
The course examines the answer, developed over centuries by the Christian church, to the question associated with Jesus in the three synoptic gospels: "Who do you say I am?" The class will study the beginnings of the answer found in the letters of Paul and in the four canonical gospels. Attention will be paid to recent writings on the historical Jesus. Six credits. Not offered 2003-2004.

4 99 Directed Study
See section 3.5. Three or six credits.

↖ SERVICE LEARNING

See Interdisciplinary Studies in 7.21

7.32 SOCIOLOGY AND ANTHROPOLOGY

Full Time
R. Bantjes, Ph.D.
A. Calliste, Ph.D.
P. Cormack, Ph.D.
A. Davis, Ph.D.
C. Fawcett, Ph.D.
W. Jackson, Ph.D.
J. Kearney, Ph.D. (adjunct)
D. Lynes, Ph.D.
D. MacInnes, Ph.D.
R. Michalko, Ph.D.
R.J. Nash, Ph.D.
J. Phyne, Ph.D.
T. Titchkosky, Ph.D.
N. Verberg, Ph.D.
S. Vincent, Ph.D.

Part Time
B. Marciniak, Ph.D.
D. MacDonald, MA

The Department of Sociology and Anthropology offers honours, advanced major and major programs with a specialty in either sociology or anthropology.

Students may use sociology upper-level courses to fulfill anthropology electives and anthropology courses to fulfill sociology degree electives. An advanced major degree in the specialized area of social and criminal justice is offered, but enrollment is limited and entry requires acceptance by the department in the spring of the student's second year.

Major

Year 1	SOCI 100 or ANTH 110 (depending on specialty)
Year 2	SOCI/ANTH 201, 202
Year 3	3 credits in theory or methods at the 300 level
Years 2-4	21 additional credits in SOCI/ANTH

See section 4.2 for program regulations.

Advanced Major

Year 1	SOCI 100 or ANTH 110 (depending on specialty)
Year 2	SOCI/ANTH 201, 202
Year 3	SOCI/ANTH 391
	3 credits in theory or methods at the 300 level
Years 2-4	18 additional credits in SOCI/ANTH

See section 4.4 for program regulations.

Advanced Major in Sociology with a concentration in Social and Criminal Justice

Year 1	SOCI 100 or ANTH 110 (depending on specialty)
Year 2	SOCI/ANTH 201, 202
	SOCI 250
Year 3	SOCI/ANTH 391
	3 credits in theory or methods at the 300 level
Years 2-4	12 credits from SOCI 212, 217, 230, 318, 320, 340, 351, 352, 353, 451, 492 with 300 recommended

See section 4.4 for program regulations.

Honours in Sociology or Anthropology

Year 1	SOCI 100 or ANTH 110 (depending on specialty)
Year 2	SOCI/ANTH 201, 202
Year 3	12 credits from SOCI/ANTH 300, 301, 302, 303, 304; SOCI/ANTH 391
Year 4	SOCI/ANTH 400 (thesis), 491
Years 2-4	27 additional credits in SOCI/ANTH

See section 4.6 for program regulations.

[AR] Indicates Designated Course in Aquatic Resources

SOCI 100 Introduction to Sociology

This course introduces the basic concepts and methods of sociology and allows students to put them to use in their ongoing attempts to make sense of their social world. Sociology provides tools for understanding a wide range of human experience and action, from the search for identity, to struggles against exploitation to the making of a new 'global' world order. The course will explore the extent and limits of our capacity to change the social world. SOCI 100 (or ANTH 110) is a prerequisite for all other sociology courses. Six credits.

ANTH 110 Introduction to Anthropology

This course offers a general survey of the field of anthropology, which is the comparative study of human societies in both the past and the present. The course presents an outline of the subfields of physical anthropology, archeology, linguistic anthropology and socio-cultural anthropology. It includes a discussion of research on human evolution and the development of human societies. Ethnographic material from societies around the world will help students understand the diversity of human life, explain similarities between societies, and demonstrate the importance of studying the role of culture. The course will focus on the impact of global processes on societies. ANTH 110 (or SOCI 100) is a prerequisite for all other anthropology and sociology courses. Six credits.

Note: SOCI/ANTH 202 is a prerequisite for entry into higher-level methods courses (except SOCI 305/NURS 310).

SOCI/ANTH 201 Traditions in Social Thought

This core course is an introduction to the dominant traditions of social thought in both anthropology and sociology. It establishes how both traditions explore questions about culture, social life and social organization. More specifically

the course explores the variety of perspectives that have shaped sociological and anthropological discourse (Marxism, structuralism, symbolic interactionism, functionalism, feminism, postmodernism). Three credits.

SOCI/ANTH 202 Research Principles and Practices [AR]
This course addresses how various philosophic assumptions shape the aims and practices of research in sociology and anthropology. 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. Research strategies include direct observational techniques, unobtrusive measures, content analysis, survey design, participant observation, and secondary data analysis. The ethical implications of research will be discussed. Three credits.

SOCI 212 Social Dissent
Social dissent has been a persistent, perhaps necessary, feature of modern (capitalist, bureaucratic, technocratic, patriarchal) societies. This course explores common themes in how dissent has been voiced and alternatives have been envisioned in the 20th century. The course also charts the development of new organizational forms and tactics of dissent, in particular the use of new technologies and international networks. Students can use the course to become more informed participants in public affairs, or as a basis for advanced social scientific research. The most important objective of the course is to involve students in current debates about social change and social justice. Three credits.

ANTH 215 Archeology and Native Peoples of Canada
Studies the prehistory of the First Nations of Canada during the 30,000 years prior to the arrival of Europeans, and examines native cultures in the past and present. There will be a focus on the Maliseet and Mi'kmaq of the Maritimes plus consideration of the court cases and new treaties that are re-defining Canada for the 21st century. Six credits.

SOCI 217 Race, Class, Gender, and Sex
Through a comparative perspective, this course examines cross-cultural and anti-racist theory and practice in Canada and elsewhere. Particular attention is given to the inter-connections among race, class, gender, and sex. This course leads into two case studies on Blacks and First Nations. Cross-listed as WMNS 217. Three credits.

ANTH 220 Political and Economic Anthropology
This course introduces students to ethnographic examples of political and economic systems from around the world. Economic systems such as foraging, pastoralism, industrial production, and horticulture are addressed, along with political systems including bands, states, chiefdoms and tribes. Students will analyze the theories that have been developed to interpret economic and political forms. The ways in which the political and economic systems of small-scale societies fit into global systems will provide a framework for discussion. Six credits.

ANTH 225 Anthropology of Gender
From a cross-cultural perspective and using examples from physical anthropology, archeology and socio-cultural anthropology, students will explore various questions. For example, can the differences observed between men and women best be explained by biology or culture? What factors explain the subordination of women found in many societies around the world? Cross-listed as WMNS 225. Six credits.

SOCI 226 Cults and New Religious Movements
Cross-listed as RELS 225; see RELS 225. Three credits.

SOCI 227 Sociology of Religion
Cross-listed as RELS 215; see RELS 225. Three credits.

SOCI 230 Sociology of Education
Provides the student with a social interpretation of education in Canada. Emphasis will be given to contemporary structures. The relationship between educational opportunity and conditions of inequality resulting from socio-economic status, the economy, family, and religion will be investigated. Six credits.

SOCI 233 The Sociology of Sport
Cross-listed as HKIN 331; see HKIN 331. Three credits.

SOCI 241 Socialization
This course explores traditional and contemporary sociological theories of identity formation. Emphasis is placed on boundary crossing (liminality) as it relates to the social construction of identity. The course studies the liminal space between child and adult, able and disabled, the body and technology, as well as the liminal space between races, sexualities, and genders. The course also addresses the influence of self-conception on the development of policy, research, and education. Three credits.

SOCI 250 Deviance and Social Control
This course introduces students to the processes of deviance and social control by critically examining the social category of deviance and its use in social institutions and daily social practices. Topics may include mental illness, drug and alcohol use, alternative sexualities, social violence, business crime, or the normalization of disability. The course will also focus on forms of social control such as the judicial system, law, medicine, education, and social interaction. Six credits.

ANTH 260 Evolution of Civilization
An archeological examination of the sequences and processes which led to the emergence of civilizations in Mexico, Peru, Egypt, Mesopotamia, Pakistan, and China. Six credits.

SOCI 300 Research Methods
Cross-listed as NURS 300; see NURS 300. Six credits and laboratory.

SOCI 301 Classical Social Theory
Explores the development and diversity of sociology's foundational perspectives through the study of selected original works by such authors as Karl Marx, Emile Durkheim and Max Weber. Prerequisite: SOCI/ANTH 201. Three credits.

SOCI 302 Topics in Contemporary Theory
This seminar course on contemporary theory may vary from year to year. While a survey approach to contemporary theory may be part of the course, it is probable that the professor will choose specific interests for in-depth analysis. Potential perspectives include feminist theory, anti-racist theory, post-modernism, and neo-Marxist theory. Prerequisite: SOCI/ANTH 201. Three credits.

ANTH 303 Anthropological Theory
This seminar course will give students an understanding of past and present trends in anthropological theory, including approaches such as historical particularism, structural functionalism, culture and personality, neo-evolutionism, cultural ecology, Marxist anthropology, structuralism, ethno-science, symbolic anthropology, applied anthropology, feminism, and post-modernism. Prerequisite: SOCI/ANTH 201. Three credits.

ANTH 304 Principles and Methods of Fieldwork
This course will examine the principles and methods of anthropological fieldwork. Students will study fieldwork techniques such as participant observation, interviewing, collection of oral and life histories. The analysis of data resulting from fieldwork and the writing of ethnographies will be discussed. Prerequisite: SOCI/ANTH 202. Three credits.

SOCI 305 Applied Methods in Social Research [AR]
The course is designed to introduce students to the research process, and to quantitative and qualitative research methods related to critical appraisal of nursing and health care literature. Concepts of research design, implementation, analysis and interpretation are studied in the context of the research process. The course requires students to become immersed in the language and culture of research, and to understand the broader context within which nursing research is conducted. Restricted to students in nursing and nursing with advanced major. Credit may not be earned for both SOCI/ANTH 202 and SOCI 305/NURS 310. Cross-listed as NURS 310. Six credits.

SOCI 310 Gender
The course will examine the origin and persistence of gender-based inequalities in our society and their impact on personal lives. Biological, psychological, economic, and cultural analyses of male-female social relations will be considered. Cross-listed as WMNS 310. Six credits.

SOCI 311 Men and Masculinities
The course will provide a critical review of the 'science' of masculinity and recent theoretical developments on the social construction of men's lives and masculinities. Attention will be given to male gender role socialization; the role social institutions play in shaping masculinities; and masculinity politics, men's movements, and social change. Three credits.

SOCI 312 Social Movements
This course provides students with the tools for analyzing popular movements for social change. Students will survey the best examples of social movement analysis in the neo-Marxist, new social movement, social constructionist, and resource mobilization traditions. While students will improve their understanding of sociological theory and methods, emphasis will be placed on making sense of modern developments in the movements themselves. Movements covered may include: labor, environmental, student, peace, anti-racist, women's. Three credits.

SOCI 313 Conceptions of Disability
In lecture format, this course will provide students with an introduction to the field of disability studies through an examination of the ways in which disabled people and disability issues are defined and treated within contemporary society. Social and political conceptions of disability are contrasted to medical and individualistic definitions of disability with the aim of developing a critique of taken-for-granted conceptions of normal bodies, minds and senses. The experience of disability will be stressed. Three credits.

SOCI 314 Disability and Culture
This course begins with the understanding that disability is a social phenomenon. Employing disability studies theory and methods, students will examine cultural representations of disability that serve to marginalize and oppress disabled people. Critical attention will be paid to how Canadian social policy, the media, helping professions, and the education system give rise to different cultural representations of disability and these will be contrasted with experiential accounts

of disability. The course aims to provide students with the tools to analyze such cultural conceptions as normalcy-abnormalcy, ability-inability, independence-dependence. Prerequisite: SOCI 313. Three credits.

ANTH 315 Health and Medicine
Examines health and illness from a cross-cultural perspective. Areas studied include diet and nutrition; gender and reproduction; the cultural construction of anatomy and physiology; medical pluralism and the medical system; pain and culture; cross-cultural psychiatry; health care systems in the developing world; ritual and the management of misfortune. Six credits.

ANTH 316 Rural Communities [AR]
Examines the social, economic and political dimensions of rural communities within a comparative and analytical perspective. Particular attention is given to topics such as attachment and identity, kinship relations, household economies, inheritance, gender relations, and the logic of petty commodity forms of production. The ways rural communities are integrated within regional, national and global institutional contexts are also examined. Three credits.

SOCI 318 First Nations
Examines how the contemporary situation of First Nations in Canada is related to historical interactions among aboriginal and non-aboriginal societies and indigenous cultural traditions. Attention will be given to the intersection of race, class and gender and the relevance of existing theoretical perspectives in explaining the experiences of First Nations. Prerequisite: SOCI 217. Three credits.

SOCI 320 The Black/African Diaspora in the Americas
Examines Black/African culture and experience in Canada, the United States, Latin America and the Caribbean Basin. Attention will be given to the intersection of race, gender and class, approaches to anti-racism, and the relevance of existing theoretical perspectives in explaining the Black/African experience in the Diaspora. Prerequisite: SOCI 217. Six credits.

SOCI 321 Sociology of Atlantic Canada [AR]
Treats the Atlantic provinces as a distinctive region of Canada. The three areas of investigation are: the progress of various ethnic and religious groups who settled the region; the socio-economic development of the Maritimes and Newfoundland (from pioneer settlement through industrialization); and the strategies employed in the ongoing recovery from a century of regional disparity within Canada. Three credits.

SOCI 322 The Antigonish Movement as Change and Development
Will explore 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, labor relations, class conflict, education, cooperative strategies, religion, and ethnicity in the context of social transformation. Three credits.

SOCI 323 Environment and Society I: Introduction [AR]
In light of modern warnings of a global environmental crisis, this course re-examines the ways in which modern societies construct their relationship to the natural world. Students will be asked to question 'common sense' assumptions about the distinctness of social and natural phenomena. The course reviews human efforts to dominate and control environments in the pursuit of the comforts of modern life. Finally, it explores the uncontrolled consequences of these efforts in the form of social inequities and emergent physical threats. Three credits.

SOCI 324 Work, Labor and Unemployment
An examination of the rise of industrial capitalism sets the context for this course on the changing meaning and social organization of work, labor and unemployment. The course will examine how various social forces have shaped social policies on work, labor and unemployment, including unemployment insurance, strike legislation, workers' compensation, sexual harassment. For instance, the class may explore the influences of Fabianism, the labor movement and the new right, globalization or free trade. Three credits.

SOCI 325 The Sociology of Mass Media
This course explores the various forms of media and their function in society. Students will be expected to critique the use of media in communications and the social construction of popular culture as portrayed in mass media. Six credits.

ANTH 326 The Family in Cross-Cultural Perspective
A study of the history and current conditions of families in various parts of the world. Using a cross-cultural perspective, the family will be studied in the context of social, political, economic, and cultural change and the unequal power relationships between men and women. Course material will focus on ethnographic examples of different forms of the family. Cross-listed as WMNS 326. Three credits.

SOCI 327 Contemporary Canadian Families
This course will focus on families in Canada today. The life course perspective will be used to study the social and interpersonal dynamics and diversity of family relations. The course also will provide a critical review of the various perspectives aimed at explaining the impact of social, political, economic and cultural change on Canadian families and the unequal power relationships between men and women. Cross-listed as WMNS 327. Three credits.

SOCI 328 Social Inequality
Explores the distribution of social, political and economic resources in Canadian society. Emphasis is given to unequal access to these resources on the basis of social class, race, ethnicity, gender, age, and region. Using a central theme based upon the concepts of class and power, the course examines specific issues such as the socio-economic bases of social inequality, ascription, and the consequences of poverty in Canada. Three credits.

ANTH 335 Cultural and Social Anthropology
A comparative study of band, tribal, chiefdom and state-level societies studied by anthropologists in the 20th century. Cross-cultural studies will be explored through the use of film ethnographies. In using film, the course will examine how the Other is represented by various anthropological filmmakers and artist filmmakers. Traditional ethnographic films, designed to produce knowledge about other cultures, will be compared with the more recent self-critical approach that often reveals unconscious assumptions about one's own culture. Six credits.

ANTH 340 Comparative Analysis of Power and Violence
Power differentials and violence are often assumed as inherent, constant and inescapable qualities of the human condition. This course provides students with the opportunity to explore systematically the socio-cultural qualities of power and violence through the application of comparative methods and analyses. The course is intended to familiarize students with the necessity of comparative approaches to the study and appreciation of human socio-cultural organization and behavior. Six credits.

ANTH 345 Archeological Field School
This course is designed to teach methods of survey, excavation, laboratory analysis, and writing archeological reports. Primarily a field course with visits to archeological sites and some excavation work. Offered on an occasional basis during the summer only. Six credits.

ANTH 350 The Future of Post-Industrial Society
This course examines the field of future studies and the methods and forecasting techniques which futurists use to assist them in thinking about the future. Students will examine both optimistic and pessimistic ideas about the state of the world at the beginning of the third millennium: the future of the nation-state; global ecological and demographic problems; the impact of new technologies on society; economic disparities among nations; and trends in North American life. Six credits.

SOCI 351 Criminal Justice and Corrections
This course examines the structure and operation of the criminal justice system, including policing, court systems, correctional institutions, philosophies, and practices. Regular class sessions will be supplemented with guest lectures, attendance at court sessions, and field trips. Prerequisite: SOCI 250. Three credits.

SOCI 352 Policing and Society
This course introduces students to the social science literature on policing. Although the emphasis of the course will be on public policing, attention will also be given to regulatory and private security policing. The course will be divided into four sections. Section one will cover the social and historical context of public policing in Great Britain, Ireland and Canada. Section two will be a discussion of the structure and operation of policing in Canadian society. Section three will explore contemporary issues: public police-community relations, aboriginals and policing, and the role of women in public policing. The final section will discuss the emergence and development of regulatory and private security policing. Prerequisite: SOCI 250. Three credits.

ANTH 353 Law, Culture and Society
This course will explore issues emanating from the anthropology and sociology of law. The course will be divided into three sections. Section one provides an overview of the social science literature on the interrelationships among legal, cultural and social institutions and practices with emphasis on cross-cultural and historical variety in legal institutions. Section two explores the literature on disputes in a cross-cultural context. Section examines the idea of punishment as a social institution introducing students to utilitarian, functionalist, political economy, panoptican, and feminist accounts of punishment. Prerequisite: SOCI 250 or 12 credits ANTH. Three credits.

ANTH 355 Linguistics
The first half of this course is cross-listed as CELT 273 and ENGL 273; see ENGL 273. Six credits.

SOCI 360 Social Policy [AR]
The aim of this course is to explain social service systems in Canada and other industrial nations. The course will address historical and contemporary trends in federal and provincial social policies, and the effects of these programs (e.g., unemployment insurance, welfare) on the state, social institutions and groups. Six credits.

ANTH 360 Archeology of the Ancient Near East
The course studies the archeology of the ancient Near East beginning with the emergence of farming around 8000 BCE. It treats the birth of civilization in Mesopotamia (present-day Iraq) and Egypt (ca. 3100 BCE). It then traces the development of civilization in these two areas as well as in Syria-Palestine down to the Iron Age in 1200 BCE. Cross-listed as RELS 340. Six credits.

ANTH 365 Anthropology of Development
This course examines the impact of development on peoples around the world, using ethnographic examples. There are two major sections in the course: discussion of how people in developing countries are affected by colonization and current global processes, and examination of the effects of development projects intended to improve the lives of poor people. The ethnographic material will be analyzed in the context of theoretical frameworks of development. Six credits.

SOCI 375 The Comparative Study of Nationalism
Cross-listed as PSCI 330; see PSCI 330. Six credits.

SOCI/ANTH 391 Junior Seminar
The purpose of this seminar is to assist honours and advanced major students in their third year of study to begin their thesis/major paper work, and provide an environment in which they may learn along with fourth-year students who are working on their thesis. Students will be encouraged to develop a thesis/advanced major topic, locate a supervisor with whom they will develop a proposal, collect materials, and consider methodological and ethical issues relevant to their research. Students will be expected to attend colloquia, guest lectures, and public talks relevant to the disciplines of anthropology and sociology. Prerequisites: SOCI/ANTH 201, 202. Three credits.

SOCI/ANTH 400 Honours Thesis Research
This seminar is required for all senior honours students. Six credits.

ANTH 403 Science in Society
This seminar course examines the role of science and technology in contemporary society. Starting with the question, "What is science?" the class will review the historical development of science and technology before moving on to consider current issues such as gender and science; political, economic, and social influences on scientific research; and the nuclear question. Prerequisite: SOCI/ANTH 201. Three credits.

SOCI 417 Social Difference: Race, Ethnicity, Gender, Class, Sex and Ability
Examines current theories of social difference and explores the personal, social, economic, and political effects of how these differences are understood in Canadian, western and international contexts. Particular attention is given to topics such as oppression, resistance, identity, politics, and discourse theory. Starting with the question, "What differences do some differences make?" the class will review how issues of difference become relations of dominance. Prerequisite: SOCI 217. Cross-listed as WMNS 417. Three credits.

ANTH 418 Area and Regional Studies I and II
The modern era is characterized by numerous and often competing claims of cultural distinctiveness based on language, history, tradition or social structure, as well as on attachment to place or territory. This course explores, from either an anthropological or a sociological perspective, the construction of cultures within regional boundaries. The focus will vary yearly, covering one region; linguistic group; or nation-state; or possibly comparing two or more. Prerequisite: SOCI/ANTH 201. Three or six credits.

SOCI 421 Ancestry, Society and Personal Identity
This course attempts to locate personal biography in the context of social history. Students' genealogies provide the starting point for a series of 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: SOCI/ANTH 201 or permission of the chair. Three credits.

SOCI 423 Environment and Society II: Paradigms and Politics [AR]
Within the framework outlined in SOCI 323, this course examines environmental problems. Using the current crises in Canadian agriculture and fisheries as case studies, students will consider the competing claims of science, the state, and citizen or community groups to define and redress these problems. The course explores four modern movements offering innovative approaches to environmental problems: deep or non-human-centred ecologies; feminist environmentalism; environmental justice; global and third world environmentalism. Prerequisite: SOCI 323. Three credits.

SOCI 424 Women and Work
This course will focus primarily on feminist analyses of women's paid and unpaid work in 20th-century Canada, though historical and cross-cultural perspectives will be addressed. The course will provide a critical overview of various theoretical perspectives and examine the influences of race, class and ability. Topics will include: pay equity, affirmative action, sexual harassment, women in family enterprises, domestic labor, the division of labor in the home, and mother work. Prerequisite: ANTH 225 or SOCI 310. Cross-listed as WMNS 424. Three credits.

SOCI 426 Consumer Society
This course will examine how individual identities, human relationships, and social policies are shaped by the drive to expand consumer credit, spending, and needs. Students will explore the influence of the consumer ethic on gender roles, family life, sexuality and reproduction, work and leisure, developing nations, and the natural environment. Finally, the course will ask how ordinary people resist expanding consumer demands, cultural imperialism, and the

globalization of consumer markets. Prerequisite: SOCI 100 or ANTH 110; SOCI/ANTH 201 is recommended. Three credits.

SOCI 451 Selected Topics in Criminal and Social Justice
This course will investigate current theoretical and research issues in crime and social justice. Emphasis will be given to the use of qualitative, quantitative and historical methodologies in the investigation of issues such as: gender; class; minorities and criminal justice; police-community relations; and carceral and non-carceral forms of punishment. The distinction between, and the processes involved in, criminal and regulatory legal procedures will also be examined. Prerequisites: SOCI 250, 351. Three credits.

SOCI/ANTH 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 the disciplines of anthropology and sociology. Required for honours students in their senior year. Prerequisite: SOCI/ANTH 391. No credit.

SOCI/ANTH 492 Student Internship in Criminal Social Justice
Offered in the fall semester of each academic year, this course expresses students to work settings in the areas of criminal and social justice through a four-month internship, involving at least 39 hours in a work placement setting. Students' work in the placement setting will be assessed, as will a research paper that incorporates the placement experience within the wider context of research in the field of criminal and social justice. Required for students enrolled in the department's Advanced Major in Criminal and Social Justice. Prerequisite: 18 credits in the criminal and social justice area, including SOCI 201 and 202 by the end of the third year. Three credits.

SOCI/ANTH 499 Directed Study
Under the direction of a professor, students will work in an area of sociology or anthropology 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 Modern Languages in 7.24.

7.33 WOMEN'S STUDIES

M. Moynagh, Ph.D.	Coordinator
Advising Faculty	***Department of***
N. Forestell, Ph.D.	History/Women's Studies
J. Dawson, Ph.D.	Adult Education
M. Gallant	Human Kinetics
C. Mrazek	Nursing
S. Vincent, Ph.D.	Sociology/Anthropology
D. Vossen, Ph.D	Human Kinetics
L. Wadsworth, Ph.D.	Human Nutrition

The academic field of women's 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.

Program Requirements

Students may choose a BA with Advanced Major or Major in women's studies, or a BA with Joint Advanced Major or Major in women's studies and a Faculty of Arts subject. *See sections 4.4 and 4.2 for degree regulations.* Arts and science students may fulfill requirements for a pair in women's studies.

Students interested in women's studies should consult with the coordinator as early as possible. To enroll in the first core course, WMNS 200, students must have completed 30 credits of university courses or have permission from the women's studies coordinator. WMNS core and cross-listed courses are described below.

Major in Women's Studies

See section 4.2 for program regulations. Students are required to complete:

i) 12 credits of WMNS 200 and 303, 398 or 399;
ii) 24 credits WMNS including cross-listed courses.

No more than 12 credits of cross-listed courses may be from a single department.

Joint Major in Women's Studies and a Faculty of Arts Discipline

Requirements:

a) 36 credits in WMNS (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 WMNS 200 and 303, 398 or 399;
   ii) 24 credits WMNS including cross-listed courses.

   No more than 12 credits of cross-listed courses may be from a single department. None of the cross-listed credits may be in the student's declared subject B.

b) Course Pattern

Subject A	36 credits
Subject B	36 credits
Pair C	12 credits
Pair D	12 credits
Electives	24 credits

Advanced Major in Women's Studies

See section 4.4 for program regulations. Students are required to complete:

i) 18 credits of WMNS 200, 303, 398 or 399, 400;
ii) 18 credits WMNS including cross-listed courses.
   No more than 12 credits of cross-listed courses may be from a single department.
iii) A senior paper. Guidelines for the senior paper are available from the women's studies coordinator or the course instructor for WMNS 400. The senior paper is written in conjunction with WMNS 400.

Joint Advanced Major in Women's Studies and a Faculty of Arts Discipline

Requirements:

a) 36 credits in WMNS (subject A) and 36 credits in another Faculty of Arts department (subject B) or 36 credits in a Faculty of Arts department (subject A) and 36 credits in WMNS (subject B). The program and department requirements for advanced majors are applicable in both subjects.
   Students must complete the following:
   i) 18 credits of WMNS 200, 303, 398 or 399, 400;
   ii) 18 credits WMNS including cross-listed courses.

   No more than 12 credits of cross-listed courses may be from a single department. When WMNS is subject A, none of the cross-listed credits may be in the student's declared subject B. When WMNS is subject B, none of the cross-listed courses may be in the student's declared subject A.

b) Course Pattern

Subject A	36 credits
Subject B	36 credits
Pair C	12 credits
Pair D	12 credits
Electives	24 credits

c) A senior paper is required for all advanced major students. Guidelines for the women's studies senior paper are available from the women's studies coordinator or the course instructor for WMNS 400. The senior paper will be written in WMNS 400 when women's studies is subject A. When women's studies is subject B, the senior paper will be written in accordance with the guidelines of subject A.

Minor in Women's Studies (Four-Year BA)

i) WMNS 200 (6 credits);
ii) 18 credits in women's studies, which may include WMNS 303 and/or 398 or 399 in addition to cross-listed courses. No more than six credits of cross-listed courses may be from a single department.

Pair

i) WMNS 200 (6 credits);
ii) 6 credits in women's studies, which may include WMNS 303 and/or WMNS 398 or 399 or (a) cross-listed course(s).

Women's Studies Core Courses

200 Introduction to Women's Studies

This course introduces students to concepts, issues and perspectives in women's studies. Interdisciplinary, feminist and multicultural perspectives on women and gender are reflected in the course. Students are introduced to questions that

have been posed concerning the nature, roles, problems and accomplishments of women. Emphasis is placed on Canadian women. Prerequisite: 30 credits or permission of the women's studies coordinator. Six 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. Prerequisite: WMNS 200 or permission of the instructor or coordinator. Three credits.

398 Sexuality, Gender&the Body
This course will examine a women's studies issue connected to a geographical, social, economic, political or temporal location. Since the approach to the selected topic will be theoretically informed, students will be given the opportunity to apply feminist theory to a particular problem or area of investigation. For 2003-2004, the topic will be the History of Sexuality: International Perspectives. Three credits.

399 Selected Topics in Women's Studies II
This course will provide students with the option of taking a second selected topics course. Three credits.

400 Research Methods Seminar
This seminar course examines research methods by feminist scholars in different fields. Students will consider the development of new methodologies and insights on methodology in the field of women's studies. The seminar also serves as the foundation for the senior paper. Prerequisite: WMNS 200 or permission of the instructor or coordinator. Six credits.

Note: Students are required to take only one of the special topics courses, either 398 or 399, in order to complete a major, advanced major, joint major or joint advanced major degree in women's studies.

WOMEN'S STUDIES CROSS-LISTED COURSES

WMNS

217	SOCI 217	Race, Class, Gender, and Sex	3 credits
225	ANTH 225	Anthropology of Gender	6 credits
229	ENGL 229	Women in English Literature	6 credits
308	HIST 308	Canadian Women's History	6 credits
310	SOCI 310	Gender	6 credits
323	RELS 323	Mary and the Identity of Women	3 credits
325	RELS 325	Early Christian Women	3 credits
326	SOCI 326	The Family in Cross-Cultural Perspective	3 credits
327	SOCI 327	Contemporary Canadian Families	3 credits
329	ENGL 329	Studies in Women Writers: Feminisms and Their Literatures	3 credits
330	ENGL 330	Studies in Women Writers: Genres, Cultures, and Contexts	3 credits
332	HKIN 332	Gender in Sport and Physical Activity	3 credits
345	PSCI 345	Women and Politics	3 credits
360	PSYC 360	Psychology of Gender	6 credits
365	NURS 365	Gender and Health	3 credits
367	BSAD 367	Current Challenges: Women in Management	3 credits
417	SOCI 417	Social Difference: Race, Ethnicity, Gender, Class, Sex, and Ability	3 credits
424	SOCI 424	Women and Work	3 credits

Other courses may be considered WMNS cross-listed courses after consultation with the women's studies coordinator.