Academic Calendar 1977-78
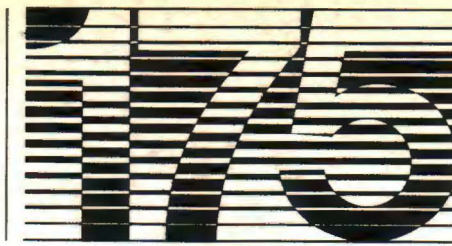
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1802-1977
Saint Mary's
University
Halifax

Academic Calendar
of
Saint Mary's University

1977-1978

USING THIS CALENDAR

Although a university calendar is used by numerous people for many different purposes, one of its chief functions is to provide information for students interested in pursuing further study at the University level. The following paragraphs were prepared to assist such students in finding relevant material in this calendar.

Section 3 of this book sets forth the requirements for the several degree and diploma programs offered at Saint Mary's University. These programs include:

Bachelor of Arts
Bachelor of Science
Bachelor of Science in Engineering Management
Bachelor of Commerce
Diploma in Engineering
Bachelor of Education
Bachelor of Education (Vocational Education)
Master of Arts (in History, Philosophy, or Education)
Master of Science (in Astronomy)
Master of Business Administration

After deciding on the degree program in which he is interested and studying the requirements of the program, the student should consult Section 5 which contains descriptions of all the courses offered by the departments of the University. The timetable for the current academic year shows exactly which courses will be available, when they will be taught, and by which instructor. Keeping within the requirements of the particular program chosen, the student may then select the courses with the greatest interest and appeal to him. Frequently a course will have several sections taught at different times. This is arranged in order to keep classes to a reasonable size and to provide time options for students in the preparation of their timetables.

The next step is to apply for admission. Complete information on how to proceed is set forth in the latter part of Section 2. This section also contains the academic regulations and provides academic information. Details on fees and financial information are found in Section 6, which also contains facts about academic awards and scholarships as well as bursaries and student loans.

Please contact the Registrar for any further information that may be required.

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Michael Derrick, B.A., (Saint Mary's) Assistant Director

Athletics
Robert Boucher, Arena Manager and Hockey Coordinator
James Clark, B.B.A. (Acadia), Football Coordinator
Roy Clements, Soccer and Volleyball Coordinator
Brian Heaney, B.Sc. (Acadia), Basketball Coordinator
Kathleen Mullane, B.P.E. (Dalhousie), Women's Athletic Coordinator

Audio Visual Services
Paul E. Rooney, Head

Bookstore
Keith A. Tower, Manager

Business Office
Brian Burke, B.Comm. (Saint Mary's), Accountant
Matthew Gallagher, Purchasing Officer
Russell Lownds, Receiving and Stores

Computer Services
A. M. Tingley, B.E., M.E. (Nova Scotia Technical College), Head

Continuing Education
Lloyd Fraser, B.A., B.Ed. (Mount Allison), Assistant Director
Dougald A. MacFarlane, B.A. (Saint Francis Xavier), M.A. (McGill), Ph.D. (Washington)

Development and Alumni Affairs
K. J. Cleary, B.A., B.Ed., M.A. (Saint Mary's), Alumni Coordinator

Library
Barbara Dacey, B.A. (Dalhousie), B.L.S. (University of Toronto), Head of Public Services
C. Gosine, A.L.A. (London), Bibliographer
Christine MacGillivray, Administrative Assistant
Lloyd Melanson, B.A. (Saint Mary's), M.L.S. (McGill), Head of Technical Services
D. Vaisey, B.A. (Trent), M.L.S. (Dalhousie), Head of Reference

Personnel
Frederick McKellar, Personnel Officer

President's Office
Carol M. Markesino, Executive Secretary

Registrar's Office
Murray Wilson, B.A., B.Ed. (Saint Mary's) Assistant Registrar
Theresa Brennan, B.A. (Saint Mary's), Assistant to the Registrar

ADMINISTRATIVE OFFICES AND STAFF 1977-78

Residence
Kenneth A. Munro, Director of Residences
Mary Anne Hotchkiss, B.Sc. (Saint Mary's) M.A. (Dalhousie), Assistant Director of Residences

Senate Office
K. J. Cleary, B.A., B.Ed., M.A., (Saint Mary's), Secretary of Senate

Student Centre
George Munro, B.A. (Dalhousie), Coordinator of Operations

Student Services
L. W. Smith, B.A. (Saint Mary's), B.Ed. (Dalhousie), M.A. (Fordham), Head of Counselling
Rev. J. J. Hennessey, S.J., B.A., M.A. (Gonzaga), Counsellor
Sandra Little, B.A., B.Ed., M.A. (Dalhousie), Counsellor
Rev. John Mills, B.A. (St. Anthony's College) B.D. (Mary Immaculate Seminary), M.A. (Maryknoll Seminary), Chaplain
Rev. John Pace, B.A. (McMaster), B.D. (Knox), Assistant Chaplain
Susan MacLean, B.A. (Saint Mary's), Director of Financial Aid.
Robert Dietz, Curator, Art Gallery
John Rodgers, Manager, Canada Manpower Centre on Campus

University Services
G. H. Somers, Dip. Eng. (Saint Mary's), Director of Physical Plant
Peter Weal, Manager, Printing Centre

SECTION 1

General
Information

GENERAL INFORMATION

HISTORY

Saint Mary's University was founded in 1802 to provide opportunities for higher learning to young Catholic men. Its founder, the Reverend Edmund Burke, had meagre resources to work with but, on later being named Bishop with responsibility for Nova Scotia, he continued to support the college as essential to the development of the Catholic community. It was not until 1841, however, that the Nova Scotia House of Assembly gave formal, if temporary, recognition of its academic role. Its legal status was confirmed in perpetuity by enactment in 1852, but the college had an uncertain existence for many years.

In 1913, the Christian Brothers of Ireland, a teaching order, were invited by the Archdiocese of Halifax to direct the college and its academic program. During the ensuing years, Saint Mary's University became more widely known for the quality of its undergraduate teaching and continued to develop new instructional programs, most notably within its Faculty of Commerce. In 1940, the Upper Canada Province of The Society of Jesus was invited to succeed the Christian Brothers as administrators and teachers in the University, and for thirty years until the enactment in 1970 of the new act of incorporation, the college remained under Jesuit supervision. The long-standing emphasis on liberal arts and commerce was extended to include new programs in science, engineering, and teacher education. Extension courses became an important part of the University's commitment to an active educational role in the community.

The transfer of responsibility from the Roman Catholic Archdiocese of Halifax to an independent Board of Governors in 1970 began a new phase in the life of Saint Mary's University. Now a public, co-educational institution functioning within its tradition of Christian values, the University offers full undergraduate programs in arts, science and commerce, with pre-professional programs in engineering, medicine, law, theology, dentistry and architecture, and selected graduate study. Five thousand students are annually enrolled in day and evening programs given at its thirty-acre campus, located in the south end of Halifax, and at several off-campus locations in Nova Scotia. An energetic building campaign has given the University almost a dozen modern buildings, including high-rise academic and residence complexes for married and single students, a Student Center, Science building, and recently a new Library.

Saint Mary's University remains faithful to the founding ideals of dedication to undergraduate teaching and concern for the individual student. The traditions formed by its founder and early teachers, built upon by the commitment to sound education of the Christian Brothers of Ireland and strengthened by the educational tradition and imaginative leadership of the Canadian Jesuits, provide a stable base for further development.

The direction in which this development will take place is indicated by the establishment of the Institute of Human Values. The Institute acts internally as an instrument for focussing the human and physical resources of the university on the relationship between knowledge, values and freedom with the object of stimulating purposeful and effective leadership in all three of these areas of human activity. Externally it acts as a clearing house of information and a channel of communication serving scholars in all fields who share this common concern. Further information on the Institute is carried in Section 8 of this Calendar.

STATEMENT OF OBJECTIVES

The objectives of the University, as defined in the Saint Mary's University Act, 1970 are to:

(a) promote and disseminate learning and knowledge;

(b) give special emphasis to the Christian tradition and values in higher education;

(c) provide an atmosphere of freedom, responsibility and mutual respect in the University community;

(d) aid in the improvement of society in all ways consistent with these objects.

MEMBERSHIPS

Saint Mary's University is a member of a number of organizations including Association of Universities and Colleges of Canada, Association of Atlantic Universities, Association of Commonwealth Universities, and the International Association of Universities.

AFFILIATIONS

Saint Mary's University has been associated with the Nova Scotia Technical College since 1916, providing the first three years of courses leading to the Degree of Bachelor of Engineering in civil, electrical, mechanical, mining, metallurgical, chemical and industrial engineering. Formal association also exists between the University and Ignatius College in Guelph and Regis College in Toronto.

SECTION 2

Academic Regulations and Information

Admission Requirements

Registration

It is the responsibility of each student, faculty member, and administrative officer concerned with academic matters to be familiar with the rules and regulations published in this Calendar. In particular, it is the responsibility of each student to ensure that the courses which he takes are appropriate in all respects to the degree program in which he is registered.

ACADEMIC REGULATIONS

INTRODUCTORY INFORMATION

Definitions

Academic Year:
The period extending from Wednesday following Labor Day in September to and including Convocation Day in May of the following year.

Academic Status:
Senior: one who has 13.0 or more credits;
Junior: one who has 8.0 to 12.5 credits;
Sophomore: one who has 3.0 to 7.5 credits;
Freshman: one who has 0.0 to 2.5 credits.

Admission:
Acceptance of an applicant as a student.

Advanced Standing:
Credit granted for work completed before admission to Saint Mary's University.

Audit:
Non-credit registration in a credit course.

Chairman:
Faculty member responsible for a department or area of study.

Course:
A unit of instruction in a particular subject. The last digit of course numbers designates the following:
.0 — full year course
.1 — first semester half course
.2 — second semester half course

Credit:
A completed unit of university work or recognized equivalent. One credit is granted for each successfully completed full-year course; a half credit is granted for a successfully completed one semester course. A minimum of twenty credits is required for a first baccalaureate degree.

Dean:
Also called Dean of the Faculty; the chief academic administrator of a Faculty.

Elective:
A course not specifically required by a student's program of studies.

Faculty:
When spelled with capital F, refers to an academic unit offering its own degree program; when spelled with small f, refers to instructors in a Faculty.

Grade:
The letter indicating an instructor's evaluation of a student.

Instructor:
A member of faculty teaching either full or part time.

Major:
A subject or area of concentration.

Probation:
A conditional status assigned to a student who has shown evidence of academic weakness.

Program:
An approved group of courses leading to a degree or diploma.

Registration:
Enrolment of a student in a course, courses, or program, including the payment of fees.

Semester:
A term or period of instruction corresponding to one half of the academic year; each semester lasts approximately fourteen weeks.

Subject:
Also called a discipline; a specific field of study, e.g., accounting, chemistry, history.

Summer Sessions:
Periods of instruction normally lasting six weeks, during the months of May through August. Two summer sessions are offered each year.

Transfer Credit:
Credit granted for work completed at another institution after admission to Saint Mary's.

ACADEMIC REGULATIONS

Course Abbreviations:

ANTHROPOLOGY	Ant
ASIAN STUDIES	Asn
ASTRONOMY	Ast
ATLANTIC CANADA STUDIES	Acs
BIOLOGY	Bio
BUSINESS ADMINISTRATION	Bus
CHEMISTRY	Che
CLASSICS	Cla
LATIN	Lat
GREEK	Gre
COMMERCIAL LAW	Cml
ECONOMICS	Eco
EDUCATION	Edu
ENGLISH	Egl
ENGINEERING	Eng
GEOGRAPHY	Gpy
GEOLOGY	Geo
HISTORY	His
MATHEMATICS	Mat
MODERN LANGUAGES	
FRENCH	Fre
GERMAN	Ger
SPANISH	Spa
CHINESE	Chi
PHILOSOPHY	Phi
PHOTOGRAPHY	Pho
PHYSICS	Phy
POLITICAL SCIENCE	Pol
PSYCHOLOGY	Psy
RELIGIOUS STUDIES	Rel
SOCIOLOGY	Soc
WEST EUROPEAN STUDIES	Wes

Number of Courses in a Year

1. a) Students must formally register for all courses. In the Faculties of Arts, Commerce and Science (exclusive of Engineering) the normal load in the regular session for a full-time undergraduate is five full courses (or the equivalent), while in the Division of Engineering and in the Bachelor of Education program six full courses (or the equivalent) constitute a normal full-time load. Undergraduate students registered for at least three courses in a semester are considered to be full-time, while students registered for fewer than three courses per semester are considered to be part-time. During the same academic year it is possible for a student to be full-time in one semester, part-time in another.

b) Students may apply to the Dean of their Faculty for permission to carry an extra half or full course. Permission will be granted only in exceptional circumstances to students whose quality point average during the previous year was at least 3.0. Forms to request a course overload are available in the Registrar's Office and, on completion, must be filed with the Registrar for processing. No additional fee is required for overload courses, unless these are to be taken at another institution.

c) A student is normally permitted to take only one full course or equivalent during a summer session. In exceptional circumstances and where a student has attained a quality point average of 3.0 during the previous academic year of full-time study, two courses may be authorized at the Dean of the Faculty's discretion. No more than three full courses or equivalent may be taken by a student during the two summer sessions in any year. Forms to request a course overload during a summer session are available in the Registrar's Office and, on completion, must be filed with the Registrar for processing.

Auditing Courses

2. Students may audit courses with the consent of the instructor concerned but they must formally register as auditors in these courses. Audited courses are not given grades.

Academic Advising

3. Although students are responsible for ensuring that they meet the requirements of their degree programs, the University makes every effort to provide assistance in the selection of courses and programs. Such advice is readily available during Registration. At all other times, and indeed during Registration if particular problems arise, students who have already decided upon their areas of concentration will be advised by the chairmen of the appropriate departments or their appointees. All other students should seek advice from the Dean of their Faculty who will, if necessary, assign special academic advisors.

ACADEMIC REGULATIONS

Grading System

4. a) The final grade for a course will be based on the quality of a student's work including, where appropriate, essays and exercises, class tests, end of semester examinations, final examinations, reports, class participation, laboratory work, tutorial sessions, projects and field work.

b) Instructors must make known in writing, within the time limits set down in 13(b), the grading system to be used in the course. The written statement must include the relative weight which will be given to examinations, tests, written assignments and other means of evaluation.

Undergraduate Rating, Grades and Quality Points

5. a) The rating of an undergraduate student's performance in a full course is given as shown below in equivalent grades and quality points (for half courses, half the number of quality points are awarded). There are no recognized percentage equivalents for these grades.

Rating		Grades		Quality Points
Excellent	=	A	=	4.0
Very Good	=	B+	=	3.5
Good	=	B	=	3.0
		C+		2.5
Satisfactory	=	C	=	2.0
		C−		1.5
Marginal Pass	=	D	=	1.0
Fail or withdrawal after deadline (see No. 16)	=	F	=	0.0
Withdrawal Failure	=	WF	=	0.0

b) The following grades shall be given when appropriate but will not be calculated in the quality point average:

Aegrotat standing (see No. 12)	AE
Authorized withdrawal from course [see No. 16(c)]	WP or W

c) The minimum passing grade is D. Students should be aware that a grade of D (or the equivalent) is not ordinarily transferable as a credit either to or from other educational institutions.

d) To receive a passing grade in a course, a student normally must complete all course requirements, including all tests and examinations.

e) Students who have not completed the work of the course may, in special circumstances and with the approval of the Dean of the Faculty, be given the temporary grade of IC (incomplete) by the instructor; if no final grade has been submitted to the Registrar by the instructor within six weeks of the last day of classes in the semester, a grade of F will automatically be substituted for IC.

f) The maximum time limit permitted for a change of final grade is six months from the last day of classes in the semester.

Quality Point Average

6. a) A quality point average is used to determine the standard of a student's performance for the academic year.

b) Each letter grade is given a quality point equivalent as described in 5(a) above.

c) The quality point average is computed at the end of each academic year by dividing the total number of quality points obtained that year by the total number of full courses taken, or their equivalent.

d) The cumulative quality point average, calculated annually at the end of the academic year, is based upon all courses taken for credit in any Faculty while registered at Saint Mary's other than those for which grades of AE, W, or WP have been given (see No. 5(b) above). Courses for which grades of F or WF have been given will be included in the calculation of the quality point average even if such courses are subsequently retaken and passed.

e) Grades for courses taken at other institutions for which advanced standing at Saint Mary's is given are not included in calculations for a cumulative quality point average, a quality point average, or in calculations for determining awards and distinctions.

ACADEMIC REGULATIONS

Standing Required for Continuance

7. a) The regulations governing continuance in a student's program are those in effect at the time of the student's first registration in that program, except as provided under (b) below.

b) In the case of students readmitted after an absence of five or more years, or after having been required to withdraw for academic weakness, or in the case of students transferring to a different degree program, the regulations in force at the time of readmission or transfer apply.

c) Satisfactory Standing:

i) All students are expected to maintain satisfactory academic standards. The minimum standard considered to be satisfactory is a quality point average of 1.5.

ii) To qualify for a Bachelor's degree in Arts, Science, or Commerce, or a Diploma in Engineering, a student must achieve a cumulative quality point average of 1.5, even though other requirements such as the stipulated number of credits have been satisfied. For a Bachelor's degree in Education, a quality point average of 2.0 in that program is required.

d) Probationary Status:
Probationary status is incurred

i) if at the end of any academic year a full-time student has not attained a quality point average of 1.5 for that year;

ii) if, after taking five courses, a part-time student has not attained a quality point average of 1.5 in respect of those five courses;

iii) on readmission after being required to withdraw because of academic weakness (see (g) below).

e) Removal of Probationary Status:

i) A full-time student with probationary status can have that status removed only by achieving a quality point average of 1.5 during his first year of full-time study after being placed on probation.

ii) A part-time student with probationary status can have that status removed only by achieving a quality point average of 1.5 in respect of the first five courses taken after being placed on probation.

Note:

i) Transfer to a different Faculty does not remove probationary status.

ii) Unless the permission of the Dean of the Faculty has been obtained in advance, courses taken at another educational institution cannot be used to remove probationary status.

f) Required Withdrawal:

Withdrawal from the University for one academic year is required if a student fails to have his probationary status removed in accordance with the provisions of (e) above.

Note:

No credit will be given for any courses taken at another institution during the year of required withdrawal.

g) Re-admission after Required Withdrawal:

i) A student who has been required to withdraw, and who wishes subsequently to be readmitted, must apply to the Admissions Office.

ii) If readmitted, the student will be placed on academic probation and must fulfill the terms outlined in the letter of readmission. These will include the requirement that a full-time student achieve a quality point average of 1.5 during the academic year after readmission, or a part-time student achieve a quality point average of 1.5 in respect of the first five courses taken after readmission. Students failing to satisfy the terms of readmission may be denied the right to further registration.

Examinations

8. a) At the end of a semester, at the discretion of the department concerned, a formal examination may be held during the special periods set aside for this purpose in December and in April.

b) All formal examinations held during the above periods are to be scheduled by the Registrar. The maximum time allowed for each examination is three hours.

c) In a course for which a formal examination during the special period is not being held, no test or examination is permitted in the semester's last three weeks of lectures other than during a single, regular class period. Two or more tests or examinations during these last three weeks are not permitted as a substitute for a formal examination allowed under (a) and (b) above.

ACADEMIC REGULATIONS

d) To be eligible to write any type of test or examination in any course, a student must be properly registered in that course. The student must write all such tests or examinations at the designated times and in the designated places.

e) Supplementary examinations are no longer offered.

Evaluations

9. a) At the end of each semester, every instructor will submit to the Registrar, on the forms provided, his evaluations of all students registered in his courses. For full courses, interim grades will be submitted at the end of the first semester and final grades at the end of the academic year.

b) First semester Grade Report Forms are available to students at the beginning of the second semester. Those not picked up by the end of the first week of this semester are mailed to a student's local address. Should the latter not be on file in the Registrar's Office, the form is mailed to a student's permanent address.

c) As soon as possible after conclusion of the academic year Grade Report Forms showing the final grades for all courses in which the student was registered are mailed to the student's permanent address.

d) Final grades are withheld from any student who has money owing to the University, or who has either money or books owing to the University Library system.

e) Grades given at the end of a semester shall not be made known to students except by the Registrar.

Special Examinations

10. a) A special examination may be arranged

i) if a student presents a legitimate reason, acceptable to the Dean of the Faculty, for not having taken a final examination on the scheduled date; or

ii) if a student has failed a course in exceptional circumstances which the instructor and Dean of the Faculty are satisfied justify a special examination being given; or

iii) if the Committee on Academic Appeals has made a judgment that a special examination be given.

b) The standard grading system (see No. 5) will be followed.

c) Special examinations will be scheduled by the Registrar. Except in the case of (a) (iii) above, a processing fee of $10.00 for one examination and $20.00 for two or more examinations will be charged to the student.

Academic Appeals

11. A student who has good reason to believe he has been subject to mistaken, improper or unjust treatment with respect to his academic work has the right to submit his case to the Committee on Academic Appeals. An appeal, however, must be based on solid evidence and not merely on injured feelings.

Appeals shall be governed by the following procedures.

a) **Appealing of Final Grades:** The only grades that may be appealed are final grades.

i) A student who wishes to appeal a grade must first consult the instructor concerned within one month of receiving the grade and, failing satisfaction, should also consult the appropriate chairman and dean. If the problem is still unresolved, the student may forward his appeal to the Committee on Academic Appeals. This must be done in writing, through the Registrar, within three months from the last day of the semester in which the course is taken.

ii) It is the responsibility of the student and the instructor to provide the Committee with all relevant available material on which the grade was based, such as examinations, tests, exercises, papers, reports, and other graded material.

iii) The Committee will normally appoint two qualified examiners to review the evidence presented and reconsider the grade. The examiners will submit their report and the evidence reviewed to the Chairman of the Committee.

iv) On the appeal for a change of grade, the decision of the Committee shall be final.

b) Other Appeals:

On appeals other than those for a change of grade, the procedures shall be as follows:

i) Normally within one month of the event or of the decision being received by the student, he shall submit his appeal in writing and direct it to the Committee on Academic Appeals through the Registrar.

ii) The Chairman of the Committee on Academic Appeals shall forward a copy of the appeal to the Dean of the appropriate Faculty, and, if relevant, to the chairman of the department and the instructor.

c) Decision:

Within one month, if possible, of receiving any appeal under a) or b) above, the Committee shall render and communicate its decision through the Registrar to all parties concerned. Pending possible further appeal, the Committee will retain the evidence presented to it for a period of six weeks after rendering its decision.

d) Appeal of Committee's Decision:

Except in the case of an appeal for a change of grade, the student shall have the right to appeal an adverse decision to the Executive Committee of Senate. Such an appeal shall be governed by the following procedures:

i) Within one month of receiving the decision of the Committee, the student shall submit his appeal in writing to the Secretary of Senate who shall forward the appeal together with all previously considered evidence to the Executive Committee of Senate for its consideration.

ii) Within one month of receiving the appeal, the Executive Committee shall render and communicate its decision through the Secretary of Senate to the Registrar, who in turn shall communicate the decision to the student and to the Committee on Academic Appeals and take any further required action.

iii) The decision of the Executive Committee shall be final.

e) Fee:

All appeals to the Committee on Academic Appeals must be accompanied by a payment of a $25.00 fee. Further appeal under d) above requires an additional payment of $25.00. In the event of a decision favorable to the appellant, all payments will be refunded.

Note:

i) An appellant may ask or be asked to appear before the committee(s) hearing his appeal.

ii) No member of a committee can participate in the hearing of an appeal arising from an action to which he was party.

Credit without Final Examination

12.   A student who, for medical or compassionate reasons, has been unable to write the final examination in a course but who has satisfactorily completed the other requirements, may apply to the Dean of the Faculty for a credit in that course without examination. He must support his request with adequate evidence. If the Dean permits the request to go forward, the instructor involved will be asked to assign an estimated final grade. If the instructor judges that the student should be given credit for the course but cannot give him a precise quality point grade, he will assign the grade of AE (aegrotat). This grade will not be included in computing the quality point average. A student may apply for aegrotat standing for a maximum of five courses during his undergraduate program.

Course Changes

13.   a) At the beginning of a course, a period of time is provided for students to alter their registration without the change being noted on their permanent records. During this period, a course or section may be added, dropped, or exchanged for another course or section.

b) The period of time provided from the first day of classes is

i) two weeks in a full year course;

ii) one week in a semester course;

iii) five days in a summer session course (three days in a half course).

c) Changes can be effected only by filing with the Registrar a Change of Registration Form, indicating the desired change(s) and signed as follows:

i) in the case of a change of section only (e.g. Egl 200.0A to Egl 200.0D), by the Chairman of the Department offering the course;

ii) in a case involving the adding, dropping or changing of an unsectioned course or courses (e.g. adding or dropping His 340.0, or changing from Ant 340.0 to Pol 350.0), by the Chairman of the Department in which the student is majoring, or (if no major has been declared) by the Dean of the student's Faculty;

iii) in a case involving both courses and sections (e.g. adding or dropping Egl 200.0A, or changing from Egl 200.0A to Pol 200.0C), by the Chairmen of the Departments offering the sectioned course(s), or (if no major has been declared) by the Dean of the student's Faculty.

Declaration or change of Major Area of Concentration

14.   a) In order to declare or change a major area of concentration, a student must file a Change of Registration Form with the Registrar. This form must have been signed by the chairman of the department in which the student intends to major. Students are strongly urged to declare their major areas of concentration before registering for the final ten credits.

b) The regulations governing the major program will be those in effect at the time of declaration, or change, of major.

Procedure for Changing Faculty

15.   In order to register an official change of Faculty, a student must file with the Registrar a Change of Registration Form which has been signed by the Dean of the Faculty into which the student intends to transfer.

Upon receipt of such a Change of Registration Form, the Registrar, on the advice of the Dean of the Faculty, will inform the student of the number of credits (including advanced standing credits) being transferred to his new degree program.

A student on probation at the time of authorized transfer of Faculty automatically remains on probation.

Withdrawing from a Course

16.   a) After the time limits indicated in 13(b) above have expired, and provided the course is still in its first half of class instruction, a student may be authorized by the appropriate Chairman or Dean of the Faculty to withdraw from the course. In the case of students registered for a major concentration, authorization will be by the Chairman; in the case of students who have not selected a major concentration, authorization will be by the Dean.

b) If authorization is granted, the student will be responsible for submitting the authorization on a prescribed Change of Registration Form to the Registrar, who will then inform the appropriate instructor and request a grade.

c) Provided the course is in its first half of instruction, the instructor will assign a grade either of WP (withdrawal pass) or WF (withdrawal failure). If the instructor has not determined the student's standing up to the time of withdrawal, a grade of W (withdrawal) will be awarded.

d) A student who withdraws from a course after it has entered its second half of instruction, or who drops a course without proper authorization, will be assigned a grade of F.

Retaking a Course

17.   a) A student may retake any course, including either class or laboratory portions. Although all grades, including failing grades, count in computing quality points for the year and for the degree, each course counts only once as a credit in the degree program.

b) A student will not ordinarily be given credit for a course taken at another educational institution which he has already taken and failed at Saint Mary's.

ACADEMIC REGULATIONS

Withdrawal for Academic Reasons

18.   Students whose participation, work, or progress is deemed to be unsatisfactory may have their registration terminated and be denied the right to continue at the University by the Dean of the Faculty.

Academic Responsibility

19.   a) University students are expected to have a reasonable measure of self-discipline and maturity. While the University's teaching resources are available for help and guidance in the programs of study undertaken by a student, and every effort will be made by instructors and staff to assist a student with academic or other problems, the final responsibility for success or failure in academic studies rests on the student.

b) While the University does not compel attendance at every class, students should realize that failure to attend regularly may seriously jeopardize their chances of success.

c) A student who does not adhere to traditional ethical standards in the conduct of his academic work will be subject to penalty, including the possibility of being expelled from the University, e.g.,

i) a student who copies another's work during an examination may be denied credit for the course; in the case of a second offense, the student may be asked to leave the University;

ii) a student who tries to submit as his own the work of another person, whether it be that of another student or copied or paraphrased without acknowledgement from another source, is guilty of plagiarism and academic dishonesty. He will be given no mark for the submission and may be denied credit for the course. Further violations will result in a denial of credit for the course, or expulsion from the University.

Advanced Standing

20.   a) **High School:**

i) Students from Nova Scotia Grade XII (or the equivalent) seeking advanced standing must forward their final transcript or certificate of marks to the Director of Admissions.

ii) Advanced standing will be given only for courses with satisfactory grades as required by the relevant Saint Mary's program, and grades of D or lower are not acceptable.

b) **University:**

After an official transcript has been received by the Registrar, students transferring from other recognized universities to a degree program at Saint Mary's will be given advanced credit as judged appropriate by the Dean of the Faculty. To obtain a first degree they must fulfill all requirements for that degree and successfully complete a minimum of seven full courses (or the equivalent) at Saint Mary's.

c) **Other Institutions:**

Students seeking advanced credit for academic courses completed beyond the high school level at non-university institutions, including those with which the University has special credit arrangements, will have their official records assessed by the Dean of the Faculty to determine possible advanced standing credits. To obtain a first degree they must fulfill all requirements for that degree and successfully complete a minimum of ten full courses (or the equivalent) at Saint Mary's.

Note: A request for advanced standing will not be considered after one year from the date of the student's first registration at Saint Mary's.

For further information on credit granted for work done prior to admission to Saint Mary's, see No. 8 of *Admission Requirements*.

ACADEMIC REGULATIONS

Transfer Credit

21. a) While registered at Saint Mary's University a student may be authorized by the appropriate Dean to take courses at another academic institution for transfer credit to a degree program at Saint Mary's. Students applying for such permission must provide the Registrar with a full description of the course(s) involved. The description from the academic calendar will suffice. The Registrar will notify the student of the Dean's decision and, if permission has been granted, will forward a Letter of Permission directly to the institution at which the student is permitted to study. The student is responsible for completing the proper registration procedures at the designated institution. These procedures also apply to summer session courses.

b) The University will pay the tuition fee of a full-time student who has been given permission to register in a credit course at another Halifax institution unless the course is an overload or summer session course, in which case the student must pay the fee directly to that institution.

c) In cases where the University has entered into a special arrangement with another educational institution for shared instruction in a particular program, the normal registration process (see section on Registration) will be followed.

d) Before transfer credit can be considered, the student must have the university concerned send to the Registrar an official transcript of the work done.

e) No transfer credit will be given for courses with grades of D (or the equivalent).

f) Except under the above provisions, no student may register concurrently at Saint Mary's and at another academic institution.

Second Undergraduate Degree

22. Students who hold a first degree may register in a different Faculty for a second undergraduate degree. They must complete all of the degree requirements, as specified by the Dean of that Faculty. In so doing, they must obtain credit for at least five additional full courses (or the equivalent), but may not use the same concentration to meet the requirements for both degrees.

Honors Equivalency: Certificate of Honors Standing

23. The Certificate of Honors Standing was established by the University Senate to provide a means of granting appropriate recognition to those graduates who did not follow the regular honors program of the University, but have subsequently completed all requirements for graduation in such a program and, having already received a degree, cannot have a second undergraduate degree in the same Faculty conferred upon them.

Convocation Dates, Degrees and Diplomas

24. a) Students must file an Application for Graduation with the Registrar by the dates stipulated in the University Diary (see Centrefold of the Academic Calendar), and pay the graduation fee.

b) Normally there is only one convocation exercise each year, in May. The names of students who complete their degree or diploma requirements during the summer months are presented to Senate in the fall, usually in November. Successful fall candidates will be notified by the Registrar and may opt either to graduate the following May at the regular convocation exercise, or to obtain their degrees by mail as soon as they have been printed. Students who choose the first option can, upon application to the Registrar, be granted a letter testifying that all the degree requirements have been completed.

c) The parchment shows the degree which has been conferred but not the major area of concentration nor any distinction which may have been awarded. These, however, are noted on the student's official record card and hence appear on any academic transcript issued.

d) The University grants the following degrees:

Bachelor of Arts	B.A.
Bachelor of Science	B.Sc.
Bachelor of Commerce	B.Comm.
Bachelor of Education	B.Ed.
Bachelor of Education (Vocational Education)	B.Ed. (Voc.)

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ACADEMIC REGULATIONS

Master of Arts	M.A.
Master of Business Administration	M.B.A.
Master of Science in Astronomy	M.Sc.
Master of Theology	M.Th.
Master of Sacred Theology	S.T.M.
Master of Divinity	M.Div.
Doctor of Theology	Th.D.
Doctor of Laws, Honoris Causa	LL.D.
Doctor of Letters, Honoris Causa	D.Litt.

Degree or Diploma in Absentia

25.   Provided that candidates have officially notified the Registrar at least ten days in advance that they will not be present at convocation, they may receive their degrees or diplomas *in absentia*. Failure to give such notification will result in a $10.00 penalty which the student must pay, in addition to the Graduation Fee, before the parchment will be mailed to him.

Distinctions

26.   a) In the general undergraduate degree and diploma program, distinctions are awarded to successful candidates on the basis of the following quality point averages in respect of the courses specified in b) below.

B.A., B.Sc., & B.Comm.	Quality Point Average	Diploma in Engineering
summa cum laude	3.91-4.00	With greatest distinction
magna cum laude	3.76-3.90	With great distinction
cum laude	3.50-3.75	With distinction

b) The above quality point averages will be calculated on the basis of the highest grades attained in twelve full courses (or the equivalent) taken at Saint Mary's, including the last ten credits in the student's program. Students who have taken fewer than twelve courses at Saint Mary's are not eligible for distinctions.

c) No distinctions are awarded in the Bachelor of Education and Master's degree programs.

d) No student will be awarded a distinction whose academic record contains a grade of F, or WF, except upon the recommendation of the appropriate Chairman and Dean of the Faculty, and with the approval of Senate.

e) Bachelor's degree with Honors: A Bachelor's degree with Honors will be awarded with the distinction "First Class" when the cumulative quality point average for 17 full courses (or the equivalent) taken while registered at Saint Mary's, including the last 15 in the student's program, is at least 3.6. Otherwise the Honors degree will be awarded without special distinction.

University Medals

27.   At each Convocation, the following are presented:

a) Governor General's Medal
This medal is awarded to the undergraduate with the highest cumulative quality point average.

b) Faculty and Division Medals
In the Faculties of Arts, Science, Commerce and Education and in the Division of Engineering, medals are awarded to the undergraduate students with the highest cumulative quality point average.

Note: The cumulative quality point averages will be calculated on the same basis as that for determining distinctions (see No. 26). In the case of a tie, Senate will determine the recipient of the medal.

Dean's List

28.   At the end of the academic year, full-time students whose quality point average indicates high academic achievement will have their names placed on the Dean's List by the Dean of the Faculty. To qualify for this recognition, a student must have taken at least five courses (or the equivalent) during that academic year and have achieved a quality point average of 3.5 or higher. Placement on the Dean's List will be recorded on the student's transcript.

ACADEMIC REGULATIONS

Transcripts

29.   To request a transcript a student must complete 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:

(1) Faculty, program, and area of concentration;

(2) advanced standing credits;

(3) grades (failing as well as passing) in respect of all academic work attempted while registered at Saint Mary's.

Where appropriate, reference is also made to:

(1) placement on, and removal of, academic probation;

(2) requirement to withdraw for academic weakness, or for disciplinary reasons;

(3) distinctions and scholarships, including placement on the Dean's List.

The cost is $1.00 for the first copy of the transcript and $0.50 for each copy made at the same time. Official transcripts are those forwarded directly from the Registrar's Office to an official third party.

ADMISSION REQUIREMENTS

Students seeking admission to any degree program, undergraduate or graduate, at Saint Mary's University should address all enquiries, applications or correspondence to:

Director of Admissions
Saint Mary's University
Halifax, Nova Scotia
B3H 3C3

Admission Procedures

1. a) Application forms may be obtained by writing to the above address or telephoning (902) 422-7331, Local 257 or 258, or (902) 422-7361, Local 242 or 243.

b) Completed application forms should reach the Admissions Office by September 1, and must include provincial or other accredited school certificates which give final grades or marks, and a processing fee of $5.00 which is non-returnable.

c) A confidential report form will be sent to the applicant with the application. It should be given to the high school principal or guidance officer, where appropriate, with a request that the completed form be mailed directly to the above address.

d) All students registering for the first time must present, at or before the time of registration, a certificate of medical fitness signed by an authorized medical practitioner and evidence of an x-ray taken within six months of the date of registration. Failure to file the required medical documents will result in the student's acceptance and subsequent registration being considered conditional and may be subject to cancellation.

e) An applicant who has completed courses at another university or post-secondary educational institution must ask that institution to send an official transcript of the work done by the applicant to the above address. Failure to report all institutions attended may result in dismissal from the University.

f) (i) Students who previously had been registered at Saint Mary's University but were not in attendance during the preceding academic year or during a period of up to three years who were not required to withdraw from the University and who wish to resume studies in the same degree program in which they were registered, must notify the Registrar in writing of their intent to return to the University before registering for any course.

(ii) Students seeking to enrol in a different degree program and who have not been registered during the preceding four years or longer, or who have been requested to withdraw must apply for re-admission to the Director of Admissions (see Academic Regulations).

Definitions

2. a) satisfactory grades means an average in five subjects of 60 per cent with no mark below 50 per cent,

b) academically recognized subjects means subjects offered in the university preparatory program of an approved school system.

Admission Requirements

3. a) Students entering from the Nova Scotia school system must have Grade XI with satisfactory grades in English and four other academically recognized subjects, as defined above, to enter a four year degree or five year honor's program.

(i) Students intending to register in arts may be admitted to a four year general or five year honor's degree, if they meet the requirements of English and four other completed courses in Grade XI with satisfactory grades.

(ii) Students intending to register in commerce may be admitted to a five year general or five year honor's degree, if they meet the requirements of satisfactory grades in English, mathematics, and three other academically recognized subjects.

(iii) Students intending to register in science, engineering or pre-professional studies (e.g., medicine and dentistry) may be admitted to a four year general or major degree or a diploma program in engineering and a five year honor's degree if they meet the requirement of satisfactory grades in English, mathematics, two sciences and one other academically recognized subject.

b) Students entering from Nova Scotia Grade XII with satisfactory grades in English and four other academically recognized subjects, as defined below, may receive advanced standing.

(i) Students intending to register in arts may be admitted to a three year general or four year honor's degree, if they meet the requirements of English and four other completed courses in Grade XII with satisfactory grades.

(ii) Students intending to register in commerce may be admitted to a four year general or a four year honor's degree, if they meet the requirement of satisfactory grades in English, mathematics and three other academically recognized subjects

(iii) Students intending to register in science, engineering or pre-professional studies (e.g., medicine

and dentistry) may be admitted to a three year general or major degree or a diploma program in engineering and a four year honor's degree if they meet the requirement of satisfactory grades in English, mathematics, two sciences and one other academically recognized subject.

c) Students who have completed Grade XII but whose final grades do not meet complete advanced credits under the provisions of 3(b) above, may be given credit for courses in which they have obtained a grade of 60 per cent. In the case of mathematics and science subjects, a grade of 75 per cent will be required for admission to further work in these subjects.

d) Students will not be granted credit for high school work done after their first registration at any university, or if the high school transcript is received after the last day for late registration.

New Brunswick and Prince Edward Island

4. a) Students entering from the New Brunswick or Prince Edward Island school system who have completed Grade XII are subject generally to the provisions outlined for Nova Scotia Grade XII students.

b) Students who do not meet the above requirements but who have been awarded a high school graduation certificate may be accepted into a four year degree program.

Newfoundland

5. Students who have completed Grade XI in the Newfoundland school system may be admitted to a four year degree program in arts and science or a five year degree program in commerce.

Other Provinces

6. The requirements for admission are:

a) Quebec: High School Leaving Certificate. Students who have completed the first year of CEGEP with high standing may be considered as having the equivalent of Nova Scotia Grade XII. Credits for students with two years of CEGEP will be assessed separately.

b) Ontario: Grade XII diploma of the five year program. Students who have completed a Secondary School Honors Graduation Diploma (Grade XIII) will ordinarily be admitted with advanced standing.

c) Manitoba, Saskatchewan and Alberta: Grade XI certificate. Students who have completed Grade XII may be considered for advanced standing.

d) British Columbia: Completion of a four year secondary school program may be considered for advanced standing.

United States

7. a) Students who have graduated from high school with 16 points — 4 in English and 12 in other academic subjects — will be considered for admission. Students seeking admission to engineering and science must have 3 points in mathematics and at least 3 points in science subjects. Students seeking admission to commerce must have 3 points in mathematics.

b) Students must arrange to provide the Admissions Office with a high school transcript, a confidential evaluation from the school principal or counsellor, CEEB and SAT test results.

c) A student who has satisfactorily completed a year or more of a university or college program, beyond high school, may be considered for advanced credit.

Other Countries

8. a) A student must have completed four years of a North American high school system or the English GCE at the Ordinary Level to be considered for admission. Passes must be obtained, at the minimum, in five subjects including English for arts, and English, mathematics and two science subjects for engineering and science. Commerce students must have English, mathematics and three other subjects.

b) A student who has completed the Advanced Level GCE tests may be considered for advanced standing.

c) A student whose first language is not English, or who has not attended an English language secondary school, will normally be required to take an English language test. These tests are administered by the University of Michigan, the College Entrance Examination Board, and the University of Cambridge. The University of Michigan English Proficiency Test is administered by the Language Institute at Ann Arbor, Michigan, U.S.A., 48104, and is given on request in any country in the world at any time during the academic year. The normal Test of English as a Foreign Language (TOEFL) score required is 550.

Advanced Standing

9. See Number 20, Academic Regulations.

REGISTRATION

1. Procedures

Registration procedures are the responsibility of the Registrar and will be made known to students, instructors and administrators.

2. Early Registration

From the first working day in August to the Friday preceding Labor Day, early registration will take place. This involves (a) the selection and approval by the appropriate authorities of a student's courses for the coming academic year and (b) the partial payment of tuition fees. This amounts to at least $100.00 for full-time students and one half the full year's fees for part-time students. Those who register early must make satisfactory arrangements with the Business Office no later than 30 September in respect of any remaining tuition fees.

3. Regular Registration

The dates and times for regular registration in September are given in the University Diary (see centre pages of this Calendar).

4. Late Registration

On payment of a late fee of $10.00, a student may register after the final day for regular registration but before the expirary of the time limits specified in Academic Regulation 13B.

5. Alterations in Timetable

The University reserves the right, in special circumstances, to change the times of a course from those advertised in the official timetable.

6. Cancellation of Courses

If the number of students registered for a course is insufficient to warrant it being offered, that course may be cancelled by the Dean of the Faculty.

7. Addresses

During the academic year, all communications mailed to students are sent to local addresses. Therefore a student is urged to keep his address up-to-date in the Registrar's Office. During the summer months communications are sent to the student's permanent address.

8. Identification Cards

At the time of first registration a student is required to purchase an I.D. card at a cost of $1.00. This card provides the student with a University identification, serves as a Library card, and enables students to obtain discounts from some local business establishments.

At the beginning of each subsequent academic year, the I.D. card has to be validated.

A student who withdraws from the University must return his I.D. card to the Registrar before the withdrawal can become effective. Should such a student subsequently be readmitted, he must purchase a new I.D. card.

SECTION 3

Faculties and Courses

ARTS
COMMERCE
SCIENCE
ENGINEERING
EDUCATION

FACULTY OF ARTS

General Information

The Faculty of Arts offers programs of study leading to the degrees of Bachelor of Arts, Bachelor of Arts (Honors), and Master of Arts. The last of these is at present available only in History and in Philosophy.

The primary purpose of the ordinary B.A. program is to provide a sound basic education in the liberal arts, combined with a study in some depth in at least one subject or other area of concentration. The Honors program is designed for students of above-average ability, especially for those who intend to proceed to graduate work or who seek a professional career in the area of the Honors subject or subjects. It requires greater specialization, and a higher level of performance, than the ordinary B.A. program, and includes courses specially designed for Honors students.

All candidates for the Bachelor's degree are expected to be able to express themselves clearly, cogently, and with at least tolerable felicity in the English language. To this end, instructors in all subjects attach great importance to clarity of expression and to the capacity to sustain a coherent argument (as well of course as to substance and relevance) in assessing written work. Students who are deficient in this area are therefore strongly advised to take immediate steps to remedy that deficiency, and in particular to use the compulsory course in English to maximum advantage. Otherwise, however industrious they may be, and however extensive their knowledge, they may have difficulty in accumulating sufficiently high grades to qualify for graduation. In a nation that is officially bilingual it should be unnecessary to point out the added advantage of acquiring a working knowledge of the French language.

The following requirements apply to all students registering for the first time in September 1975 and thereafter. Students registered in degree programs in effect before that date will remain in those programs unless they specifically request permission to transfer.

Degree of Bachelor of Arts

1. Subject to the regulations set forth in this Calendar, the candidate must complete the equivalent of 20 full courses following Junior Matriculation, or 15 courses following Senior Matriculation. In either case at least eight of these courses must be at the 300-level or above.

2. During the regular academic year, a full-time student will normally take the equivalent of five full courses. In exceptional circumstances, students with a quality point average of at least 3.0 in the previous year of full-time study may, at the discretion of the Dean, be permitted to take a sixth course.

3. Each candidate must receive credit for:
   (a) English 200 or, at the discretion of the Chairman of the English Department, an alternative full course in English.
   (b) The equivalent of one full course in one of the following subjects:

   Philosophy 200 (Basic Logic). (No other Philosophy course satisfies this requirement).
   OR Mathematics;
   OR a language other than English;
   OR a natural science (except Psychology).
   (c) The equivalent of one full course from among the remaining humanities (classics, history, philosophy other than Philosophy 200, and religious studies).
   (d) The equivalent of one full course in at least two of the following social sciences: anthropology, economics, geography, political science, psychology and sociology.

   Credits for Grade XII work may not be used in fulfillment of any of these requirements. Most full-time students will find it to their advantage to attempt to satisfy these requirements in their first year. It is hoped that they will thereby be introduced to the basic skills required for university study, and be exposed at the introductory level to a variety of disciplines.

4. Not later than the beginning of the junior year, candidates must declare the particular subjects in which they wish to major, or alternative areas of concentration. The following are recognized as

FACULTY OF ARTS

Arts subjects in which it is possible to major: anthropology, classics, economics, English, French, geography, German, history, Latin, mathematics, philosophy, political science, psychology, religious studies, sociology and Spanish. In addition, Asian Studies, Atlantic Canada Studies and West European Studies are three areas of concentration which are formally organized; and alternative areas, tailored to the needs and interests of particular students, may be devised and approved by the Dean of the Faculty. Once major subjects or areas of concentration have been declared, candidates' programs must be approved annually, and supervised, by the Departments in which they are majoring or by the persons responsible for their areas of concentration. While a subsequent change of major subject or area of concentration is possible, students are advised that such a change may necessitate additional courses in order to meet graduation requirements. The regulations governing the major program will be those in effect at the time of declaration of the major.

5. In addition to satisfying requirement 3, each candidate must receive credit for the equivalent of not fewer than six full University courses in the subject of the major or in the chosen area of concentration; but may count among these six any relevant course or courses taken in fulfillment of requirement 3. Not fewer than four of the six courses must be at the 300-level or above. No department may require more than the equivalent of eight full courses in the major subject.

6. Within the limits imposed by these regulations, any candidate may count towards his B.A. degree the equivalent of up to three full courses from outside the range of recognized Arts subjects as specified in requirement 4. The Dean of the Faculty may authorize an extension of this upper limit to meet special program requirements or where there are sound academic reasons for doing so.

7. In order to have major subjects or areas of concentration formally entered upon their records at the time of graduation, candidates must have maintained a cumulative quality point average of 2.0 (or an average grade of C) in the courses

specified in requirement 5, and must have fulfilled any additional requirements specified by their departments or areas of concentration. Candidates who fail to achieve this average may, provided that they fulfill all other requirements, graduate as non-majors.

8. Candidates have the option of declaring minor fields in addition to major ones. To satisfy the requirements for a minor they must receive credit for at least four courses in that particular subject or area of concentration, and at least two of these courses must be at the 300-level or above.

9. It is also possible to declare a double major, in which case the candidate must fulfill both Faculty and Departmental requirements in respect of each of the subjects declared. In some cases this may not be possible without exceeding the total number of courses normally required for graduation; but the Dean, with the approval of the appropriate Departmental Chairmen, may reduce these requirements in the light of a student's overall record.

Degree of Bachelor of Arts — Honors

10. The Faculty of Arts offers honors programs in anthropology, economics, English, geography, history, mathematics, modern languages, philosophy, political science, psychology, religious studies and sociology. It is also possible to take combined honors in any two of these subjects.

11. Admission requirements
    (a) Not later normally than the beginning of their junior year, candidates should make application for admission to the honors program on the special form obtainable from the Registrar. They must obtain the approval of the Chairman of the appropriate department and of the Dean of the Faculty in which they are enrolled.
    (b) The normal prerequisite is a cumulative quality point average of 2.5. Each candidate, however, will be assessed on the basis of his overall academic record.

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12. Requirements for continuance in and for graduation with Honors:
    (a) Students must accumulate 25 full course credits or equivalent, including any advanced standing credits.
    (b) To continue in the program, students must achieve a yearly quality point average of 3.0.
    (c) To graduate, students must achieve a cumulative quality point average of 3.0.
    (d) Students must receive credit for not fewer than ten full courses or equivalent in the honors subject, of which eight must be at the 300 level or above. Each year the students' programs must have the approval of the Chairman of the Department who may permit the substitution of up to two courses from a related subject area as part of the ten courses required.
    (e) In the courses presented to satisfy 12(d), students must have a quality point average of 3.0 with at least eight grades of B or higher and no grade lower than C (2.0).

13. Requirements for graduation with combined honors:
    (a) Candidates for a combined honors degree must receive credit for not fewer than seven full courses (or equivalent) in each of two honors subjects. At least ten of these courses must be at the 300 level or above, including a minimum of four in each subject. Each year, the students' programs must have the approval of the Chairmen of both Departments involved.
    (b) To continue in the program, students must achieve a yearly quality point average of 3.0.
    (c) To graduate, students must achieve a cumulative quality point average of 3.0.
    (d) In the courses presented to satisfy 13(a), students must have a quality point average of 3.0 with at least eleven grades of B, and no grade lower than C (2.0).

14. Candidates for honors must complete the requirements for the Bachelor of Arts degree as outlined in the Calendar (see no. 3), and any additional requirements of the relevant department(s).

15. Candidates who fail to meet the requirements for an honors degree but who otherwise meet the requirements for the general degree, on application, should be awarded the general degree.

16. In addition to the overall quality point average noted in 12 above, every candidate for honors must have a quality point average of 3.0 in the honors subject or subjects, with not more than two grades of C, and no grade lower than C, in the same subject or subjects.

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DEGREE OF MASTER OF ARTS IN HISTORY

The University's general requirements for admission to Graduate Studies and for the Master of Arts degree apply to the Department of History. The particular requirements of the Department, which include a thesis as well as course work, are as follows:

1. Students with a general B. A. will normally enter the two-year program. The course requirements are as follows:
   Year I — His 515.0, one other 500 level course, and two 600 level options.
   Year II — His 690.0, one 500 level course, and two 600 level options.
   Students with a B.A. (Honors) may be permitted, at the discretion of the Department, to enter a one-year program, in which the course requirements will be His 515.0, His 690.0, one other 500 level course, and two 600 level options.

2. The candidate will be required to demonstrate a reading knowledge of at least one language other than English by passing a test carried out in cooperation with the language department concerned. French is required of candidates intending to write a thesis on any aspect of Canadian history.

3. The subject of the thesis must be decided in consultation with the thesis advisor.

4. Before presenting a thesis, the student must pass a written, comprehensive examination in both a major and a minor field. Upon completion of the thesis, an oral defence will be required. Two months prior to this defence, the candidate will be invited to select an examination board from among the members of the Department of History. While the Department will make every attempt to meet individual requests, it cannot guarantee full compliance.

5. After a review of a candidate's progress at the end of the first term, the Department may recommend to the Dean that the student be required to withdraw from the program.

DEGREE OF MASTER OF ARTS IN PHILOSOPHY

The University's general requirements for admission to Graduate Studies and for the Master of Arts degree apply to the Department of Philosophy. The particular requirements of the Department are as follows:

1. Candidates are normally required to have an honors degree in philosophy with at least second class standing, (B average), or its equivalent. In some cases a candidate with a general B.A. or its equivalent may be admitted with the permission of the Department. Such candidates will have to make up for background deficiencies. Some acquaintance with modern logic and the various sections of the history of philosophy is desirable for all candidates.

2. The degree can normally be taken in one year. Candidates with certain deficiencies in philosophical knowledge and education are asked to study for two years.

3. Candidates usually take four full courses in an academic year. Those enrolling in a two-year program may be asked to attend certain medium level courses in their first year. In addition to the regular courses listed in the Calendar, reading and tutorial classes can be arranged for those who require special or advanced instruction. (See Reading Courses in the philosophy section of this Calendar).

4. Every Master of Arts candidate is required to write a thesis which shows critical acumen as well as originality. Thesis research is closely supervised by one or two members of the Department. Areas from which the topic of the thesis may be chosen include: ancient, medieval, and modern philosophy, metaphysics, philosophy of mind, epistemology, logic, philosophy of science, philosophy of man, philosophical analysis, philosophy of language, existentialism, phenomenology, ethics, and aesthetics.

FACULTY OF COMMERCE

GENERAL INFORMATION

The Faculty of Commerce offers programs of study leading to the degrees of Bachelor of Commerce, Bachelor of Commerce (Honors) and Master of Business Administration. The purpose of these programs is to prepare students for meaningful careers in business and government.

The bachelor degree programs couple a broad educational foundation in English, mathematics and other basic arts and science subjects with the study of a common body of business and economic knowledge and the opportunity to attain an appropriate degree of specialized expertise in one or more of the major commerce functional areas. These areas are accounting, economics, finance, marketing and transportation, operations management, personnel administration and industrial relations, management science and general business studies.

Both the honors and general bachelor degree programs are of the same duration and require the same total number of courses. A cumulative quality point average of B (3.0) is needed for admission to, and continuation in, the honors program. This program also requires completion of certain other specified courses including an honors project or thesis.

The Master of Business Administration program encompasses a common body of business and economic knowledge and a concentration in one of these functional areas: financial management, marketing management, management of human resources and operations management. A description of this program follows in Section 5 of this Calendar.

BACHELOR DEGREE PROGRAMS

NOTICE

1. Except as indicated in subparagraph a, b and c below, these degree requirements apply to all students who had not begun (i.e. actually attended classes in) the previous (shorter) Bachelor of Commerce or Bachelor of Commerce (Honors) program at this University by 16 February 1977 (the date that the revised Bachelor of Commerce programs were approved). This includes all students re-admitted after being requested or required to

withdraw from the University for academic weakness or disciplinary reasons, those who otherwise (voluntarily) withdraw for more than ten months, students transferring from other Faculties or other institutions, mature students, and those entering the Faculty of Commerce for the purpose of obtaining a second bachelor's degree or a certificate of honors equivalency, etc.

a) Students who were enrolled in any bachelor's degree program at Saint Mary's University or any other recognized university on 16 February 1977 may transfer to the Faculty of Commerce and follow the previous Bachelor of Commerce program provided that they:

i)   are not and never have been placed on academic probation and never have been requested nor required to withdraw from this or any other university for academic weakness or disciplinary reasons;

ii)   accomplish this transfer prior to 1 October 1978 (1 October 1980 for students transferring from the College of Cape Breton or the College of Ste. Anne)

iii)   have successfully completed at least one full course at this or another recognized university or equivalent college by 1 July 1977;

iv)   complete all Bachelor of Commerce degree requirements at Saint Mary's University before 1 September 1982.

b) Students who were actively enrolled in the previous Bachelor of Commerce program on or before 16 February 1977 and who voluntarily withdrew (or withdraw) from the University for other than academic weakness or disciplinary reasons may be re-admitted to their previous program provided that they have been away less than two years and that they meet all degree requirements before 1 September 1984.

c) Students properly classified as mature students by the Division of Continuing Education may be considered for admission to the previous Bachelor of Commerce program if they have successfully completed at least one full course at this or another recognized university by 1 September 1977 and enrol in the Bachelor of Commerce program and actually attend classes in this program at Saint Mary's University prior to September 1, 1977.

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1. Students properly following the previous B. Comm. program in accordance with the above policy, should note that several changes in course numbers and course content have been made this year and that certain previous courses are no longer offered. Those who have not already received credit for one or more of the "old" courses listed below should enrol, at the appropriate time, in the equivalent new course or courses. Please note further that credit will not be given for both "old" and "new" courses (i.e. both Bus 204 and 207).

OLD COURSE	EQUIVALENT NEW COURSE
Bus 203 (Introductory Quantitative Methods for Commerce)	Bus 206 (Introduction to Quantitative Methods for Commerce II)
Bus 204 (Introductory Statistics For Commerce)	Bus 207 (Introductory Statistics For Commerce)
Bus 280 (Principles of Management)	Bus 281($1/2$) (Principles of Management) plus Bus 348($1/2$) (Planning and Control)
Bus 307 (Statistical Analysis for Business)	Bus 303 (Statistical Analysis for Business)
Eco 101 (Economic History of Europe)	Eco 200 (Economic History of Europe)
Eco 419 (Issues In Public Finance	Eco 319 (Issues In Public Finance)

Requirements:

1. The Bachelor of Commerce and Bachelor of Commerce (Honors) programs consist of the equivalent of twenty full courses beyond Nova Scotia Grade XII (or equivalent) or a total of twenty-five full courses (or equivalent) for those entering from Nova Scotia Grade XI or otherwise not granted advanced standing.

2. During the regular academic year a full time student will normally take the equivalent of five full courses.

3. Students normally choose the department of their major (Economics or Business Administration) at the time they enrol in the Faculty of Commerce and will select their major area of concentration (Accounting, Economics, Finance, General Business Studies, Management Science, Marketing or Personnel and Industrial Relations) no later than the end of their junior year.

4. Each candidate for the Bachelor of Commerce degree must successfully complete these courses (credit value of each course is indicated in parenthesis after the course number — total 13 course credits):

a) Bus 205($1/2$) Introduction to Quantitative Methods for Commerce I
    OR
    Eco 205($1/2$) Introduction to Quantitative Methods for Economics I
    OR
    Mat 205($1/2$) Introduction to Quantitative Methods for Commerce I

b) Bus 206($1/2$) Introduction to Quantitative Methods for Commerce II
    OR
    Eco 206($1/2$) Introduction to Quantitative Methods for Economics II
    OR
    Mat 206($1/2$) Introduction to Quantitative Methods for Commerce II

c) Bus 207($1/2$) Introductory Statistics for Business and Economics
    OR
    Eco 207($1/2$) Introductory Statistics for Business and Economics
    OR
    Mat 119($1/2$) Basic Statistics

d) Bus 240(1) Principles of Financial and Managerial Accounting

e) Bus 281($1/2$) Principles of Management

f) Bus 321($1/2$) Introduction to Computers
    OR
    Mat 125($1/2$) Basic Programming and Computer Concepts

g) Bus 348($1/2$) Planning and Control

h) Bus 361($1/2$) Business Finance

i) Bus 370($1/2$) Marketing

j) Bus 489($1/2$) Business Policy

k) Cml 301($1/2$) Legal Aspects of Business

l) Eco 201($1/2$) Principles of Economics: Micro

m) Eco 202($1/2$) Principles of Economics: Macro

n) One additional economics course, or equivalent

o) Egl 200(1) Introductory English

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p) Egl 325($^1/_2$) Written Business Communications
q) Egl 326($^1/_2$) Oral Business Communications
r) Three (3) elective courses, or equivalent) offered outside of the Faculty of Commerce. These may be at any level including the 100 level. (See notes 1 and 2)

Notes:

I. Nova Scotia Grade XII Mathematics, or equivalent, is a prerequisite for Bus 205 and 206. In the event that a student has not received advanced standing for Grade XII Mathematics he is required to take Mat 113 as one of his non-commerce or free electives.

II. Mat 200(1) may be substituted for Bus/Eco 206($^1/_2$) and a $^1/_2$ course non-commerce elective.

III. Mat 225(1) may be substituted for Bus 321($^1/_2$) and a $^1/_2$ course non-commerce elective.

5. In addition to the above, all candidates for the Bachelor of Commerce degree with a major in economics, must successfully complete these seven course credits:
a) Bus 381($^1/_2$) Principles of Organizational Behavior (see note)
b) Eco 300($^1/_2$) Intermediate Microeconomic Theory
c) Eco 301($^1/_2$) Intermediate Macroeconomic Theory
d) Two (2) additional economic courses, or equivalent, above the 200 level to include either Eco 307(1) or 320($^1/_2$) or Bus 360($^1/_2$).
e) Three and one-half (3$^1/_2$) elective courses, or equivalent. These must be above the 100 level but may be in any Faculty including Commerce. (see note)

Note: Bus 382(1) may be substituted for Bus 381($^1/_2$) and a $^1/_2$ course free elective.

6. In addition to the courses listed in requirement 4 above, all accounting and business administration majors must successfully complete these seven course credits:
a) Bus 360($^1/_2$) Financial Institutions
    OR
    Eco 320($^1/_2$) Canadian Financial System
b) Bus 382(1) Organizational Behavior
c) Five and one-half (5$^1/_2$) courses• of specialized studies as follows:

i) Accounting
a) Bus 323($^1/_2$) Information Systems I
b) Bus 345($^1/_2$) Financial Accounting Theory
c) Bus 341($^1/_2$) Intermediate Financial Accounting
d) Bus 342($^1/_2$) Intermediate Financial Accounting
e) Bus 346($^1/_2$) Managerial Accounting — Cost and Control
f) Bus 455($^1/_2$) Accounting Seminar
g) One (1) additional full course credit in accounting from these courses:
Bus 324($^1/_2$) Use of COBOL in Data Processing
Bus 425($^1/_2$) Information Systems II
Bus 443($^1/_2$) Advanced Financial Accounting I Corporate Accounting
Bus 444($^1/_2$) Advanced Financial Accounting II Special Topics
Bus 449($^1/_2$) Management Control Systems
Bus 450($^1/_2$) Auditing
Bus 451($^1/_2$) Advanced Auditing I
Bus 452($^1/_2$) Advanced Auditing II
Bus 453($^1/_2$) Taxation
Bus 454($^1/_2$) Advanced Taxation
h) One and one-half (1$^1/_2$) elective courses, or equivalent. These must be above the 100 level but may be in any Faculty, including Commerce.

ii) Business Administration (Finance)
a) Bus 463($^1/_2$) Financial Management I (Working Capital)
b) Bus 464($^1/_2$) Financial Management II (Long Term Capital)
c) Bus 466($^1/_2$) Investments
d) Bus 467($^1/_2$) Portfolio Management
e) Three and one-half (3$^1/_2$) elective courses, or equivalent. These must be above the 100 level but may be in any Faculty, including Commerce.

iii) Business Administration (General Business Studies)
a) Three (3) additional commerce courses, or equivalent above the 200 level
b) Two and one-half (2$^1/_2$) elective courses, or equivalent. These must be above the 100 level but may be in any Faculty, including Commerce.

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iv) Business Administration (Management Science)
a) Bus 301($^1/_2$) Operations Research
b) Bus 302($^1/_2$) Principles of Mathematical Programming

OR

Mat 445 Introductory Operations Research (in lieu of this $^1/_2$ course and $^1/_2$ course elective)

c) Bus 303($^1/_2$) Statistical Analysis for Business

OR

Eco 303($^1/_2$) Intermediate Economics Statistics
d) Bus 317($^1/_2$) Introduction to Production Management
e) Bus 322($^1/_2$) Computer Simulation
f) Bus 409($^1/_2$) Seminar in Operations Research and Statistics

g) One (1) additional commerce elective in the non-quantitative area above the 200 level.

h) One and one-half ($1^1/_2$) elective courses, or equivalent. These must be above the 100 level but may be in any Faculty, including Commerce.

v) Business Administration (Marketing)
a) Bus 371($^1/_2$) Marketing Management

b) Two and one half ($2^1/_2$) additional courses in marketing from these courses:

Bus 372($^1/_2$) Marketing Communication and Advertising
Bus 373($^1/_2$) Management of Marketing Channels
Bus 374($^1/_2$) Sales Management
Bus 375($^1/_2$) International Marketing
Bus 376($^1/_2$) Consumer Behavior
Bus 377($^1/_2$) Industrial Marketing
Bus 378($^1/_2$) Marketing Research

c) Two and one half ($2^1/_2$) elective courses, or equivalent. These must be above the 100 level but may be in any Faculty, including Commerce.

vi) Business Administration (Personnel and Industrial Relations)
a) Bus 385($^1/_2$) Personnel Management
b) Bus 386($^1/_2$) Industrial Relations
c) Bus 481($^1/_2$) Organization Theory: Structure, Process, Analysis and Design
d) Bus 483($^1/_2$) Interpersonal Behavior I
e) Eco 339($^1/_2$) Labor Economics
f) Eco 340($^1/_2$) Human Resources Economics

g) Two and one-half ($2^1/_2$) elective courses, or equivalent. These must be above the 100 level but may be in any Faculty, including Commerce. (see note below).

Note: If Eco 339 and/or Eco 340 are used to satisfy requirement 4(n) above, (unspecified economics course) the number of free electives is increased to 3 or $3^1/_2$ as appropriate.

vii) Business Administration (Management)
a) Bus 317($^1/_2$) Introduction to Production Management
b) Bus 385($^1/_2$) Personnel Management
c) Bus 386($^1/_2$) Industrial Relations
d) Bus 481($^1/_2$) Organization Theory: Structure, Process, Analysis and Design

e) One (1) additional full course (or equivalent) in accounting above the 200 level

f) One (1) additional full course (or equivalent) in marketing above the 200 level

g) One half ($^1/_2$) additional course in finance above the 200 level

h) One (1) elective course (or equivalent). This must be above the 100 level but may be in any Faculty including Commerce.

Sequence of Courses

Aside from insuring that all of its course prerequisites are satisfied before enrolling in a particular course, there is no requirement that students satisfy the above degree requirements in any specified sequence. However, the following arrangement of courses by year is offered as a guide to students in preparing their individual programs of study.

A. For students entering with advanced standing for their freshman year (e.g. Nova Scotia Grade XII or equivalent with advanced standing for Grade XII Mathematics and four other courses):

SOPHOMORE YEAR
Bus 205($^1/_2$) Introduction to Quantitative Methods for Commerce I

OR

Eco 205($^1/_2$) Introduction to Quantitative Methods for Economists I
Bus 206($^1/_2$) Introduction to Quantitative Methods for Commerce II

OR

Eco 206($^1/_2$) Introduction to Quantitative Methods for Economists II

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Bus 281($^1/_2$) Principles of Management
Bus 321($^1/_2$) Introduction to Computers
OR
Mat 125($^1/_2$) Basic Programming and Computer Concepts
Eco 201($^1/_2$) Principles of Economics: Micro
Eco 202($^1/_2$) Principles of Economics: Macro
Egl 200(1)   Introductory English
Non commerce elective (1)

JUNIOR YEAR

Bus 207($^1/_2$) Introductory Statistics for Commerce
OR
Eco 207($^1/_2$) Introductory Statistics for Economists
OR
Mat 119($^1/_2$) Basic Statistics
Bus 240(1)   Principles of Financial and Managerial Accounting
Bus 360($^1/_2$) Financial Institutions
OR
Eco 320($^1/_2$) Canadian Financial System (see note 1)
Bus 370($^1/_2$) Marketing
Bus 382(1)   Organizational Behavior (see note 2)
Cml 301($^1/_2$) Legal Aspects of Business (see note 3)
Economics (see note 4)

FIRST SENIOR YEAR

Bus 348($^1/_2$) Planning and Control
Bus 361($^1/_2$) Business Finance
Egl 325($^1/_2$) Written Business Communications
Egl 326($^1/_2$) Oral Business Communications
Remaining courses as suggested for Area of Specialization (3)

SECOND SENIOR YEAR

Bus 489($^1/_2$) Business Policy
Remaining courses as suggested for Area of Specialization (4$^1/_2$)

Notes:
1.   Students who so desire may take Eco 307(1) in lieu of Eco 320($^1/_2$) or Bus 360($^1/_2$). This will necessitate waiting until their senior year to take one of the listed $^1/_2$ courses.
2.   Economics students may take Bus 381 and another half course.
3.   Those desiring to take management science should take Bus 301($^1/_2$) or 302($^1/_2$) in their junior year and delay Cml 301($^1/_2$) until their first senior year.
4.   Economics students should take Eco 301($^1/_2$) and 302($^1/_2$). Business administration students may take one or both of these courses or any other two half courses in economics for which they have the necessary prerequisites.

B.   For students entering from Nova Scotia Grade XI or equivalent (e.g. no advanced standing)

FRESHMAN YEAR

Mat 113(1)   Mathematics for Commerce Students
Bus 281($^1/_2$) Principles of Management
Bus 321($^1/_2$) Introduction to Computers
OR
Mat 125($^1/_2$) Basic Programming and Computer Concepts
Egl 200(1)   Introductory English
Non-Commerce elective (1)
Free elective (1) in lieu of Grade XII advanced standing

SOPHOMORE YEAR

Bus 205($^1/_2$) Introduction to Quantitative Methods for Commerce I
OR
Eco 205($^1/_2$) Introduction to Quantitative Methods for Economists I
Bus 206($^1/_2$) Introduction to Quantitative Methods for Commerce II
OR
Eco 206($^1/_2$) Introduction to Quantitative Methods for Economists II
Bus 240(1)   Principles of Financial and Managerial Accounting
Bus 382(1)   Organizational Behavior (see note 2 above)
Eco 201($^1/_2$) Principles of Economics: Micro
Eco 202($^1/_2$) Principles of Economics: Macro
Free elective (1) in lieu of Grade XII advanced standing

JUNIOR YEAR

Bus 207($^1/_2$) Introductory Statistics for Commerce
OR
Eco 207($^1/_2$) Introductory Statistics for Economists
OR
Mat 119($^1/_2$) Basic Statistics
Bus 348($^1/_2$) Planning and Control
Bus 360($^1/_2$) Financial Institutions
OR
Eco 320($^1/_2$) Canadian Financial System (see note 1 above)
Bus 361($^1/_2$) Business Finance
Bus 370($^1/_2$) Marketing
Cml 301($^1/_2$) Legal Aspects of Business (see note 3 above)
Eco (1)   (see note 4 above)
Free elective (1) in lieu of Grade XII advanced standing

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FIRST SENIOR YEAR
Egl 325($^1/_2$) Written Business Communications
Egl 326($^1/_2$) Oral Business Communications
Free elective (1) — in lieu of Grade XII advanced standing
Remaining courses as suggested for Area of Specialization (3)

SECOND SENIOR YEAR
Bus 459($^1/_2$) Business Policy
Remaining courses as suggested for Area of Specialization (4$^1/_2$)

C. Suggested Sequence for Areas of Specialization
i) Accounting
FIRST SENIOR YEAR
Bus 323($^1/_2$) Information Systems I
Bus 341($^1/_2$) and 342($^1/_2$) Intermediate Financial Accounting
Bus 345($^1/_2$) Financial Accounting Theory
Bus 346($^1/_2$) Managerial Accounting — Cost and Control
Free elective ($^1/_2$)

SECOND SENIOR YEAR
Bus 455($^1/_2$) Accounting Seminar
Accounting elective (1) — see requirement 6 above
Non commerce elective (2)
Free elective (1)

ii) Economics
FIRST SENIOR YEAR
Eco elective (1)
Non commerce elective (1)
Free elective (1)

SECOND SENIOR YEAR
Economics electives (1$^1/_2$)
Non commerce elective (1)
Free electives (2)

iii) Finance
FIRST SENIOR YEAR
Non commerce electives (2)
Free elective (1)

SECOND SENIOR YEAR
Bus 463($^1/_2$) Financial Management I (Working Capital)
Bus 464($^1/_2$) Financial Management II (Long Term Capital)
Bus 466($^1/_2$) Investments
Bus 467($^1/_2$) Portfolio Management
Free electives (2$^1/_2$)

iv) General Business Studies
FIRST SENIOR YEAR
Non commerce elective (1)
Commerce electives (2)

SECOND SENIOR YEAR
Commerce elective (1)
Non commerce elective (1)
Free electives (2$^1/_2$)

v) Management Science
FIRST SENIOR YEAR
Bus 301($^1/_2$) Operations Research (see note 3 above)
Bus 303($^1/_2$) Statistical Analysis for Business (see note 3 above)
Bus 317($^1/_2$) Introduction to Production Management
Bus 322($^1/_2$) Computer Simulation
Non commerce elective (1)

SECOND SENIOR YEAR
Bus 302($^1/_2$) Principles of Mathematical Programming
OR
Mat 445($^1/_2$) Introductory Operations Research
Bus 409($^1/_2$) Seminar in Operations Research and Statistics
Commerce elective in the non-quantitative area above the 200 level (1)
Non commerce elective (1)
Free electives (1$^1/_2$)

vi) Marketing
FIRST SENIOR YEAR
Bus 371($^1/_2$) Marketing Management
Marketing electives (1$^1/_2$) — (see requirement 6 above)
Non commerce elective (1)

SECOND SENIOR YEAR
Marketing elective (1) — see requirement 6 above
Non commerce elective (1)
Free electives (2$^1/_2$)

vii) Personnel and Industrial Relations
FIRST SENIOR YEAR
Bus 481($^1/_2$) Organization Theory: Structure, Process Analysis and Design
Bus 483($^1/_2$) Interpersonal Behavior I
Eco 339($^1/_2$) Labor Economics
Eco 340($^1/_2$) Human Resources Economics
Non commerce elective (1)

SECOND SENIOR YEAR
Bus 385($^1/_2$) Personnel Management
Bus 386($^1/_2$) Industrial Relations
Non commerce elective (1)
Free electives (2$^1/_2$)

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viii) Management
FIRST SENIOR YEAR
Bus 317($^1/_2$) Introduction to Production Management

One (1) course (or equivalent) in accounting at the 300 level or above

One half ($^1/_2$) course in marketing at the 300 level or above

Non commerce elective (1)

SECOND SENIOR YEAR
Bus 385($^1/_2$) Personnel Management

Bus 386($^1/_2$) Industrial Relations

Bus 481($^1/_2$) Organization Theory: Structure, Process, Analysis and Design

Free elective (1)

Non commerce elective (1)

One half ($^1/_2$) course in marketing at the 300 level or above

One half ($^1/_2$) course in finance at the 300 level or above

Bachelor of Commerce (Honors)

a) Admission Requirements:
i)   An overall cumulative average of 3.0 at the end of the junior year.

ii)   Candidates must make application for admission to the honors program on the special form obtainable from the Registrar no later than the last day of registration at the beginning of their first senior year. They must obtain the approval of the chairman of the appropriate department and of the Dean of Commerce.

b) Requirements For Continuance and Graduation:
i)   To continue in the program and to graduate, students must maintain a cumulative quality point average of 3.0.

ii)   Students must accumulate 20 full course credits, or equivalent, beyond completion of Nova Scotia Grade XII, or equivalent. They must also complete all the normal requirements for the Bachelor of Commerce degree and any additional requirements of the relevant department.

iii)   Students must receive credit for not fewer than ten full courses or equivalent in business and economics of which eight must be at the 300 level or above. The chairman of the department may permit the substitution of up to two courses from a related subject area as part of the ten courses required.

iv)   In the courses presented to satisfy 2(c), students must have a quality point average of 3.0 with at least eight grades of B or higher and no grade lower than C (2.0).

Honors Program in Business Administration

In addition to the general requirements for a Bachelor of Commerce degree all candidates for graduation with Honors in Business Administration must meet the following requirements:

a)   maintain a 3.0 cumulative grade point average;

b)   complete twenty full courses (or equivalent) beyond Nova Scotia Grade XII or equivalent;

c)   complete the requirements for a Bachelor of Commerce degree with a functional specialization (at least $2^1/_2$ courses or equivalent above the 200 level) in one of the following areas: accounting, economics, finance, personnel and industrial relations, management science, and marketing.

d)   successfully complete an Honors project or thesis (Bus 591.1 or .2)

e)   complete ten full courses or equivalent to be presented for honors. Normally, all of these courses will be in the field of business administration. However, if the department chairman deems it appropriate, permission may be granted to a student to substitute up to two full courses or equivalent from a related subject area.

Honors Program in Economics

The Department of Economics offers honors programs to students enrolled in either the Faculty of Arts or the Faculty of Commerce. Descriptions of the general requirements for the degrees of Bachelor of Arts with Honors and Bachelor of Commerce with Honors are contained in Section 4. In addition to these general requirements, all candidates for graduation with honors in economics must comply with the following:

a)   students must satisfy the applicable requirements for a major in economics as outlined on the preceding pages.

b)   the ten full courses or equivalent in economics presented for honors must include:

i)   Eco 201.1 (.2), Eco 202.1 (.2), Eco (or Bus) 206.1 (.2), and 207.1 (.2)

ii)   one full credit or equivalent in microeconomic theory beyond the 200 level

iii)   one full credit or equivalent in macroeconomic theory beyond the 200 level

iv)   an honors project, which is the equivalent of $^1/_4$ credit, done under the supervision of a faculty member

c)   with the approval of the Chairman of the Department of Economics, a student may be permitted to substitute up to two full courses or equivalent from a related subject area as part of the ten courses in economics presented for honors.

FACULTY OF COMMERCE

DUAL BACHELOR DEGREE PROGRAMS

Since it is possible for students to obtain two Bachelor degrees from Saint Mary's University (see Academic Regulation 22, Secton 2) many students may desire to arrange their courses so that they may obtain a Bachelor degree in Arts or Science, and a second degree in Commerce. In particular, it should be pointed out that the Bachelor of Arts degree with a concentration in economics and the Bachelor of Commerce degree with a major in business administration are compatible to the extent that by making a judicious choice of courses, a student may obtain both degrees in the same or a slightly longer period than is necessary to obtain the Bachelor of Commerce degree alone.

If a Bachelor of Science degree or a Bachelor of Arts degree with a different major is combined with a Bachelor of Commerce degree, the total time required is normally somewhat longer. Nevertheless, such dual degree programs are quite feasible and not uncommon. Students who contemplate pursuing any dual degree program should consult with the Deans of both faculties (or their representatives) **before** embarking on their programs of study.

FACULTY OF SCIENCE

Students electing to pursue a program leading to the Bachelor of Science degree should consider which of three programs best suits their aspirations.

Honors

The honors program demands a B grade in all courses followed in the honors subject. This program involves an additional year of study and is designed primarily for students who wish to proceed to graduate work or who wish to obtain professional status in the area of the honors subject. Students of above-average ability are urged to make application to follow an honors program before the end of their sophomore year. Students can apply subsequently for admission to the program. Formal application for admission to an honors program must be made on a form available in the Registrar's Office. The form must be submitted by the student to the Chairman of the Department concerned, and must receive the approval of the Dean of Science.

Major

The regular major program demands a minimum grade of C in all courses in the major subject. The program is designed to meet the needs of those students who wish to be employed in work related to the area of their major; it will be useful to those wishing to practice as technicians or technical officers. Additionally, this program permits students to prepare adequately for continued study at the graduate level, if performance and motivation develop in that way.

General

The general program is designed to give a person a good educational background for life in today's technological world. It is of the same duration as the major program but broader in content. More emphasis is placed on the humanities and social sciences, recognizing that greater understanding of science in relation to society will be required of educated people in the days ahead. Students taking this program as preparation for entrance to professional schools are urged to place special emphasis on a high standard of performance from the beginning.

SCIENCE DEGREE REQUIREMENTS

1. Subject to the regulations set forth in this Calendar, the candidate must complete the equivalent of 20 full courses following junior matriculation, or 15 full courses following senior matriculation. Not more than seven credits of the required twenty may be at the 100 level without the approval of the Dean of Science. All numbering is based on a 20 course program.

2. The candidate will normally take five full courses during the regular academic year.

3. Each candidate for the Degree of Bachelor of Science must receive credit for:
   (a) one university course in English
   (b) two courses in mathematics (Mat 100.0 and one of 200.0 or 225.0).
   (c) two courses in the humanities in addition to (a) — (the humanities herein intended are English, history, modern languages, philosophy and religious studies)

DEGREE OF BACHELOR OF SCIENCE - GENERAL

4. Each candidate for the general Degree of Bachelor of Science shall, in addition to satisfying the requirements in sections 1 to 3, receive credit for:

   (a) not less than five or more than seven courses in one subject from biology, chemistry, geology, mathematics, physics, psychology. This subject shall be known as the "subject of concentration";
   (b) four science courses not in the subject of concentration and in addition to the required mathematics courses;
   (c) sufficient elective courses to complete the degree program.

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DEGREE OF BACHELOR OF SCIENCE - MAJOR

5. Each candidate for the Bachelor of Science Degree with a Major shall, in addition to satisfying the requirements in sections 1 to 3, receive credit for:

   (a) not less than seven or more than nine courses in the major subject;
   (b) four science courses not in the major subject and in addition to the required mathematics courses;
   (c) sufficient elective courses to complete the degree program.

6. The candidate's program must be approved by the Department in which the major is taken and must satisfy any core program specified by that Department and approved by the Faculty of Science. These requirements may be waived in special cases by the Dean of Science who may approve a special program for the candidate in consultation with the Department concerned.

7. Each candidate must obtain a grade of not less than C in every course in the major subject. A student obtaining a grade of less than C in any such course may be permitted to continue in the major program with the approval of the Dean of Science, acting in consultation with the department concerned.

DEGREE OF BACHELOR OF SCIENCE-HONORS

8. An honors program with a major may be taken in one of the following subjects: biology, chemistry, geology, mathematics, physics, psychology.

9. Each candidate for the Bachelor of Science Degree with Honors shall satisfy requirement number 3.

10. All honors programs must consist of 25 full courses or equivalent following junior matriculation or 20 full courses or equivalent following senior matriculation.

11. An honors program with a combined major may be taken in any two subjects from biology, chemistry, geology, mathematics, physics, psychology.

12. In an honors program with a major, the 20 full courses taken beyond the first year level must include 10 to 12 full courses beyond the first year level in the major subject. Supporting courses and electives will be decided in consultation with and must be approved by the department of the major subject.

13. In an honors program with a combined major, the 20 full courses beyond the first year level must include 12 to 16 full courses or equivalents beyond the first year level in the two subjects. Not more than 10, nor less than 6, full courses shall be taken in either of them. Supporting courses and electives will be decided in consultation with, and must be approved by the departments of the combined major.

14. A candidate for the Bachelor of Science Degree with Honors must obtain a grade of not less than C in every honors course as described in sections 12 and 13 with an average of not less than B in the same courses. A student receiving a mark of less than C in any honors course will be permitted to continue in the honors program only with the approval of the department.

The above Faculty requirements will apply to all incoming students from September 1975 and thereafter. Students registered in degree programs in effect prior to that date may elect to remain in their present degree programs or transfer to programs under the new requirements.

FACULTY OF SCIENCE

ENGINEERING AND SCIENCE COURSE

Students who have obtained the Diploma of Engineering under schedule "B" may proceed to the Degree of Bachelor of Science on successful completion of at least five additional courses.

For these students only, the Degree Requirements of the Faculty of Science will be modified as follows:

(1) one engineering course may be included in the courses offered to satisfy requirments 4(b) and 5(b);

(2) requirement 3(d) shall be reduced to one course.

DEGREE OF MASTER OF SCIENCE IN ASTRONOMY

Graduate students in astronomy come with a diversity of university backgrounds. Indeed, some have previously had no undergraduate courses in astronomy at all though obviously some exposure to such courses is desirable. (Saint Mary's students can consider Ast 202.0, 401.1 and 402.2). A student who is interested in entering the program should write the Chairman of the Department (enclosing an up-to-date transcript) and ask for an outline of the course program he would be expected to complete.

The University's general requirements for admission to Graduate Studies for the Master's degree apply to this program. Particular requirements are as follows:

1.   Admission to the program requires an honors degree in astronomy, mathematics, or physics, or the equivalent. (This represents four years after N.S. Grade XII). Students who have not completed such a program may be admitted to a make-up year to bring themselves up to an acceptable level.

2.   Students accepted into the program will normally be required to take four courses in addition to preparing a satisfactory thesis on their research. Ast 605.0 and Ast 606.1 are required courses. The others will be chosen from astronomy, mathematics and physics. The individual student's program must be approved by the Department.

3.   An average grade of B (3.0) must be achieved, and an acceptable thesis must be submitted.

4.   Candidates must pass an oral examination in which they will be expected to demonstrate comprehensive knowledge of basic areas in astronomy. This examination will normally be given at the end of the first year of study.

DIVISION OF ENGINEERING

Engineering studies at Saint Mary's University provide the first years of the Bachelor of Engineering degree in association with the Nova Scotia Technical College. Students follow a core program leading to the Diploma in Engineering or a Bachelor of Science and a Diploma in Engineering upon completion of their courses at Saint Mary's.

Entrance Requirements

Nova Scotia Grade XII, or equivalent, including five courses from those listed below with a grade standing of 50% in each course and a general average of at least 65%.

i   English
ii Mathematics
iii Physics
iv Chemistry
v   One course from history, geology, geography, ancient and modern languages.

Nova Scotia Grade XI, or equivalent, with satisfactory grades in English and mathematics, and three other academically recognized subjects.

Note: where it is deemed advisable, students with partial Grade XII certificates may be given credits in certain subjects depending on the mark in the course and the general average. Such a decision will be at the discretion of the Director of Engineering.

SECOND YEAR COURSES

Eng 300.1	Dynamics of Particles
Eng 303.2	Fluid Mechanics
Eng 306.2	Engineering Thermodynamics
Eng 304.1	Mechanics of Deformable Bodies
Eng 308.1	Electric Circuits
Eng 314.2	Engineering Materials
Mat 300.0	Calculus II
Mat 320.1	Linear Algebra I
Mat 305.2	Topics in Complex Variables and Differential Equations

and one of the following course combinations depending upon the chosen branch of engineering:

Civil/Mining —	Eng 113.2	Surveying
	Geo 201.1	Principles of Geology
Mechanical —	Eng 212.1	Engineering Measurements
	Eng 302.2	Dynamics of Rigid Bodies
Electricial —	Phy 350.1	Physical Electronics
	Phy 322.2	Electricity and Magnetism
Chemical —	Che 311.0	Physical Chemistry

PROGRAMS

(1) Two Year Diploma after N.S. Grade XII

FIRST YEAR COURSES

Eng 106.1	Engineering Design Graphics
Eng 107.2	Design and Descriptive Geometry
Eng 204.1	Computer Science
Eng 203.2	Engineering Mechanics (Statics)
Mat 200.0	Differential and Integral Calculus
Phy 221.0	University Physics
Che 203.0	General Chemistry for Engineers
Egl 200.0	Introductory English

(2) Three Year Diploma after N.S. Grade XI

In addition to the two year program shown above, this program includes a foundation year consisting of the following courses:

Mat 100.0	Algebra and Trigonometry
Phy 111.0	General Physics
Che 101.0	Introduction to Chemistry
Eng 106.1	Engineering Design Graphics
Eng 107.2	Design and Descriptive Geometry

Elective (humanities, social sciences), 1 credit

DIVISION OF ENGINEERING

(3) Three Year Bachelor of Science plus Diploma after Nova Scotia Grade XII.

This program entails an extra year of five (5) courses, as shown below, after the Two Year Diploma Program.

Mat 425.0   Ordinary and Partial Differential Equations
Che   Elective (1 credit)
Phy 320.1   Modern Physics
Phy   Elective ($1/2$ credit)
Elective (humanities, social sciences), 1 credit
Elective (1 credit)

With a Saint Mary's University Diploma in Engineering a student may enter without examination any of the departments of engineering at the Nova Scotia Technical College and obtain the Degree of Bachelor of Engineering (Civil, Mechanical, Electrical, Chemical, Mining, Industrial or Agricultural) on the successful completion of a further two-year program.

The objectives of the engineering programs at Saint Mary's University are to offer programs, accredited by the Associations of Professional Engineers of all the Provinces through the Canadian Accreditation Board, which will assist students in developing the following qualities:

— A basic scientific understanding
— A competence in engineering design
— Creativity
— Social understanding
— An appreciation for continued learning

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FACULTY OF EDUCATION

BACHELOR OF EDUCATION PROGRAM

This program of studies is designed to give university graduates a professional foundation for careers in teaching. It is a full-time, full-year program consisting of six courses which deal primarily with preparation for teaching in junior and senior high schools.

There are two goals aimed at in this program. The first is to provide students with a basic competence in the skills of teaching academic subjects, the second goal is to encourage the development of those ideas which perceive the process of education as being one which, while providing the facts and skills necessary for living, has, at the same time, the more significant aim of expanding and enriching the mind of the learner. In furtherance of this goal, students are required to undertake a considerable amount of reading and writing with the object of developing their own personal understanding and philosophy of education.

The program comprises six courses:
Edu 501.0 Philosophy of Education
Edu 502.0 Psychology of Education
Edu 503.0 General Methods of Teaching
Edu 504.0 History of Education
Edu 505.0 Practice Teaching
Edu 520 through 549 Content and Methods of Specific Fields

Options within these courses are announced by the Faculty of Education prior to each academic year, as is the availability of any acceptable equivalent courses offered by other faculties of the University.

The six courses are not intended to be six independent phases of the program. Rather, their content is intended to be integrated in a manner that best conduces to the aims mentioned above. The organization of the courses — their placement in the academic year, their combination into integrated units, and so forth — is arranged accordingly and may be changed from year to year in keeping with experience gained.

This program meets the approval of the Department of Education of Nova Scotia, and on successful completion of their studies, students may apply to the Department of Education of the Province of Nova Scotia for a teaching certificate. Students are entirely responsible for any negotiations with the Department of Education respecting their certification status.

Candidates should note that the pass mark for the entire program is a C average, while for individual courses the pass mark is D, with the exception of Edu 505, Practice Teaching, for which the pass mark is C. No supplementary examinations are provided.

The standing of candidates is reviewed by the Faculty at the end of the first semester. On the basis of the likelihood of successful completion of the program, the Faculty decides either to confirm candidacy, terminate candidacy, or continue candidacy on a probationary basis.

ADMISSION REQUIREMENTS

Candidates must hold a Bachelor's degree from Saint Mary's University or from another recognized university of similar standing.

Candidates who have had professional teacher training at the Nova Scotia Teachers College and who have since acquired a Bachelor's degree at Saint Mary's University, may obtain the Bachelor of Education degree by successfully completing two courses in the program selected in consultation with the Dean of Education or his representative. The Faculty undertakes to offer each year at least one course that would be suitable for this purpose at a time when practising teachers can attend.

Candidates who have had professional teacher training of two or three years duration at a Teachers College in another province of Canada, a College of Education in the United Kingdom or Teacher Training College in the United States, who are licensed as teachers by the Province of Nova Scotia, and who have acquired a Bachelor's degree, may obtain the degree of Bachelor of Education by undertaking a program of study approved by Senate regulations.

Admission may be refused in cases where the applicant lacks the academic background necessary for course work related to, and practice teaching in, a secondary school subject for which the Faculty offers teacher preparation, or where the applicant is otherwise deemed unsuited to teaching.

FACULTY OF EDUCATION

APPLICATION PROCEDURE

1. Complete application forms and make sure that all documents required are complete and returned with the application.

2. Make sure that supporting documents — transcripts, references, and so on will be sent to the University by those concerned. The Director of Admissions does **not** undertake to send for transcripts or references.

3. Applications should be made as soon as possible, to the Director of Admissions, Saint Mary's University, but in any case, applications received after August 15th may not be processed in time for registration in September.

4. A student may register for an education graduate studies course (M.A.) for upgrading purposes. In order to enroll for a second graduate M.A. course, an individual student must apply and be accepted into the regular M.A. program.

MASTER OF ARTS DEGREE IN EDUCATION

The University's general requirements for admission to Graduate Studies and for the Master of Arts degree apply to the Faculty of Education. The particular requirements of the Faculty are as follows:

1. The candidate for admission is normally asked to appear for a personal interview with the Dean of Education or a faculty member designated by him. The interview usually occurs after the candidate's application form and supporting documents are on hand.

2. The candidate is encouraged to have completed at least one year of successful teaching before embarking on the M.A. in Education program. Bachelor of Education or its equivalent is essential.

3. Course offerings include the following fields philosophy of education, psychology of education, comparative education, curriculum and educational administration/supervision. The complete listing of courses is found in the Education section of this Calendar.

4. In conjunction with the writing of a thesis, a candidate must enrol in Edu 610.0 (Graduate Research Seminar). This course does not count as one of the eight half courses normally required for the degree.

MASTER'S DEGREE

GENERAL REQUIREMENTS

The University offers courses of study leading to graduate degrees in the following:

Master of Arts in History
Master of Arts in Philosophy
Master of Business Administration
Master of Education
Master of Science in Astronomy

The program of each candidate is administered by the Department concerned.

A. QUALIFICATIONS FOR ADMISSION

1. Admission is limited and at the discretion of the Department concerned. To be considered, an applicant shall hold a Bachelor's degree or its equivalent from an institution recognized by the Senate and shall have a knowledge of the proposed field of specialization satisfactory to the Department concerned (or Departments, when interdisciplinary study is intended).

2. Preference will be given to applicants who hold an Honors degree. In addition, admission will be granted only to those students who show a high promise of success in post graduate study as demonstrated by the results of appropriate tests and their records of previous academic accomplishment. See the regulations listed under each graduate program for specific additional minimum requirements for admission to that program.

3. Applicants whose mother tongue is not English may be required to demonstrate an appropriate level of proficiency in English.

B. PROCEDURE FOR ADMISSION

1. Application for admission shall be made to the Director of Admissions. The applicant shall arrange to have forwarded to the Director of Admissions an official transcript of his academic record and letters of recommendation from at least two persons in a position to judge the applicant's capacity for graduate study. The application form and all supporting documents must ordinarily be on hand by May 31st of the academic year prior to the one for which admission is sought.

2. Successful applicants will be notified by the Director of Admissions.

C. REGISTRATION

1. Registration of students in graduate studies shall take place at times indicated in the University Calendar.

2. No student is permitted to register until he has received notification of acceptance.

D. PROGRAM OF STUDY AND RESEARCH

1. Candidates entering with an Honors Degree (or equivalent) must complete four full courses and submit an acceptable thesis. On the recommendation of the department concerned, a three course program is permissible for a candidate undertaking a proportionately more demanding thesis. In departments authorized by the Committee on Graduate Studies, a five course program, without thesis, is also acceptable for the degree. Courses in all programs must be at the 500 or 600 level, but where advisable, courses at the 400 level may be included in a program, provided that the requirements applying to graduate students in such courses be of a graduate standard.

2. A candidate may be required to audit a course as part of the program of study.

3. Where required, a candidate shall submit a thesis on a subject approved by the Department in which research has been conducted under the direction of a Supervisor appointed by the appropriate Department or Departments. An oral defense in the presence of an Examining Committee appointed by the Department is mandatory.

4. Changes in either the program of courses or the topic of the thesis require the approval of the Department.

E. PERIOD OF STUDY

1. The maximum period of a Master's Degree program shall be four years (six years in the case of part-time students). Extensions may be granted with the approval of the Department and the Dean of the Faculty concerned, but these will be considered only in exceptional circumstances.

MASTER'S DEGREE

F. EVALUATION

1. In order to qualify for a Master's Degree a candidate shall obtain a quality point average of 3.0. Failure of any full course (or the equivalent) ordinarily will require withdrawal from the program. In exceptional circumstances, the Department and the Dean of the Faculty concerned may allow the student to remain in the program. In such a case, failure of a second full course (or equivalent) will require withdrawal from the program.

(a) Letter grades and quality points for graduate courses will be assigned as follows:

A   = 4.0 = Excellent
B+   = 3.5 = Good
B   = 3.0 = Satisfactory
C   = 2.0 = Marginal Pass
F   = 0   = Failure

(b) The following grades shall be given when appropriate but will not be calculated in the quality point average:

Aegrotat   AE
Authorized withdrawal from a course   W

G. THESIS (If required)

1. To be eligible for graduation at spring convocation, the candidate's finished thesis must be submitted to the Department no later than the last day of classes of the regular academic year.

2. The thesis must be ruled acceptable by the Examining Committee appointed by the Department. Any suggestions by the Committee concerning corrections, additions and other necessary changes must be either carried out or formally refuted by the candidate before the thesis can be accepted.

3. One original and two carbon copies, or clean photocopies of the accepted thesis must be submitted to the Registrar. These will be done on good quality bond paper, $8^1/_2 \times 11$ inches. The typing shall be double spaced. There will be left hand margin of $1^1/_2$ inches. All other margins will be 1 inch. The thesis must be free of typographical and other errors. Each copy of the thesis must have a page designed to contain the signatures of the members of the Examining Committee.

A Saint Mary's University Thesis Presentation Form, signed by the student must accompany the deposited copies, giving permission for microfilming.

4. Each copy of the thesis must be accompanied by a typed abstract of approximately 300 words. It will bear the title "Abstract" and will include the name of the author, title of the thesis and the date of submission.

5. Theses shall be prepared in accordance with the conventions governing the presentation of scholarly works as specified by the Department.

H. DEPARTMENTAL REGULATIONS

1. In addition to the above requirements, candidates must comply with any additional requirements of the Department concerned.

SPECIAL PROGRAM

YEAR OF STUDY ABROAD, ANGERS

Saint Mary's University has entered into an arrangement whereby qualified students have the opportunity to study at the Catholic University of the West in Angers, France. Permission to participate in this program is granted by the Dean of Arts, the Chairman of the student's area of concentration, and the Chairman of the Modern Languages Department. Usual registration procedures are to be followed, except that tuition fee payments must be made directly to the University of the West.

PRE-PROFESSIONAL COURSES

PROFESSIONAL SCHOOLS

Students who intend to continue studies at professional schools, such as theology, law, medicine, architecture and dentistry, should ensure that their plan of studies includes courses needed for admission to the appropriate professional schools. Calendars of professional schools may be consulted in the Library. Students considering the pre-medical or pre-dental program are encouraged to seek advice from the Counselling Committee of the Science Faculty.

Though not strictly required by some professional schools, it is recommended that the student complete an undergraduate degree before seeking admission to a professional school. Prerequisite course requirements apply to pre-professional students.

(A) PRE-MEDICAL PROGRAM

Students intending to study medicine should have an impressive academic record as a basic qualification for admission into medical school. Dalhousie University considers applications from students who have entered university with Nova Scotia Grade XII or its equivalent and completed at least 10 university courses usually during two years of full-time attendance.

The following subjects are the minimum requirements of all Canadian medical schools: General Biology, General Chemistry, Organic Chemistry, Physics and English, each of an academic year's duration. Dalhousie University requires that five additional elective classes must include two or more in one subject. Students should extend their studies beyond the minimum requirements and are encouraged to include subjects in the humanities and social sciences in their program. In addition to the academic factors, medical schools also take into consideration several other criteria such as Medical College Admission Test, interviews and non-academic factors like emotional stability, social values, leadership, personal maturity, motivation, etc. For complete details the student should consult the academic calendar of the university in which the admission is sought.

(B) PRE-DENTAL PROGRAM

The preceding information is equally applicable to the pre-dental program. The students interested in complete information should consult the academic calendar of the university in which admission is sought.

(C) PRE-LAW PROGRAM

Students applying for admission to the Law School are required to submit results of the Law Schools Admission Test of the Educational Testing service, Princeton, New Jersey. Information for taking this test at Canadian universities can be obtained from the Law School. Dalhousie University considers applications from students who have completed at least three full years' studies after junior matriculation (Nova Scotia Grade XI or equivalent) or two full years' after senior matriculation (Nova Scotia Grade XII or equivalent) of a program leading to the degree of B.A., B.Sc., or B.Comm. Applications are considered as they are received or in the month of June.

(D) PRE-ARCHITECTURE

Saint Mary's University, in association with the Nova Scotia Technical College, offers the first two years of a six-year course in Architecture leading to a Bachelor of Architecture degree.

Qualification for entrance to the Architecture program at Nova Scotia Technical College is the satisfactory completion of at least two years in a degree program at any university or equivalent institution recognized by the Faculty of the School of Architecture. A university course in mathematics is prerequisite, except that the Admissions Committee may instead require a written examination in this subject.

Providing it has been undertaken in a 'recognized' degree program virtually any course of studies — including arts, fine arts, engineering and other technologies, science, agriculture, social sciences, education, medicine — is acceptable.

Selection from the qualified students for admission to the School of Architecture is carried out by a selection committee of the Faculty of the School of Architecture.

(E) PRE-THEOLOGICAL COURSES

Students who are candidates for the Christian Ministry are in most cases required to obtain a B.A. degree, or its equivalent, before proceeding to theology. Normally the B.A. course will be followed by three years in theology. Requirements may vary somewhat from one denomination to another, but generally speaking students are advised to select a broad range of subjects from such departments as English, history, philosophy, classics, psychology and sociology, along with some courses in religious studies. A working knowledge of Greek is desirable for students entering theology.

SECTION 4

Continuing
Education

CONTINUING EDUCATION

Director	John H. Battye
Assistant Director	Lloyd Fraser

Continuing Education offers varied programs of credit and non-credit courses designed to enable:

a) students, to take a course or study towards a degree on a part-time basis;

b) teachers, to up-grade their professional standing;

c) managers in government, industry and commerce, to acquire new background and skills;

d) technicians and other professionals, to up-grade their qualifications;

e) adults generally, to enrich their education and lives.

DEGREE PROGRAM

Saint Mary's University has developed an extensive program to serve those who wish to take courses or study towards a degree on a part-time basis. An increasing number of courses are being scheduled in late afternoon, evening and weekend time periods so that persons who have to work for a living can continue to pursue their education if they wish to do so.

Late afternoon, evening and Saturday classes, and summer sessions, enable the part-time student to work towards a degree at the University. Evening and Saturday courses follow the academic timetable, beginning in September and ending with April examinations. Part-time students enjoy the same privileges as full-time students attending day classes. The Office of Student Services will assist them in matters of personal, social, educational or vocational concern. Issued with an ID card, the part-time student has normal access to the resources of the University Library, and may visit the Art Gallery and attend concerts at student rates. Each year, more and more adults of all ages are finding the University's part-time program a way of achieving academic and professional goals while engaged in other employment.

Every effort is made to offer during the evening hours and in the summer sessions a sufficiently varied and predictable selection of credit courses to enable a person who can attend classes only in the evenings to plan and carry through studies towards a degree in a systematic way and within a reasonable period of time.

In response to an increasing demand from communities outside Halifax, courses are offered at off-campus locations: Dartmouth, Truro, Kentville, Sackville, Bridgewater and Shearwater. Courses will be offered in other locations if there is sufficient interest. Individuals wishing to explore the possibility of having off-campus courses in their community should communicate with the Director of Continuing Education.

Summer Sessions

Two summer sessions are held each year: one from mid-May to the end of June, and the other from the beginning of July to mid-August. A student is permitted to take one course in each session and, in exceptional cases with the Dean of Faculty's approval, two courses in one of the Summer Sessions. Course offerings in the summer sessions have recently been expanded to permit students to begin and complete programs of study leading to a degree.

NON-DEGREE PROGRAM

COORDINATED PROGRAMS

The coordinated programs described below are offered by the University in cooperation with various professional organizations. Upon completion of a program, the student is normally eligible for the award of a certificate from the sponsoring organization.

Canadian Institute of Management

The Canadian Institute of Management offers a four-year program of management development intended to improve the effectiveness of middle and senior level managers employed in manufacturing, transportation, wholesaling, retailing, the service industry and the public service. The program has resulted from the identification of management needs through extensive research. This program is designed to promote skill development in general management combined with specialization in functional areas or organizational sectors.

CONTINUING EDUCATION

The Canadian Institute of Management program comprises seven instructional units:

Year 1
Organization as Systems
Managerial Accounting

Year 2
Quantitative Information for Decision-making
Organizational and Human Behavior

Year 3
Two optional courses selected from the areas of industrial management, public sector management, wholesale and distribution management, retail management, and management of the smaller enterprise.

Year 4
Applied Management

Students who complete successfully the seven units listed above, and who maintain membership status in The Canadian Institute of Management, will be entitled to use the professional designation C.I.M.

Fellows' Program in Banking

The Fellows' program in Banking consists of ten instructional units designed to provide formal education for men and women who wish to prepare themselves for more responsible positions in banking. It is intended for students who are capable of taking courses at the university undergraduate level. The courses offered cover such subjects as accounting, business administration, financial management, economics, money and banking, business strategy, marketing, information systems, organzational behavior, personnel management, and business law.

Candidates seeking admission to the program should apply through the Personnel Department of the Bank in which they are employed.

Students who successfully complete the program will be entitled to use the professional designation FICB (Fellow of the Institute of Canadian Bankers).

Appropriate courses taken for credit towards the degree of Bachelor of Commerce may also be used as instructional units to satisfy the requirements of this program.

Fellows' Program of the Trust Companies Institute

This program is offered in cooperation with the Trust Companies Institute of Canada and allows employees of member companies of the Trust Companies Association to acquire professional recognition for defined levels of accomplishment.

Upon the successful completion of the following program, students will receive a diploma from the Institute and will be entitled to use the professional designation Associate of the Trust Companies Institute:

Compulsory Courses:
Business or Management Communications
Principles of Accounting or Electronic Data Processing
Business Law
Principles of Economics

Optional Courses: Any two of
Money and Banking

Principles of Business Administration or Organizational Behavior

Principles of Marketing

Management Accounting or Business Statistics

Principles of Sociology or Psychology

Appropriate courses taken for credit towards the degree of Bachelor of Commerce may also be used as instructional units to satisfy the requirements of this program.

Real Estate Program

This program, offered in cooperation with the Nova Scotia Real Estate Association, is designed for those who are practitioners in the real estate industry or who are planning to enter it, as well as for those who are concerned with real estate as a professional interest or an investment. Special real estate courses are combined with basic business courses to provide a broad background.

Applicants are expected to have high school graduation or equivalent, to be associated with the real estate industry or planning to enter it, and to have business experience.

CONTINUING EDUCATION

To complete the academic requirements for the professional designation F.R.I. (Fellow of the Real Estate Institute of Canada), a candidate must successfully complete nine courses as set out below:

Year 1	Principles of Economics
	Building Design and Construction
	Urban Land Economics
Year 2	Real Estate Mathematics and Statistics
	Land Planning and Development
	Real Estate Financing
Year 3	Appraisal Principles
	Land Law I
	Land Law II

Those who have completed the above courses and have otherwise qualified through practical experience for the F.R.I. designation may wish to undertake the following additional program:

> Advanced Appraisal
> Real Estate Investment Analysis
> Real Estate Income Taxation

Personnel-Industrial Relations Program

This three-year program, offered in cooperation with the Maritime Personnel Association, is designed to provide training in the fundamentals of personnel and industrial relations for practitioners wishing to upgrade their qualifications. The emphasis in program instruction is on critical analysis and application of industrial relations and personnel principles to practical problems.

The program is intended for those already employed in personnel and related work in industry or government. Applicants are expected to have high school graduation or equivalent.

Year 1	Labor Economics
	Labor Relations
Year 2	Managerial Psychology
	The Personnel Function
Year 3	Organizational Behavior
	Current Personnel Problems

Students who successfully complete the program are awarded a certificate by the Council of Canadian Personnel Associations.

Certified General Accountants Association

Introductory Accounting
Intermediate Accounting

SAINT MARY'S UNIVERSITY CERTIFICATE PROGRAMS

Executive Development Certificate Program

This program is designed for working managers who are making the transition from more specialized positions to the area of general management. It is intended to present an intensive review of management functions and to help provide the skills and understanding required for executive development. It is open to qualified men and women who have assumed or will shortly assume positions of higher responsibility in management. It is appropriate for all organizations in both the private and public sectors of society.

Applicants are expected to have high school graduation or equivalent, to have recognized experience in a managerial position, and to be at least 25 years of age.

Year 1	Business Organization and Administration
	Introductory Financial and Managerial Accounting
Year 2	Marketing Management
	Financial Management
	Economics of Business
Year 3	Business Policy and Strategy
	And any two of:
	Commercial Law
	Communications
	Intermediate Financial Accounting
	Contemporary Economic Issues
	Production Management
	Management and Human Resources
	Management and the Computer

CONTINUING EDUCATION

Criminology Certificate Program

This program is designed to provide a broad theoretical and practical foundation, based on courses chosen from several academic fields, for persons who deal in their daily work with problems of delinquency, criminal behavior and the treatment of offenders.

Applicants are expected to have high school graduation or equivalent. The program is intended primarily for working officers in the police forces, in Federal and Provincial correctional services and custodial institutions, and for court workers. It is open, however, to any interested and qualified persons.

Year 1   Deviant Criminal Behavior
          Criminal Law
          Interpersonal Relations

Year 2   Community Relations and Public Issues
          The Judical System
          Penology

Marine Biology Certificate Program

This is a one-year program designed to provide a theoretical background to the methodology of fishery investigation. The program is intended for working technicians. Applicants are expected to have high school graduation or equivalent.

Topics covered include an introduction to fisheries science, fish biology, sampling a population, measurement and data recording, age determination, sex, maturity and fecundity, food and feeding, the aquatic environment, unit stocks, straining techniques. The course includes both lectures and laboratory work.

Electronics Certificate Program

This is a one-year program designed to provide understanding and practical experience in solid-state electronic analog and digital circuits. The treatment will emphasize conceptual understanding, but some algebra and trigonometry will be employed for quantitative verification of the concepts.

The program is intended for working technicians. Applicants are expected to have high school graduation, including high school mathematics, and to have taken a previous course in introductory electronics, such as the Saint Mary's course entitled 'Electronics for Science' (Phy 260.0).

The course consists of lectures and experimentation.

COURSES FOR PERSONAL DEVELOPMENT AND LEISURE ENJOYMENT

The Evolving Universe
Chinese Civilization
Creative Color Photography
Creative Writing
Effective Communication
Figure Drawing
Figure Painting
French Conversation
Interior Design
Investment
Music Appreciation
Reading/Discussion Course
Reading Dynamics
Spanish Guitar
Understanding Electronics

Each class meets one evening each week for a two-hour period. There are no entrance requirements except a sincere desire to learn.

MATURE APPLICANTS

Mature persons, even if they do not not meet the University's normal entrance requirements, may be admitted to programs leading to Bachelor of Arts, Bachelor of Science and Bachelor of Commerce degrees, and the Diploma in Engineering.

Mature applicants are each considered on an individual basis. To qualify for admission as a mature student, an applicant must have been out of school for at least five years and show, through work experience or in other ways, capability of benefitting from university studies.

Mature applicants may apply for admission as part-time or as full-time students.

Students who have been full-time students at a university are normally not eligible for admission to the mature students program within a five-year period from their last year of registration.

CONTINUING EDUCATION

Application Procedure

The application procedure for mature applicants is as follows:

i) An application for admission form may be obtained by writing, telephoning or visiting:

> Director of Continuing Education
> Saint Mary's University
> Halifax, Nova Scotia B3H 3C3
> Telephone: (902) 422-7361
> ext. 250, 251, 252, 253

ii) The completed application for admission form should be accompanied, if possible, by an accredited school certificate giving grades or marks attained during last year of attendance.

iii) An applicant who has completed courses at another university or post-secondary educational institution must ask that institution to send an official transcript of the work done by the applicant to the Director of Continuing Education.

iv) Each applicant must arrange through the Director of Continuing Education, an appointment for interview, if possible before the following dates:
First summer session — May 6
Second summer session — June 24
Fall-winter session — September 1

DEGREE PROGRAM FOR VOCATIONAL SCHOOL TEACHERS

1. Vocational teachers may be admitted to the Bachelor of Arts program if they have completed:
   a) eight years trade training and experience,
   b) grade XII or its equivalent,
   c) the three-summer program at the New Brunswick Institute of Technology,
   d) and three years successful teaching at a Vocational High School or Technical Institute.

2. Teachers so admitted shall qualify for the Degree of Bachelor of Arts by completing twelve courses satisfying otherwise the requirements for that degree as determined by Senate.

3. Vocational teachers may proceed to the degrees of Bachelor of Education (Vocational) and Bachelor of Arts concurrently. The Degree of Bachelor of Education (Vocational) may be obtained by successfully completing at Saint Mary's University at least two courses in Education, and a Practicum to be selected in consultation with the Dean of Education.

S E C T I O N 5

Description
of
Courses

ANTHROPOLOGY

Chairman, Associate Professor James R. Jaquith
Associate Professor Harold F. McGee, Jr.
Assistant Professors Paul A. Erickson,
Susan DeMille Walter
Lecturer Stephen A. Davis

Departmental Policy:
1. To obtain a major concentration, a student is required to have completed at least six courses in anthropology. These must include Ant 200.0 or its equivalent and four additional courses at the 300 level or above.
2. To obtain an honors concentration in anthropology, a student is required to (a) satisfy pertinent Faculty of Arts requirements; (b) meet Departmental major requirements; (c) complete the equivalent of ten full courses in anthropology, including the following obligatory core: Ant 200.0 or its equivalent, 300.0, 370.0, 380.0, 390.0, 450.0 and 499.0; (d) in addition, honors majors are urged to take at least one of the following methods courses: Ant 321.0, 360.0, 410.0.
3. The program for majors must be approved by the student's Departmental advisor who will be assigned at the time the major is declared.
4. In the case of re-numbered courses, students are advised that only one credit can be obtained for one course, even if that course was offered on different levels in different years.
5. Ant 200.0, 201.0, 220.0, 221.0, 270.0 and 319.0 do not have prerequisites.

200.0 INTRODUCTION TO ANTHROPOLOGY

An introduction to the scientific study of humanity. Origins, physical and cultural evolution and diversification, prehistory, ecological adaptation, social organization, economic systems, religion, language and value systems of the world's peoples.

Note: This course may not be taken by students who already have obtained a credit for Ant 260.0 or 210.0.

201.0 WOMEN: ANTHROPOLOGY'S OTHER HALF

Sex differences in the lower primates. Early man and woman. Female roles in evolutionary stages. Female roles in other cultures. Enculturation of values and sex roles. Biological basis for sex differences, including personality. The developmental cycle in the life of women. Application to modern woman.

220.0 NATIVE PEOPLES OF NORTH AMERICA

A survey of the Indian and Eskimo peoples of North America, their cultures and their life histories as groups.

221.0 NATIVE PEOPLES OF ATLANTIC CANADA AND MAINE

An examination of the social and cultural history of the native peoples of the Atlantic area. The political, religious, technological, economic, kinship and aesthetic systems of the Abanaki, Beothuk, Malecite-Passamaquoddy, Micmac, and Penobscot ethnic groups will be discussed within a temporal framework.

270.0 WORLD PREHISTORY

A study of man's use of tools as the foundation for the development of culture. The course investigates the earliest known tools and their associated activities. The development of technology is traced from the early stone age through the iron age in a world-wide setting.

300.0 ADVANCED SOCIO-CULTURAL ANTHROPOLOGY

Prerequisite: Ant 200.0, 210.0 or permission of the instructor.

An in-depth examination of some of the basic concepts used by anthropologists to analyze socio-cultural systems. Special attention will be given to the concepts of culture, structure, communitas, and the dialectic.

ANTHROPOLOGY

310.0 CULTURE CHANGE AND DEVELOPMENT

Prerequisite: a social science course or permission of instructor.

An examination of anthropological and other theories of social and cultural change, with references to case studies. Development is considered as a special case of socio-cultural change.

315.0 PEASANT SOCIETY AND CULTURE

Prerequisite: an introductory socio-cultural anthropology course or permission of the instructor.

A treatment of theories and substantive studies of peasant society and culture.

319.0 CULTURAL ECOLOGY
(Gpy 319.0) (formerly 230.0)

An introduction to the study of the relationship between man and his environment, ranging from hunting and gathering societies to the dawn of civilization.

320.0 WORLD ETHNOGRAPHY

Prerequisite: Ant 200.0, 220.0 or permission of the instructor.

Vanished and vanishing cultures in Africa, Oceania, North America, South America and Asia, viewed in relation to historical and environmental influences.

321.0 ETHNOHISTORY

Prerequisite: Ant 200.0, 210.0 or permission of the instructor.

Ethnohistory and the development of ethnohistorical research, with particular reference to North America. This course is concerned with the anthropologist's use of archival material, and the critical evaluation of different types of oral traditions as sources of historical information. Some ethnohistorical studies are examined.

325.0 ETHNOLOGY: OCEANIA

Prerequisite: a socio-cultural anthropology course or permission of the instructor.

Ethnological survey of selected (representative) societies of Polynesia, Micronesia, Melanesia and Australia.

330.0 ANTHROPOLOGICAL APPROACHES TO FOLKLORE

Prerequisite: an introductory anthropology course, a folklore course or permission of the instructor.

As a traditional system for the storage and transmission of information about how the world is perceived by a people, folklore is of interest to the anthropologist. In this course, the student will be made familiar with current anthropological approaches to the study of folklore and will have the opportunity to analyze a body of folklore.

340.0 CULTURAL GEOGRAPHY OF
(Gpy 340.0) CHINA

Prerequisite: Gpy 201.0 (formerly 152.0).

The course will cover the following topics: physical foundations, hydraulic agriculture, the nomad frontier, origins in the loess, Chinese expansion to the south, China's marketing and administrative geography, the Communist revolution.

345.0 EVOLUTION AND HUMAN BEHAVIOR
(formerly 340.0 Human Ethology)

Prerequisite: Ant 200.0, 260.0 or permission of the instructor.

An examination of physical anthropology's contribution to the nature-nurture debate, with attention to animal models for human behavior.

ANTHROPOLOGY

349.0   MYTH AND SYMBOL
(Rel 320.0)

What is myth? What is religious symbol? Are they relevant and meaningful for modern man? This course offers a comparative analysis of the nature of religious experience, myth and symbol by looking into various religions — primitive, classical and modern. Attention will be given to modern theories of myth and symbol as developed, for example, by Freud, Jung, Eliade, and several notable anthropologists.

Note: This course may be taken at the 420-level with the following prerequisite: one course in philosophy or anthropology, or Rel 306.0.

350.0   ANTHROPOLOGY OF RELIGION

Prerequisite: Ant 200.0, 210.0 or permission of the instructor.

Examination of religious behavior from anthropological perspective. Cross-cultural consideration of such questions as origin and nature of religion, religion as adaptation to environment, religion and culture change.

360.0   METHOD AND THEORY IN ARCHAEOLOGY

Prerequisite: Ant 200.0, 260.0 or permission of the instructor.

Concepts and methods of archaeology, lab analysis, survey methods, and collection of data. Suggested for students who intend to take field work courses in anthropology.

370.0   ARCHAEOLOGY OF NORTH AMERICA

Prerequisite: Ant 200.0, 260.0 or permission of the instructor.

A survey of North American prehistoric culture, the course considers man's first entry into North America and the subsequent cultures which developed here.

380.0   ADVANCED PHYSICAL ANTHROPOLOGY

Prerequisite: Ant 200.0, 260.0 or permission of the instructor.

An advanced treatment of primate behavior, primate anatomy and human genetics involving laboratory and workbook exercises.

390.0   LINGUISTIC ANTHROPOLOGY

Prerequisite: Ant 200.0, 210.0 or permission of the instructor.

Comprehensive cross-cultural introduction to language and speech behavior; to the relations between language and culture generally; to the analysis and description of languages in terms of their constituent units and dynamics; to the social functions of language; applied linguistics and literacy.

399.0   DIRECTED INDEPENDENT STUDIES

Directed independent study on a reading or research program agreed to by student and instructor. The student must obtain instructor's approval of proposed study plan before registering for the course.

410.0   METHODOLOGY AND FIELDWORK IN SOCIO-CULTURAL ANTHROPOLOGY

Prerequisite: Ant 200.0, 210.0 or permission of the instructor.

This course applies concepts already familiar to the student in actual fieldwork within the Province of Nova Scotia, as far as circumstances permit.

411.0   ANTHROPOLOGICAL STATISTICS

An introduction to the principles and applications of basic statistics in all fields of anthropology designed to facilitate anthropological learning and research. Algebra, but no calculus.

ANTHROPOLOGY

450.0   POLITICAL ANTHROPOLOGY

Prerequisite: Ant 200.0, 210.0 or permission of the instructor.

This course considers public goal-oriented behavior in pre-industrial communities. Topics include settlement of disputes, factionalism, and differences in access to and exercise of power.

450.0   HISTORY OF ANTHROPOLOGICAL THEORY

Prerequisite: Ant 200.0, 210.0, 260.0 and two additional courses in anthropology.

The development of anthropological theory from the Enlightenment to the present with reference to current theoretical issues.

460.0   FIELDWORK IN ARCHAEOLOGY

Prerequisite: Ant 200.0, 260.0, 360.0 or 370.0.

The first half of the course involves detailed instruction in, and practical application of, archeological field techniques in the excavation of a site in Nova Scotia. The second half of the course involves intensive on-campus training in the laboratory analysis of artifacts recovered in the excavation phase of the course. This course is offered during summer sessions.

3 weeks field work and 3 weeks lab.

461.0   ADVANCED FIELDWORK IN ARCHAEOLOGY

Prerequisite: Ant 460.0.

Students are expected to have knowledge of field and laboratory techniques used in archaeology. They will conduct their own excavations and analysis of an archaeological site and its material. This course is offered during summer sessions.

3 weeks field work and 3 weeks lab.

470.0   THE DAWN OF CIVILIZATION

Prerequisite: Ant 200.0, 210.0, 260.0.

A study of man's earliest civilization in the light of recent archaeological research; Southeast Asia, the Far East, the Near East and the New World. Open to history students.

480.0   SEMINAR

To be offered in response to expressed student desire for advanced instruction in anthropological topics not covered intensively in substantive course offerings. Will be given as formal seminar by a full-time Anthropology staff member.

499.0   DIRECTED HONORS RESEARCH

Supervised preparation of a significant research paper for honors students in anthropology.

2 semesters.

ASIAN STUDIES

Committee on Asian Studies

P. Bowlby, Chairman	Religious Studies
G. Boyd	Political Science
K. Chan	Economics
T. McGrath	Economics
T O'Neill	Economics
B. Robinson	Geography
M. Sun	History

There is little question of the place or significance of Asian Studies in university education. Since World War II, we have witnessed the increasing importance of Asia in world politics and economics and have recognized the need for educated citizens to develop a better understanding of the forces involved. An informed acquaintance with the Asian experience in the field of politics, history, culture, philosophy, and religion has become an essential corollary to a full understanding of our own Western experience.

An academic background in Asian studies will help to prepare students for careers in the diplomatic service, in international trade and industry and in the secondary and university teaching fields.

Saint Mary's University is the only institution in the Atlantic Provinces offering a comprehensive program in Asian Studies.

REGULATIONS

Aside from the normal university requirements for the Bachelor of Arts degree, students intending to complete a major concentration in Asian Studies are required to obtain at least six full course credits from among the following courses, which are to be taken from at least three different departments. They must also choose from among the listed faculty members, a supervisor who will oversee their programs of study.

ASIAN STUDIES
400.0 China's Developmental Experience
401.0 (Edu 539.0) Contents and Methods of Asian Studies
410.2 Special Topics on Japan

MODERN LANGUAGES

CHINESE
100.0 Elementary Chinese
200.0 Intermediate Chinese

ECONOMICS
310.1 Development Economics
311.2 Issues in Economic Development
313.1 International Finance
314.2 International Trade
315.1 Comparative Economic Systems
323.1 Soviet-Type Economy

GEOGRAPHY
340.0 Cultural Geography of China
409.0 The Birth of the City

HISTORY
209.0 Modern East Asia
291.0 History of India, 1500-1947
323.0 Dynastic History of China
324.0 Cultural History of Japan
342.0 China in Revolution
511.0 Seminar on Modernization in East Asia

POLITICAL SCIENCE
440.0 Politics of the Developing Areas
441.0 Government and Politics in East Asia
553.0 International Studies Seminar

RELIGIOUS STUDIES
235.0 Introduction to Asian Religions
323.0 Buddhist and Hindu Religious Traditions
324.0 Religions of China

SOCIOLOGY
320.0 Ethnic and Minority Groups

ASIAN STUDIES

**CHINA'S DEVELOPMENTAL
EXPERIENCE**

Prerequisite: a course in Asian studies, or equivalent.

An unusual travel-and-learn opportunity, this course takes students into China to personally view developments in that country. It is offered in the summer and requires six weeks full time. Students are given an intensive week of orientation in Hong Kong prior to entering the People's Republic of China; and, on departure, another week in Hong Kong is devoted to analysis and interpretation of individual experiences. This study of China's development under communism is undertaken from a variety of disciplines, including history, economics, geography, politics, the arts, and sociology.

Time in China is approximately four weeks. This offering is dependent on adequate enrolment and travel arrangements.

Six weeks full time.

SPECIAL TOPICS ON JAPAN

Prerequisite: one Asian Studies course or permission of instructor.

Special Topics on Japan is a seminar to be taught by a Japanese specialist invited to Saint Mary's University.

ASTRONOMY

Chairman, Assistant Professor   G. A. Welch
Observatory Director,
Associate Professor   D. L. Du Puy
Associate Professor   G. F. Mitchell

The Burke-Gaffney Observatory opened early in 1972 and began a program to make its facilities available to the general public, and to students and faculty at Saint Mary's University. The telescope is a reflector with a 16-inch diameter mirror and is equipped with research instrumentation. Students interested in observing with the telescope (whether or not enrolled in an astronomy course) should contact the Observatory.

UNDERGRADUATE COURSES
The Astronomy Department does not offer a major or concentration in astronomy. Students who intend to pursue a career in astronomy are advised to major in physics and to take Ast 202.0, 401.1 and 402.2 as electives. Ast 201.0 is a non-mathematical course intended for the non-science student.

THE MASTER'S PROGRAM
Saint Mary's University is the only institution in Atlantic Canada offering a Master's degree in Astronomy. The 600-level courses listed are graduate courses and are not usually open to undergraduate students. The Master's program attempts to provide the student with a broad background in physical science, to foster the students research ability, and to develop in the student an understanding of modern astronomy at the professional level. The graduate will be sufficiently versatile to enter a doctoral program elsewhere, pursue a technological career, or choose a career in teaching.

The program is two years in length and includes course work and a thesis. The number of courses required will depend on the qualifications of the student, but will normally be four plus thesis. The major effort of the student in the first year will be in acquiring a basic knowledge of astronomy through courses, seminars, and general reading. Three courses will normally be taken. During this first year a thesis topic will be chosen in consultation with the Department. In the second year the student will normally take one course and complete a thesis. The thesis work will be carried out under the supervision of a faculty member and will involve original research.

Admission and degree requirements are given in the Graduate Studies section of this Calendar.

201.0 INTRODUCTION TO CONTEMPORARY ASTRONOMY

This course is designed especially for the non-science student. It will provide the practical background necessary to enjoy amateur astronomy, and will introduce some of the exciting recent astronomical discoveries. Practical topics will include the methods of locating celestial objects, the principles of telescopes, celestial navigation, and methods used to uncover the true characteristics of astronomical objects. Observing sessions will be conducted at the Burke-Gaffney Observatory. Contemporary astronomical discoveries will be discussed in relation to the origin of the solar system, birth and aging processes in stars, the question of other life in the universe, the nature of the Milky Way and the possible fate of the universe.

Classes   3 hrs. a week. 2 semesters.

ASTRONOMY

212.0 INTRODUCTORY ASTRONOMY FOR SCIENCE STUDENTS

Prerequisite: Phy 111.0 and Mat 100.0.

After a study of the celestial sphere, the motions of the earth and time measurement, the solar system will be investigated in some detail. Topics will include the moon, planets, asteroids, comets, and the sun. Consideration of the properties of stars and stellar evolution will lead to a brief discussion of neutron stars, black holes and pulsars. Our Galaxy will be examined with respect to its size, rotation, and spiral structure. The nature and space distribution of external galaxies will be studied.

Classes   3 hrs. a week. 2 semesters.

401.1 THE SOLAR SYSTEM

Prerequisite: Phy 221.0 and Mat 310.0.

This course will provide an introduction to the sun, the solar magnetic field, and solar activity, as related to solar system phenomena. Also included will be topics in the origins and characteristics of comets, meteors, asteroids, the interplanetary material, and a discussion of the interiors and atmospheres of the terrestrial and Jovian planets. Recent results from the Mariner interplanetary probes and Apollo experiments will be discussed.

Classes   3 hrs. a week. 1 semester.

402.2 STARS AND STELLAR SYSTEMS

Prerequisite: Phy 221.0 and Mat 310.0.

This course begins with an introduction to observational properties of open clusters, associations, and globular clusters, including the luminosity function and galactic distributions. Topics include interstellar reddening, zero-age main-sequence determination, metal abundances, and spectroscopic parallaxes. A discussion of stellar populations in galaxies and the Local Group of galaxies will be included.

Classes   3 hrs. a week. 1 semester.

601.2 RADIO ASTRONOMY

This course will begin with a treatment of radio emission mechanisms including thermal radiation, synchrotron radiation, and line radiation. Design of radio receiving systems and the techniques of interferometry and aperture synthesis will be discussed. The theoretical methods will then be used to interpret observations of a wide variety of radio sources. Specific application of modern observing techniques will be investigated.

Classes   3 hrs. a week. 1 semester.

602.2 GALACTIC STRUCTURE

Basic structure of the Milky Way will be presented, including solar motion and the Local Standard of Rest, stellar populations, and the role of variable stars and associations in spiral structure. Galactic rotation will be examined in detail, including observational determinations of the Oort constants, mass distribution models, and comparisons of 21 cm maps with spiral structure derived from optical spiral arm tracers.

Classes   3 hrs. and lab a week. 1 semester.

605.0 FUNDAMENTAL ASTROPHYSICS

Prerequisite: Phy 432.2 and 439.2 and Mat 410.0 (may be taken concurrently).

The physical conditions in the outer layers of stars will be deduced from their continuous radiation and their spectral lines. This treatment of *stellar atmospheres* will involve a discussion of ionization and excitation, atomic and molecular spectra, and the thermodynamics of a gas. The topic of *stellar structure* will include an application of nuclear physics to stellar energy production and a treatment of nucleosynthesis in stars (explosive and non-explosive). A discussion of the *interstellar medium* will include interstellar clouds, the intercloud medium, ionized hydrogen regions, interstellar molecules, dust grains, and the galactic magnetic field.

Classes   3 hrs. a week. 2 semesters.

ASTRONOMY

606.1 TECHNIQUES IN OBSERVATIONAL ASTRONOMY

Prerequisite: Phy 432.2 and 439.2 and Mat 410.0 (may be taken concurrently).

This course will provide background and practical experience in the acquisition and reduction of astronomical data. Basic areas covered will include photoelectric photometry, photographic photometry, and spectral classification. Project assignments will involve the student with the full range of instrumentation available at the Burke-Gaffney Observatory, including multi-color photoelectric photometer, spectrograph, direct camera, Cuffey iris photometer and measuring engine.

Classes 3 hrs. and lab 3 hrs. a week. 1 semesters.

607.1 BINARY AND VARIABLE STARS

Prerequisite: Phy 438.1 and Mat 410.0 (may be taken concurrently.)

This course will provide basic methods of analyzing binary and variable star data to deduce physical properties of stars. Topics will include visual binaries, Zwier's versus Thiele-Innes methods, spectroscopic binaries, eclipsing binaries, and classes of variable stars. Application will include newly discovered x-ray binary systems, the search for black holes in multiple systems, Wesselink's method, and the period-density relation.

Classes 3 hrs. and lab 2 hrs. a week. 1 semester.

609.2 EXTRAGALACTIC ASTRONOMY

Prerequisite: Ast 606.1 or permission of instructor.

Starting with a survey of the different galaxy classes, recent observations of galaxies will be reviewed with emphasis on how these observations are interpreted using concepts arising from studies of the Milky Way. The present stellar content and possible evolutionary histories of the galaxy classes will be compared. The nature of galaxy clusters will be examined, and this will lead to a discussion of how observations of galaxies are employed to infer the large-scale properties of our universe.

Classes 3 hrs. a week. 1 semester.

610.0 THESIS

Prerequisite: second year graduate standing.

Normally taken during the second year of enrolment in the M.Sc. program, this course will formalize the efforts of the student and the thesis advisor to choose a topic, initiate research, and organize material for the dissertation.

611.1 (.2) DIRECTED READINGS IN CURRENT LITERATURE

Prerequisite: graduate standing in astronomy.

A topic of current interest in astronomy will be chosen in consultation with a faculty member. After a thorough study of recent work on the topic a detailed written report with references will be submitted. Extensive use will be made of available research journals.

ATLANTIC CANADA STUDIES

Committee on Atlantic Canada Studies

C. D. Howell, Coordinator	History
J. Baker	English
J. Battye	Continuing Education
C. J. Byrne	English
S. Davis	Anthropology
J. G. Jabbra	Political Science
B. Kiesekamp	History
K. A. MacKinnon	English
H. F. McGee	Anthropology
T. O'Neill	Economics
S. Robinson	Geography
A. T. Seaman	English

Atlantic Canada Studies is an inter-disciplinary major option in the Arts Faculty which has developed out of an increasing demand by students, faculty and the community generally, for a more organized study of this region.

Students who complete a major in Atlantic Canada Studies will have helped to prepare themselves for a fuller and more meaningful participation in the life of Atlantic Canada, and will have acquired a useful background for careers in teaching, trade and industry, and the various bureaus of the Provincial and Federal Civil Services. Their attention is particularly drawn to the advantages, from a career point of view, of taking Atlantic Canada Studies as part of a double major. Saint Mary's is the only institution in Canada which offers this program.

To complete a major concentration in Atlantic Canada Studies, a student must meet the usual University requirements for the Bachelor of Arts degree, and in particular obtain six full courses credits (or the equivalent) from the courses listed below. Three of these must be from different disciplines, and one must be the Atlantic Canada Seminar. Students are required to choose their courses in consultation with a member of the Atlantic Canada Studies Committee, and are strongly urged to select one of its members to advise them for the duration of the program, and to provide the necessary liaison with the Committee.

300.0 THE CULTURE OF ATLANTIC CANADA

This course provides an introduction to the cultural traditions and institutions of the various regions and ethnic groups of the three Maritime Provinces and Newfoundland. Lectures will cover a wide variety of architectural, artistic, ecclesiastical, educational, ethnic, and linguistic topics. Students will engage in both individual and group projects and be required to write a final examination.

301.1 SELECTED TOPICS IN ATLANTIC CANADA STUDIES I

This semester course will provide the student with an opportunity to take courses on specific Atlantic Canada topics which do not fit in with the standard offerings of other departments in the university.

302.2 SELECTED TOPICS IN ATLANTIC CANADA STUDIES II

This semester course will provide the student with an opportunity to take courses on specific Atlantic Canada topics which do not fit in with the standard offerings of other departments in the University.

400.0 ATLANTIC CANADA SEMINAR

Prerequisite: student must be a fourth year (senior) ACS major.

This course, intended for majors in Atlantic Canada Studies, will provide an opportunity for students in the program to integrate their knowledge of the region in an interdisciplinary fashion. Drawing upon the expertise of a number of guest speakers familiar with various aspects of Atlantic Provinces Life, the course will deal with such topics as the Atlantic fishery, agriculture, industry and labor, business enterprise, regional protest, and cultural ethnicity. Students will be afforded an opportunity to use the vast quantity of primary source material at the Public Archives of Nova Scotia and other local repositories.

ATLANTIC CANADA STUDIES

Students pursuing a major in Atlantic Canada Studies must select at least six full courses (or equivalent) from the following:

ACS 300.0 The Culture of Atlantic Canada
ACS 301.1 Selected Topics in Atlantic Canada I
ACS 302.2 Selected Topics in Atlantic Canada II
ACS 400.0 Atlantic Canada Studies Seminar

ANT 221.0 Native Peoples of Atlantic Canada and Maine

ECO 321.1 The Atlantic Economy
ECO 321.2 The Atlantic Economy Seminar

EGL 308.0 Literature of Atlantic Canada
EGL 313.0 Introduction to Folklore
EGL 314.0 Folklore of Atlantic Canada
EGL 450.0 Special Subject
EGL 551.0 Special Author

FRE 303.0 Acadian Civilization

GPY 300.1 The Atlantic Provinces
GPY 330.2 Regional Development in the Atlantic Provinces

GEO 201.1 Geology of The Maritimes
GEO 201.2 Geology of The Maritimes

HIS 320.0 Atlantic Provinces and New England
HIS 340.0 A History of the Atlantic Provinces
HIS 344.0 A History of Nova Scotia
HIS 345.0 Blacks and Other Minorities in Nova Scotia

POL 307.0 Provincial Government and Politics
POL 420.0 Urban Government and Politics

SOC 321.0 Canadian Society: Social Movement
SOC 332.0 Sociology of The Atlantic Region

BIOLOGY

Chairman, Associate Professor	B. Kapoor
Professor	A. Rojo
Associate Professors	E. Rojo, K. Thomas
	M. Wiles
Assistant Professor	H. Bobr-Tylingo

The Biology Department offers programs to fulfill the requirements of the following degrees:

1. the general degree of Bachelor of Science, with a *concentration* in biology.

2. the degree of Bachelor of Science with a *major* in biology and,

3. the degree of Bachelor of Science with *honors* in biology.

IN ADDITION, THE DEPARTMENT ALSO PRE-PARES STUDENTS FOR THE PROFESSIONAL STUDIES OF MEDICINE AND DENTISTRY.

STUDENTS INTENDING TO TAKE AN HONORS DEGREE IN BIOLOGY SHOULD CONSULT THE CHAIRMAN OR A MEMBER OF THE DEPART-MENT BEFORE COMPLETING REGISTRATION.

Students completing a concentration in biology should be able to understand most of the disciplines of the subject and be capable of teaching or doing technical work in biological, paramedical or health science fields after appropriate on-job training. Students finishing a major in biology should be capable of undertaking graduate level work in biology either after a further year of honors work or after a qualifying year in a graduate program. In the major program more emphasis is placed on the scientific aspects of education and training, while a concentration in biology is aimed at providing a broad general education in arts and sciences.

The following schemes are recommended by the Department for biology students doing the general science degree, the degree with a major, or an honors degree.

Scheme A: General Science Degree with Biology Concentration

Freshman Year
1. Egl 200.0
2. Mat 100.0
3. a course in the humanities
4. Bio 111.0
5. a related science course

Sophomore Year
1. a course in the humanities
2. Mat 200.0 or 225.0
3. a related science course
4. Bio 204.0
5. Bio 205.0

Junior Year
1. Two courses from the following:
   Bio 302.0
   Bio 305.0
   Bio 307.1 & 308.2
   Bio 309.0
   Bio 310.0
   Bio 317.0
2. a related science course
3. a related science course
4. non-biology elective

Senior Year
1. One course from the following:
   Bio 302.0
   Bio 305.0
   Bio 307.1 & 308.2
   Bio 309.0
   Bio 310.0
   Bio 317.0
2. One course from the following:
   Bio 401.1 or 403.1 or 407.1 or 411.1
   plus Bio 308.2 or 412.2
   Bio 405.0
   Bio 406.0
3. non-biology elective
4. non-biology elective
5. non-biology elective

BIOLOGY

Scheme B: Science Degree with a Major in Biology

Freshman Year
1. Egl 200.0
2. Mat 100.0
3. a course in the humanities
4. Bio 111.0
5. a related science course

Sophomore Year
1. a course in humanities
2. Mat 200.0 or 225.0
3. a related science course
4. Bio 204.0
5. Bio 205.0

Junior Year
1. Bio 307.1 & 308.2
2. Two courses from the following:
   Bio 302.0   Bio 310.0
   Bio 305.0   Bio 317.0
   Bio 309.0
3. a related science course
4. non-biology elective

Senior Year
1. Two or three courses from the following:
   Bio 302.0   Bio 401.1, 403.1,
   Bio 305.0   Bio 407.1 or 411.1 plus
   Bio 309.0   Bio 408.2 or 412.2
   Bio 310.0   Bio 405.0
   Bio 317.0   Bio 406.0
   Bio 420.0
2. a related science course
3. a biology or non-biology elective
4. non-biology elective

Scheme C: Science Degree with Honors in Biology

Students must satisfy the requirement for the major degree program as outlined in Scheme B, and in the honors year, take the following five courses:

Honors Year

The student will consult his/her Honors supervisor for the selection of courses.

1. One course from the following:
   Bio 401.1 & 408.2   Bio 405.0
   Bio 401.1 & 412.2   Bio 406.0
   Bio 403.1 & 412.2   Bio 420.0
   Bio 411.1 & 412.2
2. Bio 549.0
3. Two courses from the following:
   Bio 501.0   Bio 554.0
   Bio 552.0   Bio 555.0
   Bio 553.0
4. Bio 590.0

NOTE: In any biology course, the instructor may decide to substitute a one hour seminar or discussion period for one of the lectures.

Honors Program with a Combined Major in Biology and Chemistry

First Year
1. General Biology (111.0)
2. General Chemistry (101.0)
3. Mathematics (100.0)
4. English
5. Elective (Science or Arts)*

Second Year
1. Chemistry (201 or 202.0)
2. Biology (204.0)
3. Biology (205.0)
4. Mathematics (200.0)
5. English (200.0)

Third Year
1. Biology (307.1/308.2)
2. Biology (300.0 level, other than above)
3. Chemistry 241.0 (or 343 in special cases)
4. Chemistry 331.0 (or 311.0)
5. Math 311.0

BIOLOGY

103.0   BIOLOGY, ENVIRONMENT AND MAN
(for non-science students)

An introduction to the scope and principles of modern biological science. Wherever possible examples explaining these principles will be drawn from familiar, everyday events. The importance of biology in today's world will be discussed with particular emphasis on the problems associated with degradation of the environment and with human ecology. This course will not include laboratory work, but rather two lecture hours per week, and discussion sessions averaging two hours per week where demonstrations will sometimes be presented.

Note: Normally this course is restricted to non-science students for whom it constitutes a science elective. However, should a student wish to change to a science degree after taking the course, credit would be granted for the course, either as an arts elective, or in the case of a mark of A as a regular science course equivalent to the introductory biology courses: Bio 111.0.

Classes   4 hrs. a week. 2 semesters.

111.0   PRINCIPLES OF GENERAL BIOLOGY

Course designed for science students. A study of the physical, chemical and biological bases of the activities of living organisms. Emphasis will be on the modern approaches to biological sciences through a consideration of the following disciplines of biology: ecology, physiology, cytology, genetics, molecular biology, evolution and behavior.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

204.0   BOTANY

Prerequisite: Bio 111.0.

A study of different plant groups: viruses, bacteria, fungi, algae, bryophytes, ferns, gymnosperms and angiosperms. Introduction to physiological processes in plants, including photosynthesis, transpiration, absorption, nutrition, enzymes, hormonal action and growth.

Classes   3 hrs. a week. 2 semesters.

205.0   ZOOLOGY

Prerequisite: Bio 111.0.

A systematic survey of the animal kingdom with emphasis on gross morphology and its relation to function. Phylogenetic relationships, the influence of physiological adaptation through the mechanisms of heredity, and the involvement of evolutionary processes in the diversity of modern animal life.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

220.0   HUMAN SOCIETY AND THE ENVIRONMENT

An interdisciplinary course on the relationship between human society and the environment. The course will attempt to integrate social, political, economic, legal, historical and ecological aspects of environmental questions by reference to topical matters such as: man as part of nature, energy as a limiting factor in world population growth, environmental quality, the economics of pollution control, planning for the future and Canadian case histories. Field trips will be undertaken to examine various situations at first hand, such as Cape Breton coal mines and Bedford Institute of Oceanography.

Classes   Lectures and field trips during 1 summer session.

BIOLOGY

249.1   INTRODUCTION TO MARINE BIOLOGY

Prerequisite: Bio 111.0. or equivalent.

A three week summer course sponsored by the Atlantic Universities Inter-University Committee on the Sciences and offered at the Huntsman Marine Laboratory, St. Andrews, New Brunswick, during July. The course is an introduction to the principles and methods of marine biology with an emphasis on field studies. Admission is by application. Students are expected to defray their own travel costs to and from the Laboratory.

36 hrs. including lab and field work during 1 summer session.

302.0   CYTOLOGY

Prerequisite: Bio 204.0 and 205.0.

Structure and function of the cell organelles, cell reproduction, meiosis, reproductive cytology, architecture of the chromosome, function of the chromosomes, chromosomal rearrangements, polyploidy, sex-chromosomes, karyotype evolution, cytology in relation to taxonomy.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

305.0   GENERAL PHYSIOLOGY

Prerequisite: Bio 204.0, 205.0, and Che 343.0 or permission of Department.

An introduction to the essential aspects of cellular physiology and a discussion of the physiology of the major organ systems of the vertebrate body. The topics discussed include: circulation, respiration, digestion, nutrition, metabolism, muscles, nervous system and endocrine system.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

307.1   GENETICS

Prerequisite: Bio 111.0, 204.0 and 205.0, or one concurrently; Che 101.0 or 202.0.

A study of the principles of inheritance in plants and animals, by consideration of the genetic code, protein synthesis, mutations, polyploidy and Mendel's Laws.

Classes   3 hrs. and lab 3 hrs. 1 semester.

308.2   BIOSTATISTICS

Prerequisite: Bio 111.0, 204.0 or 205.0 concurrently; Mat 100.0.

Introduction to the principles and methods of analyzing and using quantitative data in the biological sciences. The emphasis will be on practical applications of statistics in biology rather than on statistical theory. Material covered includes graphical presentation of data, transformation of data, handling of data. Descriptive statistics, distributions, regressions, correlation, probability theory, comparisons of sets of data and sampling methods will be studied. Calculator usage will be undertaken.

Text: R. R. Sokal and F. J. Rohlf, *Introduction to Biostatistics*, Freeman, San Francisco.

Classes   3 hrs. and calculator 3 hrs. a week. 1 semester.

309.0   BOTANY OF DOMESTICATED PLANTS

Prerequisite: Bio 111.0, 204.0.

An introduction to the study of economically important plants, their origin, domestication, botany, cultivation, harvesting, uses, diseases, breeding and their role in modern world economy. Plants and plant products of industrial importance, medicinal plants, food plants and food adjuncts will be treated in detail.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

310.0   ECOLOGY

Prerequisite: Bio 204.0 and 205.0, or one concurrently.

A study of the fundamental concepts and principles of modern ecology, consideration of physiological ecology, population ecology, and community ecology. A brief treatment of speciation, applied ecology, conservation and management. Renewable and nonrenewable natural resources; the earth's biosphere as a dynamic, balanced system.

Text: E. P. Odum, *Ecology*, 3rd edition, Saunders 1971.

Classes   3 hrs. and lab or field 3 hrs. a week. 2 semesters.

BIOLOGY

307.0   EVOLUTION

Prerequisite: Bio 204.0, 205.0, 307.1 and 308.2.

A study of the history of the concept of evolution, the process whereby present species came into being, the mechanisms operating in nature, the factors affecting evolution and the final result as we witness it. Main area of study are population genetics, history of the earth, fossil records and the evolution of man.

Text: P. A. Moody, *Introduction to Evolution,* Third Edition, Harper and Row; D. Pilbeam, *The Ascent of Man,* MacMillan and Company.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

401.1   MORPHOLOGY OF VASCULAR PLANTS

Prerequisite: Bio 204.0 and 205.0 or permission of Department.

Structure, development and evolution of major taxa of vascular plants: pteridophytes, gymnosperms and flowering plants, both extinct and extant.

Classes   3 hrs. and lab 3 hrs. a week. 1 semester.

403.2   PLANT TAXONOMY

Prerequisite: Bio 204.0 and 205.0.

An introduction to the principles of plant variation, origin, distribution, evolution and classification; major emphasis will be to identify and classify vascular plants of Nova Scotia.

Classes   3 hrs. and lab or field 3 hrs. a week. 1 semester.

405.0   BIOLOGY OF FISHES

Prerequisite: Bio 205.0 and 308.2.

A study of the embryology, anatomy, physiology and classification of fishes. In classification and geographical distribution, emphasis will be placed on the marine northwest Atlantic fishes and the fresh-water fishes of Nova Scotia.

Text: K. F. Lagler, J. E. Bardach and R. R. Miller, *Ichthyology* (Wiley, 1962).

Classes   3 hrs. and lab or fieldwork 3 hrs. a week. 2 semesters.

406.0   MICROBIOLOGY

Prerequisite: any two 300 level biology courses preferably from 302.0, 305.0, 307.1 and one university chemistry course or permission of the instructor.

Morphology, biochemical activity and classification of microorganisms: viruses, bacteria, molds, yeasts, and other microscopic life forms. Special emphasis will be placed on bacterial variations and their resistance.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

407.1   HISTOLOGICAL TECHNIQUES

Prerequisite: Bio 111.0, 204.0, 205.0, Che 101.0.

A study of the microscopic structure of tissues and organs with special emphasis on vertebrate body. Principles and practice of microtechnique including basic histochemistry and autoradiography will be discussed. Laboratory work will consist of performing a wide range of histological and histochemical techniques using mainly animal cells, tissues and organs.

Classes   3 hrs. a week. 1 semester.

408.2   VERTEBRATE EMBRYOLOGY

Prerequisite: Bio 204.0, 205.0 or permission of the Department.

Early developmental processes involved in the transformation of the fertilized egg into a new individual.

Classes   3 hrs. and lab 3 hrs. a week. 1 semester.

411.1   PRINCIPLES OF ANIMAL PARASITOLOGY

Prerequisite: Bio 205.0.

Relation beween parasites and their hosts, emphasizing protozoa and helminths of aquatic vertebrates and of man. Aspects studied are biology, ecology and evolution of parasites, and physiology and immunology of parasitism. Laboratory work is on living and prepared materials, maintenance of life cycles and infectivity of aquatic vertebrates.

Classes   3 hrs. and lab 3 hrs. a week. 1 semester.

BIOLOGY

412.2 HUMAN GENETICS

Prerequisite: Bio 307.1 and 308.2.

The chemical and physical nature of genes. The study of population genetics in plants and animals using a statistical approach. Emphasis will be on human mutations through study of chromosomes and analysis of pedigrees.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

420.0 COMPARATIVE CHORDATE ANATOMY

Prerequisite: Bio 205.0.

A comprehensive study of gross anatomy of the various systems of animal representatives of major classes, beginning with Amphioxus and culminating with mammals.

Text: A. J. Romer, *The Vetebrate Body* (4th edition), W. B. Saunders 1970. Laboratory Manual: S. Wischnitzer, *Atlas and Dissection Guide for Comparative Anatomy*, Freeman, 1967.

Classes 3 hrs. and lab 3 hrs. a week. 2 semesters.

501.0 ADVANCED BACTERIOLOGY

Prerequisite: Bio 406.0.

Morphology, taxonomy and genetics of bacteria with special, emphasis on their ecology and biochemical activities.

Classes 2 hrs. plus tutorials and lab 3 hrs. a week. 2 semesters.

549.0 HONORS SEMINAR

Prerequisite: fifth year honors standing.

Seminars followed by discussions based on recent advances in biology. In consultation with the honors advisors, the honors students will select and prepare the topics for presentation to biology faculty and students. All biology professors will evaluate the seminars.

Classes 3 hrs. a week. 2 semesters.

552.0 CYTOGENETICS

Prerequisite: Bio 302.0.

Study of chromosome biology, experimental studies on the mitotic apparatus, karyotype and its evolution, sex chromosomes, control of meiotic system, regulation of chromosome pairing, cytology in relation to taxonomy and cancer cytology.

Classes 2 hrs. plus tutorial and lab 3 hrs. a week. 2 semesters.

553.0 MARINE INVERTEBRATES

Prerequisite: Bio 205.0.

Study of marine invertebrates with emphasis on commercial species. Taxonomy, morphology and physiology of the different groups will be the main topic covered. The life histories of representative species will be studied in the laboratory periods.

Classes 2 hrs. plus tutorials and lab 3 hrs. a week. 2 semesters.

554.0 EXPERIMENTAL FISH EMBRYOLOGY

Prerequisite: Bio 205.0, 405.0 and 408.2.

Theory on embryology of fish with emphasis on the formation of main organs (brain, eye, otolith, skeleton, heart and musculature). Laboratory work will be based on the development of one or two fishes from both marine and freshwater environments. The histological study of one embryo will complement the macroscopic and microscopic observations. Experiments will be conducted to correlate the environmental conditions (temperature, salinity, light, etc.) to the development of the species selected.

Classes 3 hrs. plus tutorials and lab 4 hrs. a week. 2 semesters.

BIOLOGY

555.0 ADVANCED PHYSIOLOGY

Prerequisite: Bio 302.0, 305.0 and Che 343.0.

A course dealing in some detail with advances in particular areas of animal physiology. Areas covered include metabolism of proteins, carbohydrates, lipids, and nucleic acids, intermediary metabolism, regulation and control of metabolic processes, bioenergetics, molecular physiology of muscles and neurophysiology.

Classes 3 hrs. plus tutorials and lab 3 hrs. a week. 2 semesters.

590.0 RESEARCH THESIS

Prerequisite: honors standing, fifth year.

Research project carried out by the student under the supervision of a member of the Department. The student will submit a thesis and present it orally.

Lab 6 hrs. a week. 2 semesters.

BUSINESS ADMINISTRATION

Professor	H. G. Beazley
Associate Professors	G. A. Badawi, V. Baydar
	M. Chew, R. D. Connell
	D. E. Connelly, D. Hope,
	S. G. Pendse, Z. H. Qureshi
Assistant Professors	F. Bourne, D. J. Brean,
	J. Chamard, D. Chipman,
	B. Emerson, P. Fitzgerald,
	N. Kling, S. O. Larsson,
	F. Miner, H. J. Schroeder,
	H. Schwind
Lecturers	J. Anthony, R. Christie
	J. O'Brien, G. M. Walsh

d) Successfully complete an Honors project or thesis (Bus 591.1 (.2)).

e) Complete ten full courses or equivalent to be presented for honors. Normally, all of these courses will be in the field of business administration. However, if the department chairman deems it appropriate, permission may be granted to a student to substitute up to two full courses or equivalent from a related subject area.

Programs — General Information

The Department of Business Administration offers programs of study leading to the Bachelor of Commerce, Bachelor of Commerce (Honors) and Master of Business Administration (M.B.A.) degrees. A description of both undergraduate programs is contained in the Commerce portion of Section 3. Further information pertaining to the honors program is given below. Regulations and general information pertaining to all graduate programs offered by the University is contained in Section 3 while a description of the M.B.A. program and M.B.A. course offerings follows the listing of undergraduate Business Administration courses.

Honors Program in Business Administration

In addition to the general requirements for a Bachelor of Commerce degree that are shown in section 3, all candidates for graduation with Honors in Business Administration must meet the following requirements:

a) Maintain a 3.0 cumulative grade point average;

b) Complete twenty full courses (or equivalent) beyond Nova Scotia Grade XII or equivalent;

c) Complete the requirements for a Bachelor of Commerce degree with a functional specialization (at least $2^1/2$ courses or equivalent above the 200 level) in one of the following areas: accounting, economics, finance, personnel and industrial relations, management science, and marketing.

Professional Designations in Accounting

A Commerce graduate who has followed the accounting concentration and obtained the required grades is normally in a position to sit for the uniform final examinations of the Institute of Chartered Accountants of Canada two years after receiving the Commerce degree.

Commerce graduates may receive exemption from many of the courses and examinations conducted by the Atlantic Provinces Association of Chartered Accountants. The exemptions are based upon specific courses taken and the grades obtained in the undergraduate program. Details of these exemptions may be obtained from the Department of Business Administration.

Arrangements for exemption from courses and examinations also exist with the Institutes of Chartered Accountants in other provinces.

Exemptions from courses and examinations are also granted by the Society of Industrial Accountants to Commerce graduates who register in the industrial accounting program sponsored by the Society.

Note: courses offered by the Department are grouped under the following subject areas:

Quantitative Methods (00 - 09)
Production (10 - 19)
Computers (20 - 29)
Accounting (40 - 59)
Finance (60 - 69)
Marketing (70 - 79)
Management (80 - 89)
Other (90 - 99)

BUSINESS ADMINISTRATION

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b) Complete twenty full courses (or equivalent) beyond Nova Scotia Grade XII or equivalent;

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Other (90 - 99)

BUSINESS ADMINISTRATION

QUANTITATIVE METHODS (00 - 09)

205.1 (.2) INTRODUCTION TO QUANTITATIVE METHODS FOR COMMERCE I

Prerequisite: Mat 113.0 or Grade XII Mathematics or equivalent.

This course is designed to provide an overview of linear systems with emphasis on applications. It includes the topics of linear programming as well as transportation and assignment problems.

Classes 3 hrs. a week. 1 semester.

Note: This is the same course as Eco 205.1 (.2) and Mat 205.1 (.2).

206.1 (.2) INTRODUCTION TO QUANTITATIVE METHODS FOR COMMERCE II

Prerequisite: Mat 113.0, Grade XII Mathematics or equivalent.

The purpose of this course is to provide an overview of linear optimization, differential and integral calculus with emphasis on applications, as well as an introduction to decisions models under uncertainty.

Classes 3 hrs. a week. 1 semester.

Note: This is the same course as Eco 206.1 (.2) and Mat 206.1 (.2).

207.1 (.2) INTRODUCTORY STATISTICS FOR COMMERCE

Prerequisite: Bus 206.1 (.2) or Eco 206.1 (.2) or Mat 206.1 (.2).

An introduction to probability and statistics with emphasis on business and economic applications.

Classes 3 hrs. a week. 1 semester.

Note: This is the same course as Eco 207.1 (.2) and Mat 119.1 (.2).

301.1 (.2) OPERATIONS RESEARCH

Prerequisite: Bus 205.1 (.2), 206.1 (.2) and 207.1 (.2).

This course is designed for students who require a deeper understanding of the concepts and mathematical model building techniques in management than that provided in Bus 205.1 (.2), 206.1 (.2), and 207.1 (.2). It will extend the material covered in Bus 205, 206, and 207 by examining standard O.R. techniques in some detail with stress on both their values and limitations as management tools.

Classes 3 hrs. a week. 1 semester.

302.1 PRINCIPLES OF MATHEMATICAL PROGRAMMING

Prerequisite: Bus 205.1 (.2), and 206.1 (.2) and 207.1 (.2).

The course extends the student's knowledge of linear programming to include integer and mixed-integer programming, postoptimality and sensitivity analysis, decomposition principle, etc. Further topics in dynamic programming are also covered. Emphasis will be placed on the application of mathematical programming techniques in management.

Classes 3 hrs. a week. 1 semester.

303.1 (.2) STATISTICAL ANALYSIS FOR BUSINESS

Prerequisite: Bus 207.1 (.2) or Eco 207.1 (.2).

A further study of statistics and its application to the solution of business problems; analysis of variance, sampling, correlation, index numbers, time series analysis, seasonal index forecasting and Bayesian statistics will form the foundation of the course.

Classes 3 hrs. a week. 1 semester.

Note: This is the same course as Eco 303.1 (.2).

308.1 (.2) MULTIVARIATE ANALYSIS

Prerequisite: Bus 303.1 (.2) and 321.1 (.2).

This course is designed for those students who wish to extend their knowledge of the techniques used in applied statistics. Topics covered include analysis of variance and multiple regression as well as other more advanced techniques such as factor analysis and discriminant analysis. Emphasis is placed upon use of the computer to facilitate the analysis of data.

Classes 3 hrs. a week. 1 semester.

409.1 (.2) SEMINAR IN OPERATIONS RESEARCH AND STATISTICS

Prerequisite: Bus 301.1 (.2), 303.1 (.2), and 321.1 (.2).

This is a seminar course which will examine specific research and/or application areas within O.R. and Statistics. Its content will vary depending on the interests of the students and professor.

Classes 3 hrs. a week. 1 semester.

BUSINESS ADMINISTRATION

PRODUCTION (10 - 19)

317.1 (.2)   INTRODUCTION TO OPERATIONS MANAGEMENT

Prerequisite: Bus 280.0 or 281.1 (.2), 206.1 (.2) and 207.1 (.2).

An introduction to the production function and process, including coverage of the systems concept and the basic techniques for decision making in the areas of planning and control.

Classes   3 hrs. a week. 1 semester.

318.2   TECHNIQUES OF PRODUCTION MANAGEMENT

Prerequisite: Bus 317.1 (.2) and 321.1 (.2).

A more advanced course in the study of the production function, making extensive use of case analysis. The course covers the production system, planning models and process models.

Classes   3 hrs. a week. 1 semester.

COMPUTERS (20 - 29)

321.1 (.2)   INTRODUCTION TO COMPUTERS

Prerequisite: Mat 113.0 or equivalent.

Introduction to computer concepts; computer programming, using FORTRAN IV; study of computer systems, information systems, and data processing functions, systems analysis and flowcharting.

Classes   3 hrs. a week. 1 semester.

322.1 (.2)   COMPUTER SIMULATION

Prerequisite: Bus 321.1 (.2) or equivalent.

A study of computer based on management techniques; modeling-random number and process generation-tests of statistical significance; queueing systems-systems in series and parallel, networks of waiting lines; inventory policies-simulation of stochastic inventory variables; maintenance and reliability-mean time to breakdown, repair resources and reliability; controls and organizations-decision making as a result of simulation-simulation of the firm. Simulation Languages-General purpose simulation system (GPSS/360), SIM SCRIPT, GASP, DYNAMO.

Classes   3 hrs. a week. 1 semester.

323.1 (.2)   MANAGEMENT INFORMATION SYSTEMS I

Prerequisite: Bus 321.1 (.2).

The study of computer-based data processing and information systems, management problems of computers in business such as organization, control and feasibility.

Classes   3 hrs. a week. 1 semester.

324.2   THE USE OF COBOL IN DATA PROCESSING

Prerequisite: Bus 321.1 (.2).

COBOL program organization, file organization, description and accessing, edit, sort, file maintenance and report writing programs, arrayed data, integration concepts, multi-programming concepts.

Classes   3 hrs. a week. 1 semester.

425.1   MANAGEMENT INFORMATION SYSTEMS II

Prerequisite: Bus 323.1 (.2).

Systems theory, data-based integrated data processing management information systems in the various functional areas of business including accounting, credit, marketing, sales, inventory, production. The control, privacy and audit of information.

Classes   3 hrs. a week. 1 semester.

ACCOUNTING (40 - 59)

240.0   PRINCIPLES OF FINANCIAL AND MANAGERIAL ACCOUNTING

A study of basic accounting concepts, and their application to business transactions and financial statements. An introductory consideration of asset and liability accounts, and the managerial uses of accounting data.

Classes   4 hrs. a week. 2 semesters.

BUSINESS ADMINISTRATION

341.1   INTERMEDIATE FINANCIAL ACCOUNTING PART I

Prerequisite: Bus 240.0.

Part I of a two course series which provides a comprehensive study of financial accounting and financial reporting to shareholders. This course is to be followed by Intermediate Financial Accounting Part II.

Classes   3 hrs. a week. 1 semester.

342.2   INTERMEDIATE FINANCIAL ACCOUNTING PART II

Prerequisite: Bus 341.1.

Part II of a two course series which provides a comprehensive study of financial accounting and financial reporting to shareholders.

Classes   3 hrs. a week. 1 semester.

345.1 (.2)   FINANCIAL ACCOUNTING THEORY

Prerequisite: Bus 240.0.

Perceived objectives of financial accounting. Major accounting theories, evolution of financial accounting theory and practice, survey of contemporary accounting practice with emphasis on latest developments and issues.

Classes   3 hrs. a week. 1 semester.

346.1   INTRODUCTORY COST ACCOUNTING

Prerequisite: Bus 240.0.

This is a basic course in cost accounting principles, techniques and procedures. Product costing, non-manufacturing costs with emphasis on managerial uses of cost accounting techniques.

Classes   3 hrs. a week. 1 semester.

348.2   PLANNING AND CONTROL

Prerequisite: Bus 240.0 and 280.0, or 281.1 (.2).

Covers concepts and techniques of planning and control such as profit planning, financial forecasting, budgets, performance measurements, management control systems, analysis of performance.

Classes   3 hrs. a week. 1 semester.

443.1   ADVANCED FINANCIAL ACCOUNTING I — CORPORATE ACCOUNTING

Prerequisite: Bus 342.2.

An advanced study of mergers and acquisitions, consolidated financial statements, branch accounting for foreign operations, and other selected corporate accounting topics.

Classes   3 hrs. a week. 1 semester.

444.2   ADVANCED FINANCIAL ACCOUNTING II — SPECIAL TOPICS

Prerequisite: Bus 342.2.

An advanced study of special topics including partnerships, fiduciary accounting, fund accounting, price level changes and receivership and liquidations.

Classes   3 hrs. a week. 1 semester.

449.1 (.2)   MANAGEMENT CONTROL SYSTEMS

Prerequisite: Bus 348.1 (.2).

An advanced study of the management control system which examines problems of effective and efficient control from the perspective of the total system: expense centers, profit centers, investment centers, programing planning, budgeting, performance appraisal.

Classes   3 hrs. a week. 1 semester.

450.1 (.2)   AUDITING

Prerequisite: Bus 342.2.

A study of the basic concepts and theory of auditing including the auditing environment; the auditor's role; the structure of the profession; responsibilities of auditors; nature and theory of evidence; the auditor's report and other related material.

Classes   3 hrs. a week. 1 semester.

451.1 (.2)   ADVANCED AUDITING I

Prerequisite: Bus 450.1 (.2).

The first term of the last formal course in the auditing field. This covers material complementary to audit procedures — audit concepts, evidence, standards, ethics, legal liability, audit committees, legislation and audit reports.

Classes   3 hrs. a week. 1 semester.

BUSINESS ADMINISTRATION

452.1 (.2)   ADVANCED AUDITING II

Prerequisite: Bus 451.1 (.2)

This is the second term of the last formal course in the auditing field. It deals with statistical sampling, flow charting, and analytical auditing, operational auditing, and the audit of electronic data processing installations.

Classes   3 hrs. a week. 1 semester.

453.1   TAXATION

Prerequisite: Bus 342.2 or 361.2.

An introductory study of the theory and procedures of taxation at all levels of government.

Classes   3 hrs. a week. 1 semester.

454.1 (.2)   ADVANCED TAXATION

Prerequisites: Bus 453.1 (.2).

A further study of taxation with special emphasis on corporate distributions and tax planning.

Classes   3 hrs. a week. 1 semester.

455.2   ACCOUNTING SEMINAR

Prerequisite: Bus 342.2.

An intensive study of the problems of income determination, asset valuation and liability and equity measurement, a study of the accounting theory that is proposed as a framework for the resolution of these problems; investigation of the relationship of financial accounting to such areas as finance, motivation system of the firm, operations research, management information system.

Classes   3 hrs. a week. 1 semester.

FINANCE (60-69)

260.1 (.2)   PERSONAL FINANCE

A survey course designed to enable the student to better understand the considerations involved in the management of personal income savings, investments, mortgage analysis and tax planning.

Classes   3 hrs. a week. 1 semester.

360.1 (.2)   FINANCIAL INSTITUTIONS

Prerequisite: Bus 206.1 (.2), 207.1 (.2), 240.0.

A basic course in business finance introducing the student to the Canadian financial environment, instruments of finance, external financing, and related topics.

Classes   3 hrs. a week. 1 semester.
Note: This is the equivalent of Eco 320.1 (.2).

361.1 (.2)   BUSINESS FINANCE

Prerequisite: Bus 240.0, 206.1 (.2), 207.1 (.2)
                 and 360.1 (.2) or equivalent.

A basic course in business finance introducing the student to capital budgeting, cost of capital, sources of capital, dividend policy, lease financing, management of assets, financial analysis.

Classes   3 hrs. a week. 1 semester.

362.1 (.2)   PRINCIPLES OF REAL ESTATE

Prerequisite: Bus 360.1 (.2) and 361.1 (.2).

A survey of the basic aspects of real estate analysis. This course covers the economic characteristics and techniques used in the real estate business including the marketing, financing, valuation, and trends within the field.

Classes   3 hrs. a week. 1 semester.

363.1 (.2)   PRINCIPLES OF INSURANCE

An introduction into the study of the nature and application of life insurance, individual and group benefits, health and accident plans; and private and public retirement programs.

Classes   3 hrs. a week. 1 semester.

463.1   FINANCIAL MANAGEMENT

Prerequisite: Bus 361.1 (.2).

Managerial in emphasis, the course covers problems of capital structure and valuation of a firm, the cost of capital in relation to financing problems, dividend policies and their relation to retained earnings, mergers and reorganizations.

Classes   3 hrs. a week. 1 semester.

BUSINESS ADMINISTRATION

464.2 CORPORATION FINANCE

Prerequisite: Bus 463.1.

A study of current literature in corporation finance emphasizing empirical findings and application of theory in practice with the help of case studies.

Classes 3 hrs. a week. 1 semester.

466.1 INVESTMENTS

Prerequisite: Bus 361.1 (.2).

The analysis of investment values, study of stock and bond markets, evaluation of investment techniques, investment analysis by industries, management of personal finance and portfolio.

Classes 3 hrs. a week. 1 semester.

467.2 PORTFOLIO MANAGEMENT

Prerequisite: Bus 466.1.

A comprehensive analysis of the decision-making process of port-folio management. Major subject areas include the definition of objectives to accord with the preferences, plans, and obligations of major classes of investors, analysis of the likely risks and gains of investments, individually and by class of security, the selection of portfolios which appear most likely to satisfy stated investment objectives.

Classes 3 hrs. a week. 1 semester.

MARKETING (70 - 79)

370.1 (.2) INTRODUCTION TO MARKETING

Prerequisite: Bus 280.0, 281.1 (.2), Eco 201.1 and 202.2.

A study of principles and fundamental concepts of marketing and marketing management: pricing, promotion, merchandising, distribution structure and marketing research.

Classes 3 hrs. a week. 1 semester.

371.2 MARKETING MANAGEMENT

Prerequisite: Bus 370.1 (.2).

Managerial in focus, this course is devoted to analyzing opportunities, studying marketing activity and its organization, planning the marketing program and controlling the marketing effort.

Classes 3 hrs. a week. 1 semester.

372.2 MARKETING COMMUNICATION AND ADVERTISING

Prerequisite: Bus 370.1 (.2).

An introduction to the study of advertising principles and practices, including advertising strategies, media presentation and evaluation of effectiveness.

Classes 3 hrs. a week. 1 semester.

373.1 MANAGEMENT OF MARKETING CHANNELS

Prerequisite: Bus 370.1 (.2).

A study of the marketing distribution system, retailing and wholesaling, merchandising, and relevant legislation.

Classes 3 hrs. a week. 1 semester.

374.2 SALES MANAGEMENT

Prerequisite: Bus 370.1(.2).

A study of the managerial problems involved in sales management, including the recruitment, training, compensation and motivation of sales personnel and the control and integration of the individual selling effort.

Classes 3 hrs. a week. 1 semester.

375.1 INTERNATIONAL MARKETING

Prerequisite: Bus 370.1 (.2).

An introduction to the nature and environment of international marketing including the study of the international consumer, product policy, distribution, promotion, research and management.

Classes 3 hrs. a week. 1 semester.

376.1 (.2) CONSUMER BEHAVIOR

Prerequisite: Bus 370.1 (.2).

A study of the nature of consumer behavior, the foundation of consumer research, consumer market segments, consumer attitudes.

Classes 3 hrs. a week. 1 semester.

BUSINESS ADMINISTRATION

377.1 (.2)   INDUSTRIAL MARKETING

Prerequisite: Bus 370.1 (.2).

A study of the marketing functions of industrial producers whose products are employed in the manufacture of other products or become part of other goods and services, behavior of industrial, governmental and institutional buyers.

Classes   3 hrs. a week. 1 semester.

378.1   MARKETING RESEARCH

Prerequisite: Bus 207.1 (.2) and 370.1 (.2).

An introductory course in the nature, methods, procedures and application of marketing research.

Classes   3 hrs. a week. 1 semester.

MANAGEMENT (80 - 89)

281.1 (.2)   PRINCIPLES OF MANAGEMENT

A study of fundamental concepts of management, decision making, management planning, organizing, motivating and controlling. A prime objective of this course is to introduce the systems concept as a foundation for further study in the program.

Classes   3 hrs. a week. 1 semester.

381.1 (.2)   PRINCIPLES OF ORGANIZATIONAL BEHAVIOR

Prerequisite: Bus 280.0 or 281.1 (.2).

Business administration and accounting majors may not take this course. A one term introductory study of human behavior in formal organizations, with emphasis on patterns and theories of behavior in industry. The course exposes the student to concepts of behavioral science through readings, classroom sessions, and application of course concepts to the analysis of cases.

Classes   3 hrs. a week. 1 semester.

382.0   ORGANIZATIONAL BEHAVIOR

Prerequisite: Bus 280.0 or 281.1 (.2).

An introductory study of human behavior in formal organizations, with emphasis on patterns and theories of behavior in industry. The course exposes the student to concepts of behavioral science through readings, classroom sessions, and application of course concepts to the analysis of cases.

Classes   3 hrs. a week. 2 semesters.

385.1 (.2)   PERSONNEL MANAGEMENT

Prerequisite: Bus 280.0 or 281.1 (.2).

A study of the conceptual and practical aspects of the personnel function in organizations, with a special emphasis on business organizations. The course focuses on the major issues, procedures and problems involved in manpower planning, recruitment and selection, compensation, training and development, and maintenance of human resources.

Classes   3 hrs. a week. 1 semester.

386.1 (.2)   INDUSTRIAL RELATIONS

Prerequisite: Bus 280.0 or 281.1 (.2).

An introduction to the field of industrial relations, a study of union structure and operation, collective bargaining and allied material.

Classes   3 hrs. a week. 1 semester.

388.1 (.2)   BUSINESS AND ITS ENVIRONMENT

Prerequisite: Bus 280.0, 281.1 (.2), Eco 201.1 and 202.2.

Business and its economic and political environment, the social responsibilities of business.

Classes   3 hrs. a week. 1 semester.

481.1 (.2)   ORGANIZATION THEORY: STRUCTURE, PROCESS, ANALYSIS AND DESIGN

Prerequisite: Bus 382.0.

In a systems context, the first phase of the course will expose the student to different concepts of formal organization. The second phase will involve the application of concepts using various design approaches and configurations.

Classes   3 hrs. a week. 1 semester.

BUSINESS ADMINISTRATION

483.1 (.2)   INTERPERSONAL BEHAVIOR I

Prerequisite: Bus 382.0.

This course studies and attempts to improve the kinds of interpersonal competence that can contribute to the effectiveness of an administrator. By focusing on the causes of misunderstandings between persons and tracing the causes of such misunderstandings, the course attempts to improve an individual's interpersonal skills as a member of an organization.

Classes   3 hrs. a week. 1 semester.

484.2   INTERPERSONAL BEHAVIOR II

Prerequisite: Bus 483.1 (.2).

The course is designed to give further understanding of interpersonal behavior in an organizational context. It will give students the opportunity to practice interpersonal skills and gain further theoretical insights.

Classes   3 hrs. a week. 1 semester.

487.1 (.2)   SMALL BUSINESS MANAGEMENT

Prerequisite: Bus 361.2 and 370.1 (.2).

The objective of the course is to stimulate informed interest in creating and managing a small business; the course includes the investigation of new business opportunities, capital requirements and sources, information systems, marketing and tax considerations.

Classes   3 hrs. a week. 1 semester.

488.1 (.2)   INTERNATIONAL BUSINESS MANAGEMENT

Prerequisite: Bus 280.0 and 381.1 (.2) or 382.0.

An introduction to the nature of environment of international business management including the study of multinational corporations, intercultural differences and their effects on management style and policy and execution.

Classes   3 hrs. a week. 1 semester.

489.1 (.2)   BUSINESS POLICY

Prerequisite: Bus 361.2, 370.1 (.2) and one additional full credit in Business Administration at the 300 level or above.

The perspective of top management, sizing up situations, formulating policies, discovering opportunities and planning programs of action, organizing administrative personnel and putting plans into action, control, follow up and appraisal, day to day administrative problems, the business leader and public responsibility.

Classes   3 hrs. a week. 1 semester.

492.1 (.2)   DIRECTED STUDY

Prerequisite: permission of department chairman and instructor.

Intended to supplement or provide an alternative to the regular business administration courses in order to meet the special needs and interests of students, the course provides an opportunity to study a particular subject in detail and requires from the student some measure of independence and initiative.

Tutorial and independent study.

OTHER (90 - 99)

591.1 (.2)   HONORS BUSINESS RESEARCH

The student will undertake an original investigation of a business problem and submit a report on his findings and recommendations.

Classes and independent study. 1 semester.

BUSINESS ADMINISTRATION

COMMERCIAL LAW

301.1 (.2)   LEGAL ASPECTS OF BUSINESS —
                  PART I

An introduction to the essential legal aspects of commerce: contracts, some special contracts, corporations, and special areas, such as anti-combines, tax and tariff legislation.

Classes   3 hrs. a week. 1 semester.

302.2   LEGAL ASPECTS OF BUSINESS —
                  PART II

Prerequisite: Cml 301.1 (.2).

A further examination of some of the legal aspects of commerce; areas included are impeachment of contract, the requirement of writing, discharge of contracts, assignment of contracts, bailment, insurance, guarantee, and landlord and tenancy.

Classes   3 hrs. a week. 1 semester.

BUSINESS ADMINISTRATION

PROGRAM FOR DEGREE OF MASTER IN BUSINESS ADMINISTRATION

PROGRAM OBJECTIVES

The primary objective of the Master of Business Administration Program is to provide an intellectual and social environment in which the student can discover how to develop potential for effective management. Both business and government are increasingly demanding that professional administrators possess *specialist* competence as a prerequisite for middle management employment, plus *generalist* competence from those who aspire to more senior management positions. The program at Saint Mary's University is designed to satisfy both these demands.

Since many young M.B.A. students* can realistically expect to hold middle line or staff management positions before moving on to more senior levels later in their careers, the program is designed to:

a. satisfy long-term educational needs by providing *generalist* concepts in anticipation of potential to succeed to more general and senior management positions later;

b. satisfy short-term educational needs by providing *specialist* concepts and techniques applicable to a particular line or staff area. This part of the program provides a functional identity which the student can exploit during the early years of a career to acquire middle management experience.

*The arrangements for a General Management Program, which may be of interest to students with substantial work experience, are outlined on the following page.

PROGRAM STRUCTURE

YEAR I COURSES

Both *generalist* and *specialist* management education, as with medicine, ideally requires a blend of knowledge in the basic disciplines, (the social and behavioral sciences and mathematics), and their applications to the functional areas of management. Therefore the first year of the program necessarily consists of foundation courses in both the basic disciplines and each of the functional areas of management. It also shows the student how the concepts and techniques developed by the basic disciplines are used to enhance managerial effectiveness, and enables an informed choice to be made of an area of specialization in the second year of studies.

Basic Disciplines
- Economics of the Enterprise
- Economics of the Enterprise Environment
- Management Science
- Operations Research Techniques
- Systems, Computers and Management
- Organizational Behavior

Functional Areas
- Accounting — a. Financial
  b. Managerial
- Managerial Finance
- Marketing Management
- Operations Management

YEAR II COURSES

The second year of the program consists of:

a. a two-semester course in Management Policy and Strategy Formulation designed to integrate the material covered elsewhere in the program and to further the student's longer term *generalist* needs;

b. a number of *Structured Modules* in particular functional areas of management to further the *specialist* needs of students. They are designed to reflect the faculty's perception of management educational needs within each area over the next decade.

Students will select one of the following Modules based upon previous academic qualifications, employment experience, and in anticipation of immediate career aspirations:

- Management of Technology/Operations Management
- Financial Management Planning and Control
- Marketing Management
- Management of Human Resources

In addition, students are required to undertake a Management Research Project involving the practical application of concepts and techniques in the selected area.

BUSINESS ADMINISTRATION

The objectives of the *Structured Modules* and their individual courses are discussed in more detail later in this section.

Students are also required to complete the equivalent of two full credits* (which could be a second Module) from the remainder of the second year program.

*Students who select the Marketing Management Module are required to complete only 1½ credits from the remainder of the second year program.

GENERAL MANAGEMENT PROGRAM

It is recognized that some students, particularly some of those enrolled in the program on a part-time basis, may already have substantial management experience and be aspiring towards general management positions soon after graduation. Such students could be offered the opportunity of following a General Management Program specifically suited to their needs. In their second year of studies, they would be required to complete the Management Research Project and Policy and Strategy Formulation course plus the equivalent of four full courses from the remainder of the second year program.

TEACHING METHODOLOGY

The program is neither discipline nor case oriented, but courses embrace combinations of lectures, case discussions, seminars, and assignments according to the requirements of the individual subjects. Since the faculty has extensive business as well as academic experience, attention is focused on both the practical and the academic aspects of the materials covered during the program.

The faculty believes that management education is essentially a process of personal development which must be student-centered. Therefore, to facilitate individual academic and management development throughout the program, a personal advisor is assigned to assist each student to discover and develop his or her management potential.

ADMISSION REQUIREMENTS

Admission to the program is open to students with a bachelor's degree from a recognized university, whose scholarly records indicate that they are capable of studying management and administration at the graduate level, and who obtain a satisfactory score in the GMAT.

An official transcript of such records is required by the Director of Admissions who processes all applications.

APPLICATION INFORMATION

Applications for admission to the M.B.A. program should be made as early as possible, preferably by May 30th, for entry the following September.

APPLICATION PROCEDURE

a. Complete an application form (including the names of referees) and return to:
   Director of Admissions
   Saint Mary's University
   Halifax, Nova Scotia B3H 3C3

b. Arrange for official transcripts and supporting documents to be sent directly to the University from graduate and undergraduate institutions attended.

c. Arrange for GMAT results to be sent directly to the University. (To obtain further details of this test, write to The Educational Testing Service, Princeton, New Jersey 08540. Note — the code number for the Faculty of Commerce, Saint Mary's University, is R0958).

d. An overseas student whose native language is not English is additionally required to complete a test in English. These tests are administered by the University of Michigan, the College Entrance Board and the University of Cambridge, England.

e. Remit a non-returnable application fee of $5.00.

NOTE: The best M.B.A. programs include substantial mathematical and statistical material. Many students, particularly those with a liberal arts background, fear that they will be unable to comprehend such material, and that consequently their academic performances may fail to reflect their true potential. The faculty is empathetic to the learning difficulties faced by such students. Students who feel that their mathematical background needs to be 'up-dated' to cope with the quantitative courses, are offered the opportunity to complete a special course in mathematics immediately prior to admission.

FINANCIAL AID

In addition to Canada Student and other loans, some financial aid is available through university scholarships and assistantships.

BUSINESS ADMINISTRATION

PART-TIME BASIS

The program is available on a part-time basis for students who wish to complete it in part, or whole, while remaining in full-time employment. At least two courses from each year of the program will be offered in sequence in evening classes each semester. Subject to satisfactory enrolment, at least one course from each year of the program will be offered during the summer sessions. Consequently, a student may complete the whole program on a part-time basis within four years.

TEACHING FACILITIES

The Faculty is located in a new academic building in the center of the University campus, close to the Main Library, Student Center and university residences. A Management Science Laboratory provides access to electric calculating machines, 'off-line' card punches, etc. and computing facilities include access to I.B.M. 1130 and CDC 6400 computers.

COURSES OFFERED — YEAR I

BASIC DISCIPLINES

MBA 500.1 (.2) ECONOMICS OF THE ENTERPRISE

An examination of the economic behavior of the consumer and the firm, including market demand and structure and the pricing and employment of factor inputs.

MBA 501.1 (.2) ECONOMICS OF ENTERPRISE ENVIRONMENT

This course will be a continuation of the economic behavior of the consumer and the firm, including market demand and structure and the pricing and employment of factor inputs. The course also studies the determinants of and changes in the level of national income, monetary and fiscal theory, and international trade and finance theory and policy.

MBA 506.1 BASIC MANAGEMENT SCIENCE I

This course acquaints the student with the concepts relevant to the use of the systems approach and mathematical models in management. It deals with the application of operations research techniques and statistical analysis to decision making in business.

MBA 507.2 BASIC MANAGEMENT SCIENCE II

This course will be a further study of the concepts relevant to the use of the systems approach and mathematical models in management. It deals with the application of operations research techniques and statistical analysis to decision making in business.

MBA 521.1 (.2) SYSTEMS, COMPUTERS AND MANAGEMENT

This course acquaints the student with concepts relevant to the use of computers in management. It studies programming and systems with emphasis on the use of the computer as a decision-making tool.

MBA 581.1 ORGANIZATIONAL BEHAVIOR I

This course will present an investigation of behavioral science theories and concepts that apply to organizations. This course helps the student to diagnose, understand and predict the behavior of people as individuals, in interpersonal relationships, in groups and in complex organizations.

MBA 582.2 ORGANIZATIONAL BEHAVIOR II

This course will be a continuation of the investigation of behavioral science theories and concepts that apply to organizations. This course helps the student to diagnose, understand and predict the behavior of people as individuals, in interpersonal relationships, in groups and in complex organizations.

BUSINESS ADMINISTRATION

FUNCTIONAL AREAS

MBA 516.1 (.2) OPERATIONS MANAGEMENT

A foundation in the concepts and techniques of operations/production management, dealing with methods used for the planning, organizing and scheduling of operations in both industry and other institutional settings.

MBA 540.1 (.2) FINANCIAL ACCOUNTING

This course provides an introduction to financial accounting and presumes no prior knowledge of the subject. Using a conceptual approach, the student is given a thorough understanding of financial accounting concepts, principles and practices. Emphasis is placed on providing the student with a fundamental knowledge of how to interpret and analyze financial reports and also with an appreciation of the limitations inherent in published financial data.

MBA 548.1 (.2) MANAGERIAL ACCOUNTING

The primary objective of this course is to provide the student with a knowledge of the various types of accounting data which are available for use by managers in decision-making. The student examines selected cost concepts and the appropriateness of their use in diverse areas of decision-making. Financial forecasting, budgeting, profit-planning and performance measurement make up the major portion of the course content.

MBA 561.1 (.2) BUSINESS FINANCE

An introduction to financial management and the role of finance, both within the organization and the economy as a whole with emphasis on financial decision-making. The topics considered include investment decisions and subsequent financing, the costs of capital, the management of assets, and dividend policy.

MBA 571.1 (.2) MARKETING MANAGEMENT: AN OVERVIEW

A course providing managerial introduction to the fundamentals of marketing with primary focus on the planning, organizing, and controlling of product, price, distribution, promotion, and public policy strategies, in both domestic and international markets.

COURSES OFFERED — YEAR II
REQUIRED COURSES

MBA 687.1 MANAGEMENT POLICY AND STRATEGY FORMULATION I

This course focuses attention on the role of the senior management function to develop and implement strategy in the context of the resources. It draws upon case material based on companies of differing sizes, technologies and degrees of diversification. By providing an insight into the problems and responsibilities faced by general management at the senior level, it seeks to provide an overall perspective for the remainder of the program.

MBA 688.1 (.2) MANAGEMENT POLICY AND STRATEGY FORMULATION II

This course will be a continuation of the study of the role of senior management function to develop and implement strategy in the context of the resources. It draws upon case material based on companies of differing sizes, technologies and degrees of diversification. By providing an insight into the problems and responsibilities faced by general management at the senior level, it seeks to provide an overall perspective for the remainder of the program.

MBA 691.1 (.2) MANAGEMENT RESEARCH PROJECT

Each student is required to complete a project, normally on an 'in-company' basis, involving the practical application of the concepts and techniques learned in a specialist area, under the direct supervision of a faculty member in that area.

STRUCTURED MODULES

MANAGEMENT OF TECHNOLOGY/ OPERATIONS MANAGEMENT MODULE

This group of courses is designed for students with a relatively strong mathematical background at undergraduate level, (particularly those with bachelor degrees in the mathematical sciences or engineering), and is based on the following considerations:

a. many students with the above backgrounds are seeking management careers in technology-based organizations in which they can exploit both their bachelor and M.B.A. degree backgrounds;

BUSINESS ADMINISTRATION

b. the increasing employment demands for graduates in functions demanding a flexible capacity to solve organizational and managerial problems in a technological environment.

The overall objective is to provide an education for students contemplating careers initially as managers of operations, in the manufacturing and service industries and public administration. Such managers must be able to make decisions based on informed evaluations of technological, financial and behavioral aspects of problem situations; and to communicate and implement these decisions expeditiously. Therefore, the courses are designed to analyze the nature of the managerial task in such situations and the implications of changing technology on industry, the public service and contemporary society.

MBA 603.1 (.2) ADVANCED MANAGEMENT SCIENCE I

This course builds on the material covered in the first year, to extend the student's grasp of mathematical model building techniques as they apply to the analysis and design of administrative systems. It particularly emphasizes the practical application of these techniques to management problem situations by substantial use of case material already developed specifically for this purpose.

MBA 604.1 (.2) ADVANCED MANAGEMENT SCIENCE II

This course will be a further study of the mathematical model building techniques as they apply to the analysis and design of administrative systems. It particularly emphasizes the practical application of these techniques to management problem situations by substantial use of case material already developed specifically for this purpose.

MBA 616.1 (.2) MANAGEMENT OF PRODUCTION SYSTEMS

A thorough understanding of the nature of operations/production systems and their related managerial problems is provided in this course. An interdisciplinary approach is adopted throughout to identify, examine and apply relevant theory and techniques from both the behavioral and management sciences that have been taught elsewhere in the program.

MBA 630.1 (.2) MANAGEMENT OF SCIENCE AND TECHNOLOGY

An examination of the problems of 'managing technology' at both the company level and in its effect on the socio-political, economic, physical and ecological environments. It draws on the expanding body of literature in this area.

FINANCIAL MANAGEMENT MODULE

The Financial Management Module has been designed for those students who wish to pursue a management career in the area of financial administration. It focuses on the financial decisions facing a business practitioner and on analytical methods and techniques available as aids to such decisions.

The student is introduced to the principles and practices of finance through the development theory and its subsequent application to simulated business situations. Following a survey of the features and mechanics of the macro-financial systems, the student is introduced to the factors determining financial yields and the problems which managers encounter in developing fiscal policies within their organizations.

The Module develops thorough analytic treatment of principles and techniques in the following areas:

a. the management of corporate funds, including cash and capital budgeting, the selection of alternative financing sources, and the financial adaptation of the firm to its economic environment;

b. the role of capital markets, and in particular the implications of changes in the markets for raising long and short-term funds;

c. the methods underlying investment and security analysis and investment policies of individuals and financial institutions;

d. the measurement and communication of the results of economic transactions entered into by the business entity;

e. the design of systems and the establishment of practices which will enhance the organization's opportunity to achieve desired objectives.

BUSINESS ADMINISTRATION

MBA 641.1 (.2) FINANCIAL REPORTING: PROBLEMS AND ISSUES

This course focuses on the problems inherent in the process of communicating financial information to various interested groups outside the business organization. Commencing with an examination of the basic objectives of financial statements and the information requirements of various financial statement users, the course provides an opportunity to evaluate generally accepted accounting principles currently in use. Alternative asset valuation and income measurement models are considered as well as current financial reporting issues.

MBA 648.1 (.2) MANAGEMENT CONTROL SYSTEMS

Designed to provide the student with an understanding of the nature of management control systems, this course places particular emphasis on organizational structure and the control process. Various applications of the 'responsibility center' concept are examined as well as planning, budgeting and performance appraisal. The emphasis is on the design of systems suitable to the organization and its objectives and includes consideration of both profit oriented and non-profit organizations.

MBA 663.1 (.2) MANAGERIAL FINANCE

The object of this course is to expose the student to in-depth analysis of areas related to financial management. The course builds upon the introductory business finance course taken in the first year and considers such areas as investment value, cost of capital, capital budgeting, mergers and acquisitions, and long-term financial planning. In addition, the student is acquainted with the organization and regulation of money and capital markets in the Canadian economy.

MBA 664.1 (.2) FINANCIAL ANALYSIS

This course will be a continuation of the in-depth analysis of areas related to financial management. The course builds upon the introductory business finance course taken in the first year and considers such areas as investment value, cost of capital, capital budgeting, mergers and acquisitions and long-term financial planning. In addition, the student is acquainted with the organization and regulation of money and capital markets in the Canadian economy.

MARKETING MANAGEMENT MODULE

This group of integrated courses is designed to prepare an individual to meet the complex challenges of a marketing management career. The basic objective is to provide students with a foundation upon which can be developed the capability of confronting the dynamic controllable and uncontrollable variables of the marketing function. To accomplish this, a course frame-work based on the following criteria is formulated:

a. A Decision-Making Orientation — a recognition that the major function of a marketing executive is to make decisions. Thus, emphasis is placed on the different types of decisions involved in the specification of objectives and the allocation of resources, for the pursuit of market place opportunity.

b. An Analytical Approach — an emphasis on analyzing the interrelationships of marketing decision variables, rather than describing solutions to past marketing problems.

c. An Interdisciplinary Perspective — a problem solving application of relevant behavioral science, economic and quantitative concepts and theories.

MBA 672.1 (.2) MARKETING COMMUNICATIONS: PLANNING AND STRATEGY

A study of communications theory as it applies to the role of interpersonal and mass communication media in marketing. Emphasis is placed on the formulation, coordination and evaluation of the effectiveness of advertising, personal selling, sales promotional, and public relations strategies.

MBA 673.1 (.2) MARKETING DISTRIBUTION: PLANNING AND STRATEGY

A systematic analysis of the decision-making factors underlying the development of effective distribution policies and strategies. The course focuses on the institutions and functions of the marketing channel with emphasis placed on distribution regulation, direct selling, retail, wholesale and physical distribution functions.

BUSINESS ADMINISTRATION

MBA 676.1 (.2) CONSUMER BEHAVIOR: DECISION-MAKING APPLICATIONS

An examination of the buying behavior of individuals as it is affected by psychological and sociological influences. Emphasis is placed on the understanding of how such behavioral science concepts as social class, reference group, perception, attitude, motivation, personality and learning can contribute to the improvement of marketing decision-making.

MBA 678.1 (.2) MARKETING RESEARCH

A study of the decision-making application of marketing research techniques and procedures. Emphasis is placed on research design, sampling, data collection, analysis and presentation.

MBA 679.1 (.2) MARKETING POLICY

A comprehensive, integrated study of marketing management. Primary focus is placed on the analysis and solution of complex marketing problem situations. The course also includes several seminar discussions on contemporary issues such as multinational marketing, consumerism, and marketing regulation.

MANAGEMENT OF HUMAN RESOURCES MODULE

The overall objective of this group of courses is to provide an education for students who are contemplating careers intitially concerned with the human aspects of organizations. The first year courses will have provided students with the general tools necessary to understand organizational behavior. The second year courses are designed to give the student the expertise to perform effectively in the personnel/labor relations management functions and to promote organizational responsiveness and adaptability to its changing internal and external environment.

MBA 683.1 (.2) MANAGEMENT OF INTERPERSONAL RELATIONS

This course aims at improving the individual's ability to interact productively with others in two-person and small group relationships. It seeks to develop an individual's awareness of how his behavior affects and is affected by that of others.

MBA 684.1 (.2) MANAGEMENT OF ORGANIZATIONAL DESIGN AND DEVELOPMENT

A study of the evolution of organizational design and the use of current techniques in organizational development. Emphasis is placed upon understanding how the evolution of organizational structures has affected our present ones and how current research can be utilized to improve and develop them in the future.

MBA 685.1 (.2) PERSONNEL ADMINISTRATION

An investigation of the role of the personnel manager and the changes in the nature of responsibilities brought about by changes in the legal and technological environments of organizations. The course deals mainly with manpower planning, selection and compensation and the development of the human resources of the organization.

MBA 686.1 (.2) LABOR-MANAGEMENT RELATIONS

An examination of the role of the labor-management functions in the organization and the changing interplay between management, union and public policy, focusing on some of the main legal, behavioral and institutional issues in collective bargaining.

MBA 692.1 (.2) DIRECTED STUDY

Prerequisite: permission of department chairman and instructor.

Intended to supplement or provide an alternative to the regular business administration courses in order to meet the special needs and interests of students, the course provides an opportunity to study a particular subject in detail and requires from the student some measure of independence and initiative.

CHEMISTRY

Chairman, Associate Professor   D. H. Davies
Professors   J. W. Murphy, S.J., A. T. Sabean
Associate Professors   J. Ginsburg, K. Vaughan,
           J. C. O'C. Young
Assistant Professors   C. M. Elson, D. Phelps

The program of the Department of Chemistry is designed to satisfy two functions:

a) Fulfill requirements for the general degree of Bachelor of Science, the degree of Bachelor of Science with major, and the degree of Bachelor of Science with honors.

These degrees will permit graduates to enter the work force or graduate school with a background at least equal to that provided by other universities in Canada and the United States.

b) Introduce students in other disciplines to the idea of chemistry and provide them with the chemical skills necessary for their professional development.

All members of staff are engaged in active research projects, and senior undergraduates are expected and encouraged to contribute to these projects. Some jobs, both during the term and in the summer, are available for senior undergraduates.

The core program for a major in chemistry consists of Che 101.0, 201.0, 241.0, 311.0, 321.0, 331.0, and one of 342.0, 411.0, or 441.0. Students may take two additional chemistry courses of their choice.

The core program for an honors degree in chemistry consists of Che 101.0, 201.0, 241.0, 311.0, 321.0, 331.0, 411.0, 441.0, 500.0 and one of 511.0, 513.0, 521.0, 531.0, 541.0 or 542.0. Students are required to take one to three additional chemistry courses of their choice.

Combined honors programs can be arranged and one suggested program is outlined in the Biology section of this Calendar.

NOTE: Students failing to complete a laboratory course prior to the date of examination will not be eligible to write the examination.

101.0 INTRODUCTION TO CHEMISTRY

The fundamental laws and principles of chemistry are explored and applied in the study of selected nonmetals, metals and their compounds.

Classes 3 hrs. and lab 3 hrs. a week. 2 semesters.

201.0 GENERAL CHEMISTRY FOR PHYSICAL SCIENCES

Prerequisite: Che 101.0, Mat 200.0 to be taken concurrently.

An introduction to the chemistry of gases, liquids, solid and solutions.

Classes 3 hrs. and lab 3 hrs. a week. 2 semesters.

202.0 GENERAL CHEMISTRY FOR LIFE SCIENCES.

Prerequisite: Che 101.0, Mat 200.0 to be taken concurrently.

A practical introduction for students in life sciences to the chemical behavior of gases, liquids, solids and solutions.

Classes 3 hrs. and lab 3 hrs. a week. 2 semesters.

203.0 GENERAL CHEMISTRY FOR ENGINEERS

Prerequisite: Che 101.0, Mat 200.0 to be taken concurrently.

A practical introduction for engineering students to the chemical behavior of gases, liquids, solids and solutions.

Classes 3 hrs. and lab 3 hrs. a week. 2 semesters.

241.0 INTRODUCTION TO ORGANIC CHEMISTRY

Prerequisite: Che 201.0 (may be taken concurrently).

An introduction to the major classes of organic compounds, their simple reactions and methods of preparation, physical properties and the nomenclature of organic chemistry.

Classes 3 hrs. and lab 3 hrs. a week. 2 semesters.

CHEMISTRY

311.0   INTRODUCTORY PHYSICAL CHEMISTRY

Prerequisite: Che 201.0, Mat 311.0 (may be taken concurrently).

Fundamental thermodynamics, electrochemistry, kinetic theory of matter, surface chemistry and catalysis.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

321.0   INORGANIC CHEMISTRY

Prerequisites: Che 201.0.

Fundamental inorganic chemistry including: atomic and molecular structure, aqueous and non-aqueous chemistry, chemistry of main group and transition elements, organometallic compounds, inorganic chemistry in biological systems.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

331.0   ANALYTICAL CHEMISTRY FOR
(Geo 355.0)   CHEMISTS AND GEOLOGISTS

Prerequisite: Che 210.0.

An integrated lecture-laboratory course with emphasis on basic analytical methods, e.g., titrimetry, gravimetric analysis, colorimetry. The practical application of analytical methods will be stressed by analyzing geological samples, metals and alloys, and samples from the environment.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

342.0   BIOCHEMISTRY

Prerequisite: Che 201.0 and 241.0.

An introduction to the organic chemistry of compounds of biological importance: vinyl and condensation polymers, polysaccharides, lignins, amino acids, proteins, nucleic acids, enzymes and co-enzymes, heterocyclic compounds, sugars, alkaloids, steriods, and terpenes.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

343.0   ELEMENTARY ORGANIC CHEMISTRY

Prerequisite: Che 202.0.

A comprehensive treatment of organic chemistry for non-chemistry majors. The principal functional classes, reaction mechanisms, stereochemistry and physical methods are discussed in the lectures and illustrated in the laboratory.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

371.0   INTRODUCTION TO
ENVIRONMENTAL CHEMISTRY

Prerequisite: Che 101.0.

Chemical and energy cycles in nature, the energetics of environmental change, the significance and measurement of environmental quality parameters, selected pollution topics and research studies.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

372.0   MARINE CHEMISTRY

Prerequisite: Che 201.0 and Mat 200.0.

Introducing chemical oceanography, the study of the ocean viewed as a chemical system, an outline is presented of the nature and behavior of aqueous electrolytic regimes. Topics to be discussed include the chemical composition of sea water and analytical techniques for its examination. Students will carry out research projects on farming the oceans to produce new food supplies.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

411.0   PHYSICAL CHEMISTRY

Prerequisite: Che 311.0, Mat 311.0.

Basic quantum theory, statistical thermodynamics, chemical kinetics and reaction mechanisms.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

CHEMISTRY

431.0   ANALYTICAL CHEMISTRY

Prerequisite: Che 331.0.

An instrumental course in which emphasis is placed on modern electrochemical and spectroscopic techniques and in which an introduction to various separation techniques will be presented.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

441.0   INTERMEDIATE ORGANIC CHEMISTRY

Prerequisite: Che 241.0 or 343.0.

A study of aliphatic, aromatic and heterocyclic compounds with emphasis on modern methods and concepts in stereochemistry, reaction mechanisms and physical properties.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

500.0   RESEARCH THESIS

Prerequisite: restricted to final year students in the honors program.

The student will carry out a research project under the direction of one of the members of the Department and will prepare a thesis on his work. The thesis is presented orally.

Lab 6 hrs. a week (minimum). 2 semesters.

511.0   ADVANCED TOPICS IN PHYSICAL CHEMISTRY

Prerequisite: Che 411.0.

A course on special topics selected from advanced areas of physical chemistry.

Classes   3 hrs. a week. 2 semesters.

513.0   QUANTUM CHEMISTRY

Prerequisite: Che 411.0, Phy 221.0 and Mat 311.0.

Techniques for generating approximate solutions of atomic and molecular wave equations (Hartree-Fock method, perturbation theory, configuration interaction). Interpretation and properties of probability distributions. The use of symmetry in quantum chemistry. Theoretical basis of spectroscopy.

Classes   3 hrs. a week. 2 semesters.

521.0   ADVANCED TOPICS IN INORGANIC CHEMISTRY

Prerequisite: Che 321.0.

A lecture-seminar-laboratory course on selected topics in advanced areas of inorganic chemistry.

Classes and lab 5 hrs. a week. 2 semesters.

531.0   SELECTED TOPICS IN INSTRUMENTAL ANALYSIS

Prerequisite: Che 431.0.

A lecture-seminar-laboratory course designed to present topics in electronic circuits, chromatography, spectroscopy and electrochemistry.

Classes and lab 5 hrs. a week. 2 semesters.

541.0   ADVANCED ORGANIC CHEMISTRY

Prerequisite: Che 441.0 and Che 411.0 (may be taken concurrently).

Selected topics in stereochemistry, heterocyclic compounds, natural products and polymers. In the laboratory the student will perform selected synthesis and characterize structure by spectroscopic methods.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

542.0   ADVANCED TOPICS IN BIOCHEMISTRY

Prerequisite: Che 342.0.

A lecture-seminar-laboratory course on selected topics in advanced areas of biochemistry.

Classes and lab 5 hrs. a week. 2 semesters.

CLASSICS

Assistant Professors   G. T. Thomas, V. McB. Tobin

To obtain a major in classics a student must complete at least six courses, four of which must be at the 300 level.

Students who are seriously interested in classical studies are strongly advised to do some work in at least one of the classical languages. Although the department does not strictly require linguistic studies, students should realize the importance of Latin and Greek as tools which can give direct access to the ancient world. Knowledge of at least one of these languages is required for entrance into the classics program of any graduate school.

A student's program must be approved by a member of the Department. Appropriate supporting courses in other departments will be suggested.

The following courses are recommended as core courses for a major in classics:
Cla 301.0 — Classics in Translation
Cla 303.0 — History of Greece
Cla 304.0 — History of Rome
Cla 305.0 — Hellenistic History
Cla 310.0 — History of Israel

LATIN

100.0   INTRODUCTION TO LATIN

A course in the essentials of Latin for students who have not completed matriculation Latin.

Text: DeWitt, *College Latin*.

Classes   4 hrs. a week. 2 semesters.

201.0   INTRODUCTION TO LATIN EPIC POETRY

Emphasis is placed on the exact rendering of the thought content of certain selections into idiomatic English. Prose composition stresses the exact rendering of English into idiomatic Latin.

Texts: Vincent and Mountford, *Outline of Latin Prose Composition*. Vergil, *Aeneid* (Books II and IV will be studied from the Latin text; the remainder of the *Aeneid* will be considered in English).

Classes   3 hrs. a week. 2 semesters.

301.0   THE POETRY OF HORACE

A critical analysis and appreciation of Horace's art and ideals. Prose composition.

Texts: Horace, *Odes, Satires, Arts Poetica*.

Classes   3 hrs. a week. 2 semesters.

403.0   ADVANCED LATIN

A tutorial course on Cicero *(De Amicitia. De Senectute)* and Lucretius *(De Rerum Natura)*.

404.0   ADVANCED LATIN

A tutorial course, the content of which may be varied according to the needs and interests of the student. Directed readings and research.

GREEK

101.0   INTRODUCTORY GREEK

An introductory course covering the major grammatical points of the Greek language. This course will be followed in succeeding years by more advanced courses in the reading and interpretation of classical authors.

Classes   3 hrs. a week. 2 semesters.

201.0   SECOND YEAR GREEK

Prerequisite: Gre 101.0.

An application of the major grammatical points of the Greek language through the reading of the selected works of classical authors:

   i. Homer, *Iliad*
  ii. Xenophon, *Anabasis*
iii. the dramatists
iv. lyric poetry

Classes   3 hrs. a week. 2 semesters.

CLASSICS

CLASSICAL LITERATURE

301.0   CLASSICS IN TRANSLATION

The classical literature of Greece and Rome in translation. This course is especially recommended to all Arts students who are not taking Latin in their program, and also to students of ancient history.

Texts: *Various selections from the Classical writers of Greece and Rome.*

Classes   3 hrs. a week. 2 semesters.

CLASSICAL HISTORY

120.0   THE CLASSICAL CIVILIZATIONS OF GREECE AND ROME

A general introduction to the civilizations of ancient Greece and Rome with particular regard to political organization and cultural contribution to modern western society.

Classes   3 hrs. a week. 2 semesters.

303.0   HISTORY OF GREECE
(His 350.0)

A concentrated study of selected topics dealing with the main features of Greek history, stressing both the greatness and the weakness of ancient Greek society. This course is designed as a companion and parallel to Cla 304.0, which deals in the same manner with the history of Rome. This course may also be used as a history credit.

Classes   3 hrs. a week. 2 semesters.

304.0   HISTORY OF ROME
(His 351.0)

A concentrated study of selected topics dealing with the main features of Roman history, stressing both the greatness and weakness of the Roman world. This course is designed as a companion and parallel to Cla 303.0, which deals in the same manner with the history of Greece. This course may also be used as a history credit.

Classes   3 hrs. a week. 2 semesters.

305.0   HELLENISTIC HISTORY
(His 352.0)

Prerequisite: one course in classics or history.

This course considers the characteristics of the Hellenistic world from Alexander the Great until the arrival of Pompey in the East (334 B.C. to 63 B.C.). This is the period of the expansion of Greek culture over the Eastern world (Hellenism), giving the rise to a highly complex historical era, one containing many of the problems and features of 20th century life. This course may also be used as a history credit.

Classes   3 hrs. a week. 2 semesters.

310.0   HISTORY OF ISRAEL
(Rel 309.0)

A study of the history of the ancient Hebrew kingdoms of Israel and Judah from the earliest settlement in Palestine to the fall of Jerusalem in 70 A.D.

Classes   3 hrs. a week. 2 semesters.

334.0   ROMAN HISTORY: PRIMARY SOURCE MATERIAL

Prerequisite: Cla 120.0 or 304.0.

A study of selected topics in Roman history based on readings from various authors and dependent upon some knowledge of the chronological development of Rome.

Classes   3 hrs. a week. 2 semesters.

COMMERCIAL LAW

LEGAL ASPECTS OF BUSINESS — PART I

An introduction to the essential legal aspects of commerce: contracts, some special contracts, corporations, and special areas, such as anti-combines, tax and self-regulation.

Classes 3 hrs. a week. 1 semester.

LEGAL ASPECTS OF BUSINESS — PART II

Prerequisite: Cml 301.1 (.2).

A further examination of some of the legal aspects of commerce; areas included are impeachment of contract, the requirement of writing, discharge of contracts, assignment of contracts, bailment, insurance, guarantee, and landlord and tenancy.

Classes 3 hrs. a week. 1 semester.

COMPUTER SCIENCE

Although Saint Mary's does not offer a complete program in computer science, students interested in taking courses in this area are advised to consult course offerings in the Departments of Business Administration and Mathematics as well as the Division of Engineering.

ECONOMICS

Professor	J. J. Vorstermans
Associate Professors	E. J. Doak, D. MacFarlane, W. T. McGrath
Assistant Professor	K. C. Y. Chan
Lecturers	T. O'Neill

Department Statement

Economics has been defined as ''the study of how men and society end up choosing, with or without the use of money, the employment of scarce productive resources, which could have alternative uses, to produce various commodities over time and distribute them for consumption, now and in the future, among various people and groups in society.'' (Paul A. Samuelson).

Economics borders on other important academic disciplines, such as political science, sociology, psychology, anthropology and business administration. It also draws heavily on the study of history, statistics and mathematics.

Students who desire some minimum understanding of economics are encouraged to consider taking one or more courses at the 200 level. Entrance into higher level courses ordinarily requires a full-year of principles of economics, but this may be waived with the approval of the Department.

The Economics Department is able to offer students with a special interest in economics the opportunity to undertake some concentration beyond the core of required courses in the following listed areas and associated courses:

Money and Banking, Eco 307.0, 320.1
Public Finance, Eco 318.1, 319.2, 321.2
International, Eco 313.1, 314.2
Quantitative, Eco 302.1, 303.1, 309.2
Urban-Regional, Eco 324.1, 325.2, 330.1, 350.2, 360.1
Comparative Systems, Eco 315.1, 323.2
History and Development, Eco 304.1, 310.1, 311.2
Labor, Eco 339.1, 340.2
Industrial Organization, Eco 316.1
Other theory courses, Eco 312.1, 440.1, 441.2

Students who desire a major in economics are encouraged to enrol in an appropriate program under the guidance of a faculty advisor. There are two general programs (1) B.A. with a major in economics; and (2) B. Comm. with a major in economics. The former requires a total of twenty full courses, or equivalent, following Nova Scotia Grade XI or fifteen full courses, or equivalent, following Nova Scotia Grade XII. The latter requires a total of twenty full courses, or equivalent, following Nova Scotia Grade XII or twenty-five full courses, or equivalent, following Nova Scotia Grade XI. (See Faculty of Arts and Faculty of Commerce, section 3 for the basic requirements for these degrees.) Regardless of the degree sought, the Department of Economics requires that the program of study leading to a major in economics include the following courses:

(1) Mat 113.0 (Nova Scotia Grade XII Mathematics) or equivalent.
(2) Egl 200.0 (Introductory English)
(3) One course in the humanities or a language (Egl 325 ($^1/_2$) and 326 ($^1/_2$), which are required of all B.Comm. students, satisfy this requirement).
(4) One natural science, university mathematics or computer course (Bus 205 and 321, which are required of all B. Comm. students, satisfy this requirement).
(5) One course from the social sciences other than economics.
(6) The following economics courses:

Eco 201 ($^1/_2$) (Principles of Economics: Micro)
Eco 202 ($^1/_2$) (Principles of Economics): Macro
Eco 206 ($^1/_2$) (Introduction to Quantitative Methods for Economists II) or
Bus 206 ($^1/_2$) (Introduction to Quantitative Methods for Commerce)
Eco 207 ($^1/_2$) (Introductory Statistics for Economists) or
Bus 207 ($^1/_2$) (Introductory Statistics for Commerce)
Eco 300 ($^1/_2$) (Intermediate Microeconomic Theory)
Eco 301 ($^1/_2$) (Intermediate Macroeconomic Theory)

6 additional half courses economic electives at the 300 level or above.

In addition, students must satisfy conditions set down by the faculty in which they enrol.

ECONOMICS

A suggested sequence of courses follows for students pursuing the degree of B.A. with major in economics. A suggested sequence of courses for those pursuing the degree of B.Comm. with major in economics is shown under Faculty of Commerce in Section 3.

Suggested courses leading to a B.A. with a major in Economics (assuming there is no advanced standing)

FIRST YEAR
Eco 200.0 or 221.1 and 222.2
Mat 113.0
Social science other than economics (e.g. political science, history, anthropology, sociology, geography, psychology)
Elective
Elective

SECOND YEAR
Eco 201.1 and 202.2
Eco 206.1 and 207.1 (see note)
Egl 200.0
Elective
Elective

THIRD YEAR
Eco 300.1 and 301.2
Eco Elective
Natural science, mathematics or computers
Elective
Humanities or language (e.g. philosophy, religious studies, English, French)

FOURTH YEAR
Eco elective
Eco elective
Elective
Elective
Elective

Note: Students taking Bus/Eco 205(^{1}/$_2$) and Bus 321(^{1}/$_2$) to satisfy requirement 4 above, should take Bus/Eco 205(^{1}/$_2$) and 206(^{1}/$_2$) in the second year and Bus/Eco 207(^{1}/$_2$) and Bus 321(^{1}/$_2$) in the third year.

HONORS PROGRAM IN ECONOMICS

The Department of Economics offers honors programs to students enrolled in either the Faculty of Arts or the Faculty of Commerce. Descriptions of the general requirements for the degrees of Bachelor of Arts with Honors and of Bachelor of Commerce with Honors are contained in Section 3. In addition to these general requirements, all candidates for graduation with honors in economics must comply with the following:

a) Students must satisfy the applicable requirements for a major in economics as outlined on the preceding pages.
b) The ten full courses or equivalent in economics presented for honors must include:
   i) Eco 201.1(.2), Eco 202.1(.2), Eco (or Bus) 206.1(.2), and 207.1(.2).
   ii) one full credit or equivalent in microeconomic theory beyond the 200 level.
   iii) one full credit or equivalent in macroeconomic theory beyond the 200 level.
   iv) an honors project, which is the equivalent of ^{1}/$_2$ credit, done under the supervision of a faculty member.
c) With the approval of the chairman of the Department of Economics, a student may be permitted to substitute up to two full courses or equivalent from a related subject area as part of the ten courses in economics presented for honors.

200.0   ECONOMIC HISTORY OF EUROPE

An introduction to European economic history. Stages of economic growth, birth of European civilization, medieval economic society, mercantilism, the first industrial revolution, laissez-faire and industrial capitalism, and Europe since 1914.

Classes   3 hrs. a week. 2 semesters.

201.1   PRINCIPLES OF ECONOMICS: MICRO

General price theory, theory of the firm, market structure, production, cost, revenue and profit maximization, theory of distribution.

Classes   3 hrs. a week. 1 semester.

ECONOMICS

202.2   PRINCIPLES OF ECONOMICS:
           MACRO

National income determination, national accounting, business fluctuations, money and banking, international economics, eionomic growth.

Classes   3 hrs. a week. 1 semester.

205.1 (.2)   INTRODUCTION TO QUANTITATIVE
           METHODS FOR ECONOMISTS I

Prerequisite: Mat 113.0 or Grade XII Mathematics or equivalent.

This course is designed to provide an overview of linear systems with emphasis on applications. It includes the topics of linear programming as well as transportation and assignment problems.

Classes   3 hrs. a week. 1 semester.

Note: This is the same course as Bus 205.1 (.2) and Mat 205.1 (.2).

206.1 (.2)   INTRODUCTION TO QUANTITATIVE
           METHODS FOR ECONOMISTS II

Prerequisite: Mat 113.0 or Grade XII Mathematics or equivalent.

The purpose of this course is to provide an overview of non-linear optimization, differential and integral calculus with emphasis on applications, as well as an introduction to decisions models under uncertainty.

Classes   3 hrs. a week. 1 semester.

Note: This is the same course as Bus 206.1 (.2) and Mat 205.1 (.2)

207.1 (.2)   INTRODUCTORY STATISTICS
           FOR ECONOMISTS

Prerequisite: Eco 206.1 (.2) or Bus 206 (.2).

Functions of statistical methods, collection, analysis and interpretation of data, frequency distribution, measures of central tendency and dispersion, probability, binomial, normal,and sampling distributions, hypothesis testing, estimation of parameters, regression and correlation.

Classes   3 hrs. a week. 1 semester.

Note: This course is the same as Bus 207.1 (.2) and Mat 207.1 (.2).

221.1   INTRODUCTION TO CURRENT
           ECONOMIC ISSUES I

A course which introduces the student to the discipline of economics through a survey of the major economic issues of the current decade. Specific topics will include unemployment and inflation, monetary and fiscal policy, economic growth, regional economic disparities, poverty and income inequality, economic problems of urbanization, expanding role of the public sector in economic activity. The course assumes no prior knowledge of economics and is open to both freshmen and those non-commerce students who are not planning to major in economics.

Classes   3 hrs. a week. 1 semester.

222.2   INTRODUCTION TO CURRENT
           ECONOMIC ISSUES II

As a sequel to Eco 221.1, this course is designed to continue the student's introduction to the discipline of economics through a survey of major economic issues of the 1970s. Specific topics will include international economic relations, monopoly power and competition policy, multinational corporations and foreign ownership, labor relations, agricultural problems, energy and natural resources, pollution and environmental problems. The course assumes no prior knowledge of economics and is open to both freshmen and those non-commerce students who are not planning to major in economics.

Classes   3 hrs. a week. 1 semester.

300.1   INTERMEDIATE
           MICROECONOMIC THEORY

Prerequisite: Eco 201.1 (.2) and 206.1 (.2).

Theory of consumer behavior and demand; theory of production and cost, behavior of the firm under different market structures; theory of income distribution, general equilibrium, welfare economics.

Classes   3 hrs. a week. 1 semester.

ECONOMICS

301.2 INTERMEDIATE MACROECONOMIC THEORY

Prerequisite: Eco 202.1 (.2) and 206.1 (.2).

National income accounting, models of aggregate demand and income determination, theory of prices, wages and employment, models of economic growth, international aspects.

Classes 3 hrs. a week. 1 semester.

302.1 MATHEMATICAL ECONOMICS

Prerequisite: Eco 206.1 (.2) or equivalent.

An introduction of the role of mathematics in static and dynamic economic analysis. Mathematical topics include partial differentiation, matrix theory, integration, and difference and differential equations.

Classes 3 hrs. a week. 1 semester.

303.1 (.2) INTERMEDIATE ECONOMICS STATISTICS

Prerequisite: Eco 207.1 (.2) or Bus 207.1 (.2) or equivalent.

A further study of the basic concepts of statistics and its application to the solution of business and economic problems; review of probability, random variables and their distribution, sampling and sampling distributions, normal and associated distributions, statistical inference, simple and multiple regression and related topics.

Classes 3 hrs. a week. 1 semester.

Note: This is the same course as Bus 303.1 (.2).

304.1 ECONOMIC HISTORY OF NORTH AMERICA

Prerequisite: Eco 201.1 (.2) and 202.1 (.2).

This course acquaints students with the leading events and processes in the economic history of North America in general, and of Canada in particular. Among the topics to be discussed are the development of agriculture, industry and trade, the economic conditions which shaped banking developments, the colonial links and incentives, industrial and financial capitalism, twentieth century developments of industry, labor organizations, investments and trade patterns.

Classes 3 hrs. a week. 1 semester.

307.0 MONEY AND BANKING

Prerequisite: Eco 201.1 (.2) and 202.1 (.2).

Money: its standards, supply and value; monetary theory, Canadian and other banking systems, public finance, and international monetary problems.

Classes 3 hrs. a week. 2 semesters.

309.1 INTRODUCTION TO ECONOMETRICS

Prerequisite: Eco 206.1 (.2) and 303.1 or equivalent.

Theory and applications of econometric models and the methods for their estimation. Topics covered will include classical linear regression and extensions, generalized least squares and its applications, distributed lags, simultaneous equations and identification.

Classes 3 hrs. a week. 1 semester.

310.1 DEVELOPMENT ECONOMICS

Prerequisite: Eco 201.1 (.2) and 202.1 (.2).

Alternative theories of growth and development, including economic and non-economic determinants of growth in developing countries, the role of government in development policies and lessons from experience in growth and change.

Classes 3 hrs. a week. 1 semester.

311.2 ISSUES IN ECONOMIC DEVELOPMENT

Prerequisite: Eco 201.1 (.2) and 202.1 (.2) or 310.1.

Specific problems in economic development; emphasis on government policies, foreign aid, foreign trade and their impact on underdeveloped countries.

Classes 3 hrs. a week. 1 semester.

312.1 DEVELOPMENT OF ECONOMIC IDEAS

Prerequisite: Eco 201.1 (.2) and 202.1(.2).

The course traces the development of economic ideas from the middle ages to the present. Students will be introduced to the theories of the main economic schools, especially in the light of their contribution to contemporary economic thinking.

Classes 3 hrs. a week. 1 semester.

ECONOMICS

313.1 INTERNATIONAL FINANCE

Prerequisite: Eco 201.1 (.2) and 202.1 (.2).

An introduction to the theory, institutions, and history of international finance: balance of payments, foreign exchange rates, instruments, and markets, international banking, adjustment mechanisms, stablization policy.

Classes 3 hrs. a week. 1 semester.

314.2 INTERNATIONAL TRADE

Prerequisite: Eco 201.1 (.2) and 202.1 (.2).

An introduction to the theory of international trade: comparative advantage, modern refinements, gains from trade, empirical relevance of trade models, tariffs and protection, economic integration, trade and growth.

Classes 3 hrs. a week. 1 semester.

315.2 COMPARATIVE ECONOMIC SYSTEMS

Prerequisite: Eco 201.1 (.2) and 202.1 (.2).

An examination of economic ideology from mercantilism to contemporary welfare economics both capitalist and socialist. Specifically, the necessary conditions and implications of a Pareto-optimium will be evaluated and contrasted with Marxian value theory. Several post-Marx socialist models will be studied in light of Schumpeterian capitalism. Impirical economic systems will be contrasted such as welfare socialism, e.g., Scandinavian countries and the United Kingdom; managed capitalism, e.g., Canada, U.S., and France; centralized socialism, e.g., Russia; decentralized socialism, e.g., Yugoslavia.

Classes 3 hrs. a week. 1 semester.

316.1 INDUSTRIAL ORGANIZATION

Prerequisite: Eco 201.1 (.2), 202.1 (.2).

The course begins by laying out the arguments for competitive market processes and then proceeds to investigate the determinants of real-world industrial market structures, the behavior of firms, and efficiency in resource allocation.

Classes 3 hrs. a week. 1 semester.

318.1 INTRODUCTION TO PUBLIC FINANCE

Prerequisite: Eco 201.1 (.2) and 202.1 (.2).

An introduction to the theory of public finance. Emphasis is placed on the classical approach of governmental spending and taxing powers affecting the distribution of income, the allocation of resources and the stabilization of national income.

Classes 3 hrs. a week. 1 semester.

319.1 (.2) ISSUES IN PUBLIC FINANCE

Prerequisite: Eco 318.1 or Eco 201.1 (.2) and 202.1 (.2).

Selected topics relating to the economic effects of fiscal policy. The process of governmental decision-making is investigated through the use of economic analysis. This course is also an introduction to modern welfare economics.

Classes 3 hrs. a week. 1 semester.

320.1 THE CANADIAN FINANCIAL SYSTEM

Prerequisite: Eco 201.1 (.2) and 202.1 (.2).

General nature of the financial system, historical trends in financial institutions and ideas, elements of financial theory, private financial institutions, government financial institutions.

Classes 3 hrs. a week. 1 semester.

321.2 CANADIAN ECONOMY SEMINAR

Prerequisite: Eco 201.1 (.2) and 202.1 (.2).

A course on current economic issues in Canada: population and labor force, unemployment, inflation, international trade, balance of payments and foreign exchange rates, regional economic disparities, poverty, the business cycle, monetary and fiscal policy. Some treatment is also given to selected aspects of Canadian economic history.

Classes 3 hrs. a week. 1 semester.

UNIVERSITY DIARY

1977-1978

1977
1 August, Monday ⎫
to   ⎬ EARLY REGISTRATION
2 September, Friday ⎭

1977
SEPTEMBER

12	Monday	First day of residence registration for new students.
13	Tuesday	Orientation for new students.
14-16	Wednesday to Friday	Registration and payment of fees.
14	Wednesday	
	(a) 9:00-11:30 a.m. ⎱	(a) New freshmen, new sophomore, and transfer students.
	2:00- 4:30 p.m. ⎰	
	(b) 7:00- 8:30 p.m.	(b) New and returning part-time students except those in graduate programs.
15	Thursday	
	(a) 9:00-11:30 a.m. ⎱	(a) Returning seniors*, returning juniors* and Bachelor of Education students.
	2:00- 4:30 p.m. ⎰	
	(b) 7:00- 8:30 p.m.	(b) New and returning part-time students and Master's degree candidates, both full and part-time, in all faculties.
16	Friday	
	(a) 9:00-11:30 a.m. ⎱	(a) Returning sophomores*, returning freshmen*, and students entering second undergraduate degree programs, exclusive of Education.
	2:00- 4:30 p.m. ⎰	
	(b) 7:00- 8:30 p.m.	(b) New and returning part-time students except those in the graduate programs.
19	Monday	Classes begin and late registration begins.
26	Monday	Final date for: (1) late registration in a first semester course and (2) adding or dropping a first semester course (i.e., designated .1)
30	Friday	Last day for filing applications for degree to be awarded in May 1978.

OCTOBER

3	Monday	Last day for: (1) late registration in a full course and (2) adding or dropping a full course (i.e., designated .0).
10	Monday	Thanksgiving Day. No classes.
26	Wednesday	Last day for withdrawing from a first semester course. See "Withdrawing from a Course" section of this **Calendar.**

NOVEMBER

11	Friday	Remembrance Day. No classes.

*Seniors are those having 13.0 or more credits; Juniors have 8.0 to 12.5;
Sophomores 3.0 to 7.5, and Freshmen 0.0 to 2.5.

1977
DECEMBER

8	Thursday	Patronal Feast of the University. No classes.
9	Friday	Last day of classes.
12-20	Monday-Tuesday	Final examinations in first semester courses and mid-year examinations in full year courses.
20	Tuesday	First semester ends.

1978
JANUARY

3	Tuesday	Classes resume.
3-12	Tuesday-Thursday	Payment of fees for second semester.
10	Tuesday	Last day for adding or dropping a second semester course (i.e., designated .2) or for late registration in a .2 course.
11	Wednesday	Last day for withdrawing from a full course. See ''Withdrawing from a Course'' section of this **Calendar**.

1977

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        S M T W T F S                S M T W T F S
JAN                 1      JUL                 1  2
        2  3  4  5  6  7  8          3  4  5  6  7  8  9
        9 10 11 12 13 14 15         10 11 12 13 14 15 16
       16 17 18 19 20 21 22         17 18 19 20 21 22 23
       23 24 25 26 27 28 29         24 25 26 27 28 29 30
       30 31                        31

FEB           1  2  3  4  5  AUG        1  2  3  4  5  6
        6  7  8  9 10 11 12          7  8  9 10 11 12 13
       13 14 15 16 17 18 19         14 15 16 17 18 19 20
       20 21 22 23 24 25 26         21 22 23 24 25 26 27
       27 28                        28 29 30 31

MAR           1  2  3  4  5  SEPT             1  2  3
        6  7  8  9 10 11 12          4  5  6  7  8  9 10
       13 14 15 16 17 18 19         11 12 13 14 15 16 17
       20 21 22 23 24 25 26         18 19 20 21 22 23 24
       27 28 29 30 31               25 26 27 28 29 30

APR                 1  2    OCT                    1
        3  4  5  6  7  8  9          2  3  4  5  6  7  8
       10 11 12 13 14 15 16          9 10 11 12 13 14 15
       17 18 19 20 21 22 23         16 17 18 19 20 21 22
       24 25 26 27 28 29 30         23 24 25 26 27 28 29
                                    30 31

MAY     1  2  3  4  5  6  7  NOV          1  2  3  4  5
        8  9 10 11 12 13 14          6  7  8  9 10 11 12
       15 16 17 18 19 20 21         13 14 15 16 17 18 19
       22 23 24 25 26 27 28         20 21 22 23 24 25 26
       29 30 31                     27 28 29 30

JUN           1  2  3  4    DEC             1  2  3
        5  6  7  8  9 10 11          4  5  6  7  8  9 10
       12 13 14 15 16 17 18         11 12 13 14 15 16 17
       19 20 21 22 23 24 25         18 19 20 21 22 23 24
       26 27 28 29 30               25 26 27 28 29 30 31
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1978

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        S M T W T F S                S M T W T F S
JAN     1  2  3  4  5  6  7  JUL                    1
        8  9 10 11 12 13 14          2  3  4  5  6  7  8
       15 16 17 18 19 20 21          9 10 11 12 13 14 15
       22 23 24 25 26 27 28         16 17 18 19 20 21 22
       29 30 31                     23 24 25 26 27 28 29
                                    30 31

              1  2  3  4
FEB     5  6  7  8  9 10 11  AUG           1  2  3  4  5
       12 13 14 15 16 17 18          6  7  8  9 10 11 12
       19 20 21 22 23 24 25         13 14 15 16 17 18 19
       26 27 28                     20 21 22 23 24 25 26
                                    27 28 29 30 31

MAR           1  2  3  4    SEPT                 1  2
        5  6  7  8  9 10 11          3  4  5  6  7  8  9
       12 13 14 15 16 17 18         10 11 12 13 14 15 16
       19 20 21 22 23 24 25         17 18 19 20 21 22 23
       26 27 28 29 30 31            24 25 26 27 28 29 30

APR                    1    OCT     1  2  3  4  5  6  7
        2  3  4  5  6  7  8          8  9 10 11 12 13 14
        9 10 11 12 13 14 15         15 16 17 18 19 20 21
       16 17 18 19 20 21 22         22 23 24 25 26 27 28
       23 24 25 26 27 28 29         29 30 31
       30

MAY        1  2  3  4  5  6  NOV             1  2  3  4
        7  8  9 10 11 12 13          5  6  7  8  9 10 11
       14 15 16 17 18 19 20         12 13 14 15 16 17 18
       21 22 23 24 25 26 27         19 20 21 22 23 24 25
       28 29 30 31                  26 27 28 29 30

JUN              1  2  3    DEC              1  2
        4  5  6  7  8  9 10          3  4  5  6  7  8  9
       11 12 13 14 15 16 17         10 11 12 13 14 15 16
       18 19 20 21 22 23 24         17 18 19 20 21 22 23
       25 26 27 28 29 30            24 25 26 27 28 29 30
                                    31
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FEBRUARY

15	Wednesday	Last day for withdrawing from a second semester course. See "Withdrawing from a Course" section of this **Calendar.**
February 27 to March 5	Monday-Sunday	Study break. No classes.

MARCH

10	Friday	Charter Day. Extracurricular activities cease.
24	Friday	Good Friday. No classes.

APRIL

7	Friday	Last day of classes.
10-22	Monday-Saturday	Final examinations in second semester courses and in full courses.
22	Saturday	Second semester ends.

MAY

|		
1	Monday	Last day for applying to graduate in absentia at Spring Convocation.
8	Monday	Spring Convocation.

AUGUST

1	Tuesday	Last day for filing application for degree to be awarded in November 1978.

Saint Mary's University conducts two summer sessions each year. The first extends from mid-May to late June; the second from early July to mid-August. Further information will be available in the Summer Sessions brochure.

PLEASE NOTE

EARLY REGISTRATION will take place during the month of August. This will involve the selection of courses and payment of fees (in the case of part-time students) and partial payment of fees in the case of full time students.

Saint Mary's University
Campus Guide

TOWER ROAD

INGLIS STREET

GORSEBROOK AVENUE

ROBIE STREET

1. Rice Residence
2. Vanier House
3. Loyola Residence
4. Loyola Building
5. McNally Building (Administration)
6. Gymnasium
7. Theatre Auditorium
8. Science Building
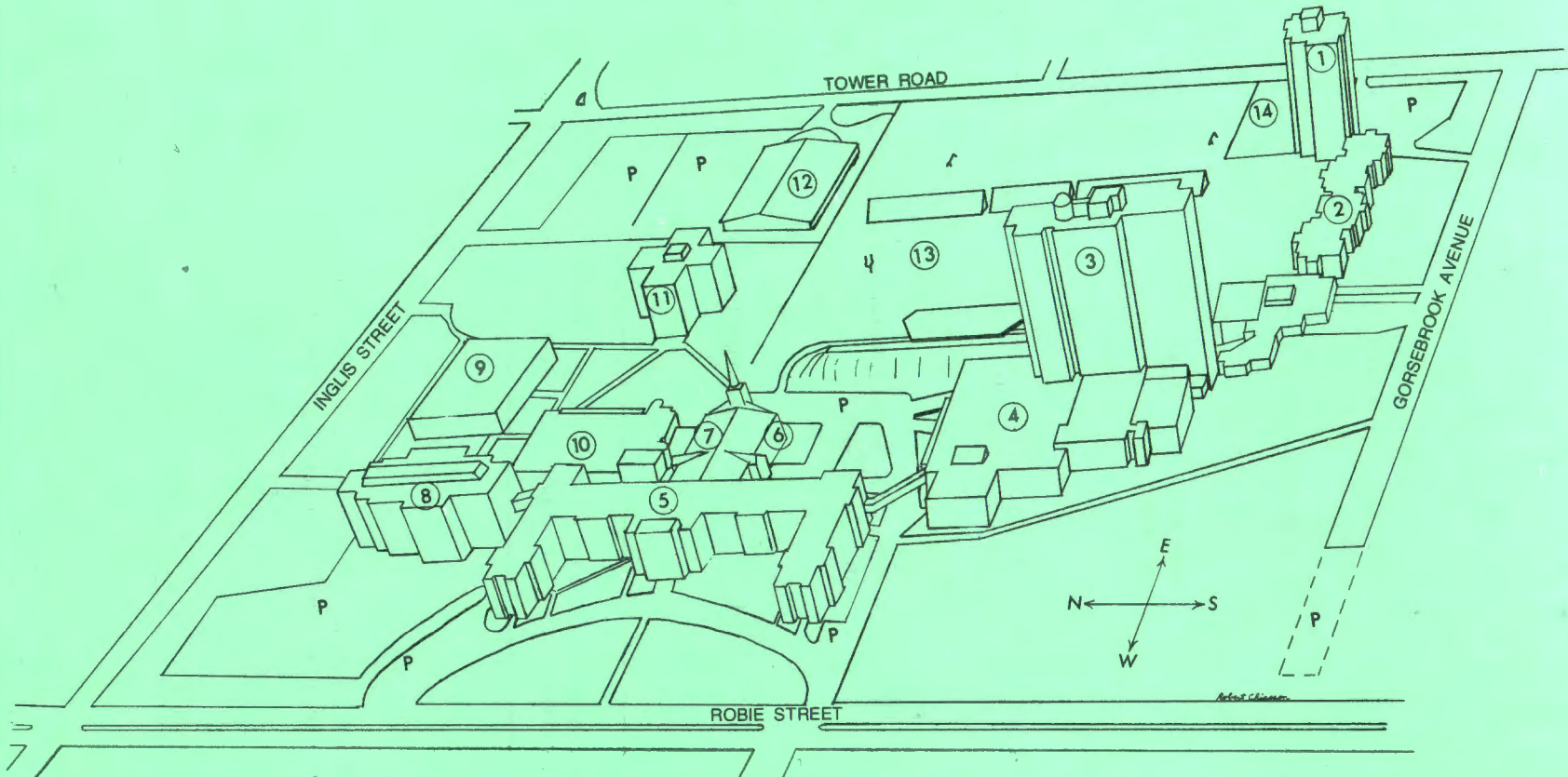
9. Bishop Burke Education Centre
10. Patrick Power Library
11. Student Centre
12. Alumni Arena
13. Huskies Stadium
14. Tennis Courts
15. Parking

ECONOMICS

SOVIET-TYPE ECONOMIES

Prerequisite: Eco 201.1 (.2) and 202.1 (.2).

This course includes: development of Soviet economics — historical background, institutional framework, the rate of growth, the problems of saving, investment and central planning; the origin of the Soviet bloc — Communist international economics, the problems of economic integration in Eastern and Western Europe, East-West trade, economic reforms in Eastern Europe; Soviet-type economies in Asia.

Phil 209.0 Marxist Philosophy is an appropriate supporting Humanities elective for this course.

Classes   3 hrs. a week. 1 semester.

THE ATLANTIC ECONOMY

Prerequisite: Eco 201.1 (.2) and 202.1 (.2).

Analysis of the structure, development, and performance of the economy of the Atlantic region. Topics covered include: economic history of the region, current structure of the regional economy and state of economic development, sub-regional differences in economic structure and performance, external trade linkages, demographic and labor market characteristics, the role of government in the development process.

Classes   3 hrs. a week. 1 semester.

325.2   ATLANTIC ECONOMY SEMINAR

Prerequisite: Eco 201.1 (.2) and 202.1 (.2).

The course will examine, in detail, a small number of current economic issues in the Atlantic region. General topic areas, from which specific issues may be chosen, include: the impact on the region of policies and programs of the federal government including monetary, fiscal, manpower, and development policies; the role of provincial and municipal planning and development agencies; the role of key sectors of the economy in future development, including energy, natural resources, steel, and transportation.

Classes   3 hrs. a week. 1 semester.

330.1   REGIONAL ECONOMICS

Prerequisite: Eco 201.1 (.2) and 202.1 (.2).

An examination of the problems of the regional economy and the government programs and policies to deal with regional problems. Location theory, central place theory and growth pole theory will be used to study regional problems in the Maritimes, Canada and the U.S.

Classes   3 hrs. a week. 1 semester.

339.1   LABOR ECONOMICS

Prerequisite: Eco 201.1 (.2) and 202.1 (.2).

Factors affecting wages, working conditions and employment in industrial societies; role of market forces and collective bargaining in wage determination; development of labor unions in Canada, Europe and the United States and their effects on the economy.

Classes   3 hrs. a week. 1 semester.

340.2   HUMAN RESOURCE ECONOMICS

Prerequisite: Eco 201.1 (.2) and 202.1 (.2).

A study of structure and changes in the labor force, nature of the labor market, manpower programs and policies, and how these interact with inflation and the general health of the economy.

Classes   3 hrs. a week. 1 semester.

350.2   URBAN ECONOMICS

Prerequisite: Eco 201.1 (.2) and 202.1 (.2).

Economics of an urban economy: why it grows and how it copes with this growth. Urban policies for transportation, housing, labor markets and public services are examined.

Classes   3 hrs. a week. 1 semester.

ECONOMICS

360.1 ECONOMICS OF NATURAL RESOURCES POLICY

Prerequisite: Eco 201.1 (.2) and 202.1 (.2).

This is a course in the economics of public policy relating to the development, management and utilization of natural resources. Attention will focus on the identification of policy problems in the natural resources sector of the Canadian economy, the impact of the natural resources sector on the rest of the economy, public investment criteria and project analysis. Specific topics will include rent and location theory, regional economics and benefit-cost analysis as they apply to public policy problems.

Classes   3 hrs. a week. 1 semester.

440.1 ADVANCED MICROECONOMICS

Prerequisite: Eco 300.1.

Treatment of the major topics in microeconomic theory at an advanced level. Topics covered will include the theory of the firm, consumer behavior and distribution theory. Other topics which could be covered at the discretion of the instructor may include: welfare economics, theories of capital and interest, game theory and decision-making models.

Classes   3 hrs. a week. 1 semester.

441.2 ADVANCED MACROECONOMIC THEORY

Prerequisite: Eco 301.2.

Treatment of some major topics in macroeconomic theory at an advanced level. Topics may include welfare economics, static macroeconomic models, demand for and supply of money, theories of interest, inflation, economic growth and business cycles.

Classes   3 hrs. a week. 1 semester.

492.1 (.2) DIRECTED STUDY

Prerequisite: Eco 201.1 (.2) and 202.1 (.2) and consent of instructor.

Intended to supplement or provide an alternative to the regular economics courses in order to meet the special needs and interests of students, the course provides an opportunity to study a particular subject in detail and requires from the student some measure of independence and initiative.

591.1 (.2) HONORS SEMINAR AND PROJECT

Prerequisite: admission to the honors program.

Students enrolled in the honors program are required to complete a project under the direction of a faculty member. This course is designed to enable the student to fulfill this requirement.

Classes and independent study. 1 semester.

EDUCATION

Dean, Associate Professor M. MacMillan
Associate Professors B. E. Davis, F. Dockrill,
J. Haysom, F. Phillips,
D. Weeren
Assistant Professors B. Hanrahan, M. Herrick

The philosophy and structure of the Bachelor of Education program are described in section 3 of this Calendar.

Within several of the Bachelor of Education courses (Edu 501.0 through Edu 550.0) a choice of sections, each with a particular emphasis in content and/or a particular instructional approach, is available. Information on the sections to be offered in 1977-78 will be issued to prospective students by the Faculty of Education prior to registration.

501.0 PHILOSOPHY OF EDUCATION

A study of fundamental questions about the nature and aims of education.

Classes 3 hrs. a week. 2 semesters.

502.0 PSYCHOLOGY OF EDUCATION

A study of the nature, equipment, growth, development, evaluation, and adjustment of the learner.

Classes 3 hrs. a week. 2 semesters.

503.0 GENERAL METHODS OF TEACHING

The application of basic principles derived from the philosophy, psychology and history of education to classroom teaching, and an examination of teaching strategies in the light of classroom experience and of research on teaching.

Classes 3 hrs. a week. 2 semesters.

504.0 HISTORY OF EDUCATION

A study of facets of our educational heritage aimed at assisting in the formation of sound educational principles and practices.

Classes 3 hrs. a week. 2 semesters.

505.0 PRACTICE TEACHING

Practice teaching sessions will consist of observation and practice teaching in the public school system. The extent and dates of these sessions will be arranged by the Education staff.

CONTENT AND METHODS OF SPECIFIC FIELDS
520 through 549

The courses within this range of numbers discuss the concepts and competencies to be developed in the various teaching fields at the junior and senior high school level, and methods conducive to that development. Normally, these courses carry a half course credit, and B.Ed. candidates select two to make up the full credit required of them. The present repertory includes the courses listed below. The definitive list of offerings for 1977-78 is issued by the Faculty of Education prior to registration.

520.1 VALUES

Special methods in the teaching of human and religious values, whether as a course or as a dimension of another subject, e.g., English.

Classes 1½ hrs. a week. 2 semesters.

521.1 SECONDARY READING

An introductory course in reading principles and methodology that can be utilized by a secondary school teacher in a content area (e.g., English, social studies, mathematics, science).

Classes 1½ hrs. a week. 2 semesters.

EDUCATION

522.1   SCIENCE

Objectives, programs, methods in junior and senior high school science.

Classes   1¹/₂ hrs. a week. 2 semesters.

523.1   MATHEMATICS

Objectives, programs, methods in junior and senior high school mathematics.

Classes   1¹/₂ hrs. a week. 2 semesters.

524.1   SECOND LANGUAGE I

Principles and techniques of current methodology for teaching of French, and other modern languages.

Classes   1¹/₂ hrs. a week. 2 semesters.

530.1   GEOGRAPHY

Objectives, programs, methods in junior and senior high school geography.

Classes   1¹/₂ hrs. a week. 2 semesters.

531.1   HISTORY

Objectives, programs, methods in junior and senior high school history.

Classes   1¹/₂ hrs. a week. 2 semesters.

532.1   JUNIOR HIGH SCHOOL
SOCIAL STUDIES

This section focuses on history and civics at the junior high level.

Classes   1¹/₂ hrs. a week. 2 semesters.

533.1   SOCIAL STUDIES:
CONTEMPORARY EMPHASIS

Objectives, programs, methods for senior high school courses in modern world problems, economics, political science, sociology.

Classes   1¹/₂ hrs. a week. 2 semesters.

534.1   SOCIAL STUDIES:
AN INTERDISCIPLINARY APPROACH

Objectives, programs, methods for senior high school social studies courses that integrate a variety of fields — geography, history, economics, sociology, political science, etc. The 'local studies' approach is a principal focus.

Classes   1¹/₂ hrs. a week. 2 semesters.

539.0   ASIAN STUDIES

Prerequisite: Professional teaching experience and a university course in history or one of the social sciences.

This course is designed to assist teachers to incorporate Asian studies content into school programs. The first half will involve an interdisciplinary study of salient aspects of selected Asian countries. The second half will seek to formulate models of curriculum units for teaching Asian studies at various school levels.

540.1   ENGLISH: JUNIOR HIGH LEVEL

Objectives, programs, methods for junior high school English.

Classes   1¹/₂ hrs. a week. 2 semesters.

EDUCATION

541.1 ENGLISH: SENIOR HIGH LEVEL

Objectives, programs, methods for senior high school English.

Classes 1½ hrs. a week. 2 semesters.

550.0 DYNAMICS OF CURRICULUM THROUGH PHILOSOPHY

Prerequisite: Professional teaching experience.

An examination of key philosophical ideas that underpin curriculum will provide an initial survey of its possibilities for teachers. Several promising examples of creative development of curriculum will be analyzed and the successful principles that they embody will be used to devise new lesson and unit schemes.

610.0 RESEARCH TECHNIQUES AND DESIGN OF EXPERIMENTS

An introduction to methodology, interpretation and use of educational research. Subjects covered will include general methods of research, hypotheses, and hypothesis testing, design of experiments, surveys and case studies, questionnaires, historical research, elementary statistics, evaluation of these in progress. Credit for this course will be given on completion of a thesis.

Classes 1½ hrs. a week. 2 semesters.

620.1 (.2) CURRICULUM STUDIES

An examination of the basic assumptions underlying the study of curriculum, attempting to provide students with a theoretical understanding of curriculum studies. It is normally taken in conjunction with 632.1 Theories of Mental Development.

Classes 3 hrs. a week. 1 semester.

621.1 (.2) PROBLEMS IN CURRICULUM

Prerequisite: Edu 620.1 or 620.2 or equivalent or the permission of instructor.

A course covering problems in the field of curriculum, focussing where possible upon the application of the theory of curriculum to practical concerns in the field of education.

622.1 and 623.2 CURRICULUM IN HISTORICAL PERSPECTIVE

These two half-courses address historical questions that need to be raised about today's curricula and current attempts at curriculum reform, e.g., origins of today's curricula, justification for departures from earlier practices, changes in the teacher's role in curriculum development. 622.1 draws on the history of western education generally, while 623.2 draws on the history of education in Nova Scotia, to shed light on current curricular issues.

624.0 CURRICULUM DEVELOPMENT: JUNIOR HIGH SCHOOL SCIENCE

The course blends practical and theoretical aspects of curriculum design with particular reference to the teaching of science in junior high schools.

626.0 CURRICULUM DEVELOPMENT: PROBLEMS IN ENGLISH LITERACY

Prerequisite: professional background as a teacher or graduate assistant.

Since the composition of the traditional English trivium of language, composition and literature is too often ignored in the upper divisions of English departments, this course considers problems of teaching writing and maintaining acceptable standards of literacy by concentrating on rhetorical theory, curriculum development and actual writing practice and grading.

EDUCATION

630.1 (.2) PSYCHOLOGICAL PRINCIPLES OF LEARNING

Prerequisite: Psy 301.0 and Edu 502.0 or permission of instructor.

Discussions of the basic tenets of modern learning theory as developed through the findings of experimental psychology. Topics include: development of learning theory, conditioning, reinforcement, stimulus control of behavior, punishment and memory.

Classes 3 hrs. a week. 1 semester.

631.1 (.2) SPECIAL ASPECTS OF THE PSYCHOLOGY OF LEARNING

Prerequisite: Edu 630.1 (.2) or equivalent, or permission of instructor.

A seminar course discussing topics dealt with by current learning studies which have particular relevance to school learning. The following are examples of areas dealt with: concept learning, creativity, intelligence, perceptual learning and transfer of training.

Classes 3 hrs. a week. 1 semester.

640.1 (.2) PHILOSOPHY OF EDUCATION: PHILOSOPHICAL CRITIQUE OF MOTIVATION (I)

An examination of the cultural significance of the metaphysics of motivation. As a study of social exigencies in the learning situation, the course involves the reading and discussion of such philosophical sources as Plato, Aristotle, Buber, Fromm, Johann, Marcel, on the nature of love, and more precisely, a consideration of the nature of the affective relation between student and teacher.

Classes 3 hrs. a week. 1 semester.

641.1 (.2) PHILOSOPHY OF EDUCATION: PHILOSOPHICAL CRITIQUE MOTIVATION (II)

The course is a problematic approach to the affective features of concrete learning situations. Some of the works used are *Education and Ecstasy, Freedom to Learn,* and *Existential Encounters for Teachers*.

Classes 3 hrs. a week. 1 semester.

647.1 (.2) PHILOSOPHY OF EDUCATION: THEORY OF KNOWLEDGE (I)

A lecture and seminar course based on Lonergan's Insight and directed towards developing an epistemology inherent in the learning process. The course sets out from the point of view of a personal self-appropriation of one's own dynamic cognitive structure.

Sources: Lonergan, *Insight;* Buford, *Toward a Philosophy of Education;* Vandenberg, *Being and Education; Essays in Existential Phenomenology*.

Classes 3 hrs. a week. 1 semester.

648.1 (.2) PHILOSOPHY OF EDUCATION: THEORY OF KNOWLEDGE (II)

Consideration of the question, "What kind of student activity do I look for and recognize as the result of teaching?" In addition to personal cases discussed, some references involving such a question will be Plato, Meno; Holt, *How Children Fail;* Hutchins, *The Learning Society;* Postman and Weingartner, *Teaching as a Subversive Activity*.

Classes 3 hrs. a week. 1 semester.

650.1 (.2) INTRODUCTION TO COMPARATIVE EDUCATION

This course examines the principal characteristics of education in a number of countries and areas outside Nova Scotia, the methodology and bibliographical tools of comparative education, and the utility of comparative education for the practising teacher and administrator.

Classes 3 hrs. a week. 1 semester.

___.1 (.2) PROBLEMS IN COMPARATIVE EDUCATION

Prerequisite: Edu 650.1 (.2) or equivalent, or permission of Instructor.

Selected educational problems will be examined with the aid of the discipline of comparative education.

Classes 3 hrs. a week. 1 semester.

___.1 (.2) INTRODUCTION TO EDUCATIONAL ADMINISTRATION

The general theory of administration, covering such topics as decision-making, planning, role of authority, attempting to develop in students techniques and procedures of analyzing and meeting administrative problems.

Classes 3 hrs. a week. 1 semester.

661.1 (.2) PROBLEMS IN ADMINISTRATION

A practical application of the principles examined in Edu 660.1 (.2) with particular consideration of administrative problems relating to personnel, pupils, buildings, instructional materials and financing.

Classes 3 hrs. a week. 1 semester.

662.1 (.2) INTRODUCTION TO SUPERVISION

A study of the part played by supervisors in building an efficient administrative organization, together with such topics as leadership, changing concepts of supervision, teacher expectations of supervisors, and problems relating to teachers.

Classes 3 hrs. a week. 1 semester.

663.1 (.2) PROBLEMS IN SUPERVISION

An examination of problems arising in the field of supervision including such topics as visits to classrooms, analysis of pupils' needs, individual and group conferences and development of instructional materials.

Classes 3 hrs. a week. 1 semester.

690.1 (.2) INDIVIDUAL STUDY

Prerequisite: registration is only by permission of the professor and the Dean of Education.

The course provides an opportunity for a student to undertake special directed study in a disciplinary area or topic relevant to his program, especially in the event a course in the subject in not offered during the current session at Saint Mary's or at another university in the metropolitan area. This individual study course may be taken more than once, if the syllabus is different.

ENGINEERING

Director, Division of Engineering, Associate Professor
D. L. Mulrooney
Associate Professors   W. P. Boyle, D. G. Hubley
Assistant Professors   R. M. Diwan, D. B. Van Dyer
Adjunct Professor   A. E. Creelman

106.1   ENGINEERING DESIGN GRAPHICS

Engineering drawing and sketching. Working drawings, standards and conventional practices. Projection Theory. Orthographic oblique and isometric drawing and sketching. Introduction to perspective drawing. The engineering design process and its relationship to engineering graphics.

Text: James H. Earle, *Engineering Design Graphics* (Addison Wesley); Earle, Cleland, Stark, Mason, Bardell, Vogel and Guerard, *Engineering Graphics and Design Problems* (Addison Wesley).

Classes   2 hrs. and lab 3 hrs. a week. 1 semester.

107.2   DESIGN AND DESCRIPTIVE GEOMETRY

Principles and applications of descriptive geometry. Application to problems such as roadway cut and fill, contour maps, design of dams, outcrops of mineral veins, clearances and drawing developments of shapes. Plotting graphs and curve fitting.

Text: *Engineering Design Graphics* as for Engineering 106.1; Earle, Cleland, Stark, Mason, Bardell, Vogel and Guerard, *Design and Descriptive Geometry Problems* (Addison Wesley).

Classes   2 hrs. and lab 3 hrs. a week. 1 semester.

113.2   SURVEYING

A course covering the theory and practices involved in surveying for engineering projects. The topics included are: surveying instruments, measurement of distance, difference in elevation, direction angles, area and earthwork calculations, circular curves, photogrammetry and mapping.

Text: Moffitt and Bouchard, *Surveying,* 6th edition, Intext Educational Publication.

Classes   3 hrs. and lab 3 hrs. a week. 1 semester.

120.0   TECHNOLOGY AND SOCIETY

This course is designed for students in all disciplines.

The complaint against technology, history of technological change, response to technological change, predictions of disaster, the question of adequate precautions, the interrelations of technology with science, industry and government.

Text: N. deNevers, ed., *Technology and Society* (Addison Wesley).

Classes   3 hrs. a week. 2 semesters.

203.2   ENGINEERING MECHANICS (STATICS)

Prerequisite: Eng 106.1-107.2, Mat 200.0 (concurrently).

Fundamental concepts and principles of mechanics statics of particles, equivalent force systems, equilibrium of rigid bodies, analysis of structures, friction, distributed forces, centroids, center of gravity, moments of inertia.

Text: Beer and Johnson, *Vector Mechanics for Engineers* (McGraw-Hill).

Classes   3 hrs. and lab 3 hrs. a week. 1 semester.

ENGINEERING

204.1 COMPUTER SCIENCE

Prerequisite: Mat 100.0.

Introduction to the digital computer and the computing process. Computer organization, information representation, and matching language. Basic data types, operations and expressions. Structure of algorithms and their flowchart representation. Repetitive calculations and arrays. Structure and control of subprocedures. Program optimization. Errors in numerical computation. FORTRAN IV language. Introduction to the terminal and the basic language. Introduction to logical operations and logic circuits.

Text: Booth & Chien, *Computing Fundamentals and Applications*, (Hamilton).

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

212.1 ENGINEERING MEASUREMENTS

Prerequisite: Mat 200.0 (concurrently).

The objective of the course is to introduce students to fundamentals of Engineering measurement and to provide them with opportunities to apply measurement techniques under typical engineering circumstances. Topics: nature of measurements, scales, units; concepts of accuracy and precision; systematic and random errors; laws of probability in relation to error; analysis of experimental data; transducers, functional elements, measurement of fundamental quantities; and data acquisition.

Text: Holman, *Experimental Methods for Engineers* (McGraw-Hill).

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

220.0 POLLUTION CONTROL

Prerequisite: second year standing. This course is open to non-engineering students of all faculties.

An introduction to the fundamental concepts of water, air, soil, noise, solid wastes and nuclear pollutants and their control. An investigation of the world as a finite system. Finally a review of growth trends in the world system. This course is designed specifically for non-technical students.

Text: Masters *Introduction to Environmental Science and Technology* (Wiley).

Classes 3 hrs. a week. 2 semesters.

300.1 DYNAMICS OF PARTICLES

Prerequisite: Mat 311.0 (concurrently) and Eng 203.2.

The objective of this course is to study the kinematics and kinetics of a particle. The course extends the principles developed in the course on statics. Both scalar and vector methods are used where appropriate. While three-dimensional problems are included the emphasis is on two-dimensional problems. Topics: Kinematics of a particle, rectilinear and curvilinearmotion, relative motion, Newton's Second Law; work and energy methods; impulse and momentum methods.

Text: Beer and Johnson, *Vector Mechanics for Engineers* (McGraw-Hill).

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

302.1 DYNAMICS OF RIGID BODIES

Prerequisite: Mat 200.0, Eng 300.1.

This course extends the concepts developed in 300.1 to apply to rigid bodies. The emphasis will be on plane motion of rigid bodies. Topics: Kinematics of plane motion, kinetics of plane motion; kinematics and kinetics of three-dimensional motion.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

303.2 FLUID MECHANICS

Prerequisite: Mat 200.0, Eng 203.2.

Fluid properties, fluid statics and stability. Lagrangian and Eulerian methods of analysis. Application of the control volume of continuity, energy and momentum. Euler's equation of motion, Bernoulli's equation and applications. Linear momentum equation and applications. Dimensional analysis and dynamic similitude. Viscous effects in pipe flow. Introduction to boundary layers and drag on immersed bodies. Flow measurement techniques.

Text: Victor L. Streeter, *Fluid Mechanics, 4th Edition* (McGraw-Hill).

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

ENGINEERING

304.1 MECHANICS OF DEFORMABLE BODIES

Prerequisite: Eng 203.2, Mat 200.0.

An introduction to the techniques and theories involved in the analysis of the strength, deformation and stability of structural members and assemblies under the action of forces. Specifically to develop understanding of the relationships between loads applied to non-rigid bodies and the resulting stresses and strains. Topics include: stress and strain, axially loaded members, torsionally loaded members, flexural loading, combined loadings, column loading and finally an introduction to the Theory of Elasticity.

Text: Higdon, Olsen, Stiles and Weese, *Mechanics of Materials, 2nd edition* (John Wiley).

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

306.2 ENGINEERING THERMODYNAMICS

Prerequisite: Phy 221.0, Mat 200.0.

Energy and the first law, ideal gas, gas equation, macroscopic properties of pure substances, properties and state, energy analysis of thermodynamic systems, principles of statistical thermodynamics, entropy and the second law, general chemical equilibrium, thermodynamic relations, kinetic theory applications, gaseous mixtures, consequences and applications of second law, thermodynamic systems.

Text: Holman, J. P. *Thermodynamics, 2nd edition*.

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

308.1 SYSTEM DYNAMICS (ELECTRIC CIRCUITS)

Prerequisite: Phy 221.0, Mat 300.0 (concurrently).

The objective of this course is to introduce the student to the fundamental laws of electric circuits and circuit parameters, the concept of time-constants, impedances and admittances and general network theorems. Topics include: Kinchoff's Laws; Ohm's law and circuit parameters, resistive networks, loop and node equations; network theorems, super position, Thevenin-Norton; A.C. circuits, sinusodial response, power, power factor, three-phase circuits; transients in simple circuits.

Text: Vincent Del Toro, *Electrical Engineering Fundamentals* (Prentice-Hall, 1972).

Classes 3 hrs. and lab 3 hrs. a week. 1 semester.

314.2 ENGINEERING MATERIALS

Prerequisite: Che 203.0, Phy 221.0, Mat 100.0.

Electrons and bonding, atomic packing, crystal structure, imperfections in crystals, non-crystalline solids, the shapes and distributions of phases in solids, equilibrium diagrams, non-equilibrium diagrams, non-equilibrium phase transformations, macroscopic properties of materials.

Text: Flinn and Trojan, *Engineering Materials and their Application* (Houghton Mifflin Co.)

Classes 3 hrs. a week. 1 semester.

ENGLISH

Chairman, Associate Professor   K. A. MacKinnon
Associate Professors   C. J. Byrne, R. H. Crowther,
    L. Falk, T. E. Flynn,
    G. B. Hallett, R. Perkyns,
    J. Power, S.J., C. J. Terry,
    K. R. Tudor
Assistant Professors   J. Baker, M. J. Larsen,
    R. A. MacDonald, D. Pigot,
    A. T. Seaman, T. A. Whalen
Lecturer   A. Hopwood

The Introductory Program:

Egl 200.0, Introductory English, is designed to meet the various needs of students entering the University from Junior or Senior Matriculation. It satisfies the requirement for an English course stipulated by the Faculties of Arts, Commerce and Science. The course is divided into many sections to ensure as much individual attention to each student as possible. Students are urged to make use of the language tutorials, which are an adjunct to the course designed to help them with particular problems of reading and writing at the university level.

The Non-Major Program:

After Egl 200.0, students who do not wish to major in English may select courses from the 300-320 range, or at other levels in consultation with the Department. The 300-320 courses are designed specifically for non-majors.

The Major Program:

An English major is required to complete six courses beyond Egl 200.0. The core of the English major program comprises the following three courses: Egl 340.0 — The Study of Poetry; Egl 341.0 — A Study of The Novel, and Egl 354.0 — Elizabethan and Jacobean Drama. A student will normally take these courses after successful completion of Egl 200.0.

Students receiving a mark of A in Egl 200.0 or the recommendation of their professor may be permitted, at the discretion of the Chairman, to by-pass a core requirement. The core courses may be taken simultaneously or over two consecutive years.

Additionally, an English major should complete three further English courses as electives. English majors may elect more than one course from the 300-320 range for their degree but only one course from this range may be included in a student's minimum requirement for a major.

Students will normally follow either of two schemes:

Three Year Degree	Four Year Degree
First Year:	First Year:
Egl 200.0	Egl 200.0
Second Year:	Second Year:
Egl 340.0	Egl 340.0
Egl 341.0	Egl 341.0
Egl elective	
Third Year:	Third Year:
Egl 354.0	Egl 354.0
Egl elective	Egl elective
Egl elective	
	Fourth Year:
	Egl elective
	Egl elective

The Honors Program

All prospective honors students should refer to the section of this calendar pertaining to honors degrees and apply to the Registrar for enrolment in honors after their first year in the University.

The following is a list of honors requirements in recommended order:

1. Egl 200.0
2. Egl 340.0 or, see (a) below
3. Egl 341.0 or, see (a) below
4. Egl 356.0
5. Egl 354.0
6. Egl 352.0
7. Egl 552.0
8. 400 level elective — see (b) below
9. 400 level elective
10. 400 level elective

ENGLISH

(a) Egl 340.0 and 341.0 may be by-passed for a higher level (i.e., 350+ or 400+) course after consultation with the departmental honors advisor and permission of the Chairman.

(b) 400 level electives must be chosen in consultation with the departmental honors advisor.

(c) No 300-320 elective will count towards the student's minimum requirements for honors.

(d) All prospective honors students must consult the Chairman about admission to the program; after admission each candidate will report to the Chairman who will assign an advisor; each course elective or course change must be approved by the departmental honors advisor.

(e) Honors English candidates must maintain an average of B (3.0) in their English courses.

200.0   INTRODUCTORY ENGLISH

A course designed to establish and refine basic skills of critical reading and writing through the close study of selected prose, fiction, drama and poetry. Accreditation will depend on a pass in both course work and a final 'Use of English' examination.

Classes   3 hrs. a week and tutorials. 2 semesters.

300.0   COMPARATIVE LITERATURE: EUROPE

Prerequisite: Egl 200.0.

A seminar course examining some of the characteristics of West European literature and a consideration of whether or not it is worth reading. Details of texts will be posted.

Classes   3 hrs. a week. 2 semesters.

122

301.0   THE MODERN NOVELLA

Prerequisite: Egl 200.0.

A course designed to introduce the student to a wide range of short novels which illustrate both the rich diversity and the fundamental unity of concern which characterize the modern imagination and cultural consciousness.

Texts: Hamalian and Volpe, *Ten Modern Short Novels;* R. Paulson, *The Modern Novelette*.

Classes   3 hrs. a week. 2 semesters.

302.0   CONTEMPORARY CANADIAN LITERATURE

Prerequisite: Egl 200.0.

Though the purpose of this course is to create an exploratory and experimental atmosphere, it also includes an effort to study works which illustrate both regional differences in Canada today and the wide variety of forms in which our literature is now being expressed. Writers studied include: Callaghan, MacLennan, Ross, Riguet, Buckler, Garner, Richler, Moore, Atwood, Laurence, Nowlan, Purdy, Layton and others.

Classes   3 hrs. a week. 2 semesters.

304.0   THE DEVELOPMENT OF DRAMA IN THE THEATRE

Prerequisite: Egl 200.0.

This course will trace in outline the history of drama in relation to the living theatre from its inception to contemporary styles, with particular reference to the Greek and Roman classical theatre; the religious origins and secularization of English Drama; the Elizabethan Playhouse; the development of the private theatre and proscenium stage; the clash of Puritanism with the Restoration and 18th century theatre: pioneers of the new stage craft in the later 19th and 20th centuries.

Classes   3 hrs. a week. 2 semesters.

305.0   INTRODUCTION TO LINGUISTICS

Prerequisite: Egl 200.0.

The course surveys past and present approaches to linguistic science with reference to phonetics, phonemics, morphology, syntax, semantics, and classification of languages.

Classes   3 hrs. a week. 2 semesters.

ENGLISH

308.0   LITERATURE OF ATLANTIC CANADA

Prerequisite: Egl 200.0.

This course will examine the literature and literary background of Atlantic Canada. Emphasis in the first semester will be on the 19th and early 20th centuries; in the second semester on contemporary writing.

Classes   3 hrs. a week. 2 semesters.

**309.0   LITERATURE BETWEEN THE WARS:
                1918-1939**

Prerequisite: Egl 200.0.

An examination of the way in which poets, novelists and critics responded to war, post-war disjointedness, Fascism, Communism, and the Depression.

Classes   3 hrs. a week. 2 semesters.

310.0   MODERN ENGLISH LANGUAGE

Prerequisite: Egl 200.0.

The course will examine the nature of modern English, with reference to its syntax, grammar and vocabulary. Contemporary approaches to grammatical description and to problems of usage and lexicography will be discussed. Recommended for prospective teachers of English.

Classes   3 hrs. a week. 2 semesters.

**311.0   CONTEMPORARY AMERICAN
                FICTION**

Prerequisite: Egl 200.0.

A study of American fiction since World War II. Special attention will be paid to such writers as Ellison, Malamud, Bellow, O'Connor, Barth and Heller, partly because they interpret some important aspects of the national experience during the last three decades and partly because they raise basic questions about the aesthetics of fiction.

312.0   CHILDREN'S LITERATURE

Prerequisite: Egl 200.0.

This course will examine some of the concepts of childhood in English-speaking cultures through an exploration of the types of literature for children produced in different historical periods. A variety of literature written for or read by children will be studied in an attempt to establish modes of evaluation appropriate to such material.

313.0   INTRODUCTION TO FOLKLORE

Prerequisite: Egl 200.0 or equivalent.

This course will survey the various types of folklore (tale, song, riddle, proverb, etc.) within a context of ethnic and regional traditions. It will examine further (a) the relationship between folklore and written literature, (b) the problems of diffusion, collection, classification, and evaluation of folklore, and (c) background materials from European and North American traditions.

314.0   SCIENCE FICTION

Prerequisite: Egl 200.0.

Under the general designation of science fiction, this course will explore aspects of the *visionary* or *speculative* literature which has developed out of the recognition that scientific thought and technology are the most distinctive characteristics of modern time and culture. The usual themes of evolution in space-time, the possibilities of extraterrestrial life, the threatened conquest of man by his machines, and the sense of the *uncanny* or *weird* which the awareness of scientific knowledge forces upon us will be considered in the work of such classic science-fiction authors as Poe, Verne, H. G. Wells, Zamyatin, Capek, and in contemporary writers like Asimov, Bradbury, Miller, Heinlein, Hoyle, Arthur C. Clarke, John Wyndham, and others. The scientific or *science-fiction* elements in the writing of more standard authors like Huxley, Orwell, Burgess, D. Lessing, Vonnegut, Pynchon will also be considered.

Classes   3 hrs. a week. 2 semesters.

ENGLISH

340.0 THE STUDY OF POETRY

Prerequisite: Grade of C in Egl 200.0.

A study of methods and problems in poetics and the reading and analysis of English poetry for the purpose of preparing students for advanced work. The study will be conducted within the context of a chronological presentation of English poetry. In addition, the work of one poet will be studied in close detail.

Classes 3 hrs. a week. 2 semesters.

341.0 A STUDY OF FICTION

Prerequisite: Grade of C in Egl 200.0.

A close study of representative and important fiction from the 18th to the 20th century. The course is designed to introduce students to major writers of fiction as well as to the analytical concepts necessary for critical appreciation and judgment.

Classes 3 hrs. a week. 2 semesters.

350.0 HISTORY OF THE ENGLISH LANGUAGE

Prerequisite: Grade of C in Egl 200.0.

A course designed to acquaint the student with the nature of language and its growth. The student will be instructed in the basic techniques of linguistic analysis.

Classes 3 hrs. a week. 2 semesters.

352.0 CHAUCER AND THE 14TH CENTURY

Prerequisite: Egl 340.0 (or may be taken concurrently).

This course will deal primarily with the poetry of Chaucer which will be studied in the original Middle English. Students will be required to do outside reading on literary influences and on life in 14th century England.

Texts: F. N. Robinson, ed., *The Works of Chaucer; The Age of Chaucer,* Pelican Guide to English Literature, Volume 1.

Classes 3 hrs. a week. 2 semesters.

354.0 ELIZABETHAN AND JACOBEAN DRAMA

Prerequisite: Grade of C in Egl 200.0.

Shakespearean drama will be the major subject of study in this course. Due attention will be given Shakespeare's predecessors and successors so that the student will become aware both of the development of Elizabethan and Jacobean drama and of Shakespeare's relation to that drama and the age. Supplementary reading will be required in such areas as Greek tragedy, Medieval drama, and Renaissance poetry.

Classes 3 hrs. a week. 2 semesters.

356.0 THE POETRY AND PROSE OF THE ENGLISH RENAISSANCE

Prerequisite: Egl 340.0 (or may be taken concurrently).

A study of forms and developments in the literature of the English Renaissance, excluding drama. Poets from Wyatt through the Metaphysicals and Milton will be examined and also a wide variety of prose writers from Elyot to Browne.

Classes 3 hrs. a week. 2 semesters.

400.0 RESTORATION AND 18TH CENTURY POETRY AND PROSE: 1666-1780

Prerequisite: Egl 340.0 and 341.0 (or either may be taken concurrently).

A study of the central works in the Neo-Classic era. Major attention is given to Dryden, Swift, Pope and Johnson.

Classes 3 hrs. a week. 2 semesters.

401.0 THE NOVEL: DEFOE TO AUSTEN

Prerequisite: Egl 341.0 (or may be taken concurrently).

The study of major novelists of the 18th century. Special emphasis will be placed on Defoe, Richardson, Fielding Goldsmith and Austen. Sterne, Burney and the Gothic novelists may also be studied.

Classes 3 hrs. a week. 2 semesters.

ENGLISH

402.0 THE 19TH CENTURY NOVEL

Prerequisite: Egl 341.0 (or may be taken concurrently).

Is it true and does it matter to us now, that the 19th century novelists 'held up the mirror to life' and created a fresh form of expression which employed the strength and scope of English dramatic poetry? The course will pursue these questions by examining in detail two novels by each of the following: Austen, Eliot, Bronte, Dickens, Hardy, and James.

Classes   3 hrs. a week. 2 semesters.

403.0 ROMANTIC POETRY

Prerequisite: Egl 340.0 (or may be taken concurrently).

A study of the origins and development of the English Romantic movement. Major emphasis will be placed on the works of Blake, Wordsworth, Coleridge, Shelley, Keats and Byron.

Classes   3 hrs. a week. 2 semesters.

404.0 VICTORIAN POETRY AND PROSE

Prerequisite: Egl 340.0 or 341.0 (or either may be taken concurrently).

The course is designed to acquaint students with the attitudes and ideas of writers in the Victorian period. Arnold, Browning and Tennyson are studied in depth.

Classes   3 hrs. a week. 2 semesters.

405.0 19TH CENTURY AMERICAN LITERATURE

Prerequisite: Egl 340.0 or 341.0 (or either may be taken concurrently).

A study of major writers of the 19th century. Critical readings of works by Cooper, Hawthorne, Melville, Emerson, Thoreau, Whitman, Dickinson, James.

Classes   3 hrs. a week. 2 semesters.

406.0 20TH CENTURY AMERICAN LITERATURE

Prerequisite: 'Egl 340.0 or 341.0 (or either may be taken concurrently).

A review of representative figures in the modernist tradition. A consideration of the work and place of such writers as Dreiser, Hemingway, Faulkner, Fitzgerald, Mailer, Pynchon.

Classes   3 hrs. a week. 2 semesters.

407.0 MODERN ENGLISH POETRY

Prerequisite: Egl 340.0 (or may be taken concurrently).

A study of the major poets of the modern era. Authors will include Hardy, Hopkins, Eliot, Pound, Yeats, and Auden. The course will also include reference to English poetry of the fifties and sixties.

Classes   3 hrs. a week. 2 semesters.

408.0 20TH CENTURY DRAMA

Prerequisite: Egl 340.0 or 341.0 (or either may be taken concurrently).

A study of the major dramatists from the late 19th century to contemporary movements. Dramatists to be studied include Ibsen, Chekhov, Strindberg, Shaw, Synge, O'Casey, O'Neill, Pirandello, Brecht, Wilder, Williams, Miller, Beckett, Ionesco, Pinter, Osborne and Albee.

Classes   3 hrs. a week. 2 semesters.

409.0 LITERATURE, THOUGHT AND ART 1880-1930

Prerequisite: Egl 340.0 or 341.0 (or either may be taken concurrently).

An exploration of the relationship between the cultural background of the period and its effect on imaginative works. This is not a course in the history of ideas.

Classes   3 hrs. a week. 2 semesters.

ENGLISH

410.0   THE MODERN NOVEL

Prerequisite: Egl 341.0 (or may be taken concurrently).

An examination of the early 20th century novel in terms of a close critical analysis of representative works and in the light of certain cultural, philosophic and socio-political tendencies which have played a decisive part in determining the response of the modern imagination to emotional, moral and social experience.

Classes   3 hrs. a week. 2 semesters.

411.0   THEORY AND PRACTICE OF CRITICISM

Prerequisite: Egl 340.0 or 341.0.

A course offering practice in individual judgment of various literary forms, with introduction to the principles of criticism.

Classes   3 hrs. a week. 2 semesters.

412.0   THE DEVELOPMENT OF ENGLISH CANADIAN LITERATURE

Prerequisite: Egl 340.0 or 341.0 (or either may be taken concurrently).

Some background reading in Canadian intellectual and cultural history is required. The main literary and historical themes are imperialism, sectarianism, and regionalism. Besides poets like Roberts, Lampman, Pratt, F. R. Scott, Birney, and Layton, other writers to be studied include McCulloch, Haliburton, Susanna Moodie, Sara Duncan, Leacock, Callaghan, MacLennan.

Classes   3 hrs. a week. 2 semesters.

413.0   MODERN ANGLO-IRISH LITERATURE

Prerequisite: Egl 340.0 or 341.0 (or either may be taken concurrently).

A study of the contradictions and fissures in modern Ireland as these are seen through the imagination of her writers. The writers studied will include: W. B. Yeats, J. M. Synge, G. B. Shaw, Sean O'Casey, Maurice O'Sullivan, Liam O'Flaherty, James Joyce, P. U. Kavanaugh, Padraic Colum, Sean O'Faolain, James Stephens, J. B. Kane, and Brian Freele.

Classes   3 hrs. a week. 2 semesters.

414.0   DRAMA AND SOCIETY- RESTORATION TO LATE 19TH CENTURY

Prerequisite: Egl 340.0 or 341.0 (or either may be taken concurrently).

A course which traces the fortunes of drama over two centuries in relation to the society of the age. The Comedy of Manners is studied with special attention to Congreve, Wycherley, Sheridan and Wilde. The decline of tragedy is traced from the heroic tragedy of Dryden to the rise of the 19th century melodrama. The theatrical revival in the 19th century centers on social drama, particularly by Ibsen, Strindberg, Pinero, and Shaw.

Classes   3 hrs. a week. 2 semesters.

415.0   THEORY OF GRAMMATICAL ANALYSIS

Prerequisite: Egl 310.0, 350.0 or Fre 311.1 or Ant 390.0.

A comparative cross-disciplinary study of the leading theories and methods of grammatical analysis, with special emphasis on the structural and transformational-generative approach. Strongly recommended for prospective English and language teachers.

Classes   3 hrs. a week. 2 semesters.

450.0   SPECIAL AUTHOR

Prerequisite: permission of the department.

A tutorial course open to students who wish to study a particular author largely through independent reading. Students are required to discuss their special interest with a member of the department during the preceding academic year.

Tutorials by arrangement with supervisor. 2 semesters.

451.0   SPECIAL SUBJECT

Prerequisite: permission of the department.

A tutorial course open to students who wish to study a particular subject largely through independent reading. Students are required to discuss their special interest with a member of the department during the preceding academic year.

Tutorials by arrangement with supervisor. 2 semesters.

ENGLISH

550.0   SPECIAL AUTHOR

Prerequisite: enrolment in the English honors program, or special recommendation of the department.

This course will provide the opportunity to study a particular author in considerable depth and detail, and will require some measure of independence and initiative in the student.

Tutorials by arrangement with supervisor. 2 semesters.

551.0   SPECIAL SUBJECT

Prerequisite: enrolment in the English honors program, or special recommendation of the department.

This course will provide the opportunity to study a particular subject or period in considerable depth and detail, and will require some measure of independence and initiative in the student.

Tutorials by arrangement with supervisor. 2 semesters.

552.0   LITERATURE AND CRITICISM SEMINAR

Prerequisite: enrolment in the English honors program, or special recommendation of the department.

A seminar course aimed towards an understanding of the general foundations of literature and criticism, and an appreciation of the links between literature and other disciplines. The course will use material from a wide variety of periods and sources.

Classes   2 hrs. a week. 2 semesters.

GEOGRAPHY

Chairman, Associate Professor   D. Day
Assistant Professors   R. McCalla, H. Millward,
                            B. Robinson

General Information

In its broadest sense geography studies the interaction between man and his environment. It derives much of its educational value from its interdisciplinary approach to man-environment relationships. At the same time it is a subject of practical importance in such fields as urban and regional planning, resource development, industrial location, marketing research and environmental management. The Geography Department has developed two major programs. The first is a general major which will be of particular interest to teachers and prospective geography teachers. The second structured major is for people interested in the field of urban and regional development. A third major in coastal and marine studies is being developed.

Departmental Policy

NOTE: Students who have taken geography courses formerly offered, or presently cross-listed by anthropology, are not permitted to take for credit the same course under geography.

(1) The Department regards Gpy 200.0, 201.0, and 203.0 both as *service* courses for the university in general and basic introductory courses for geography majors and honors students. With the exception of Gpy 300.1 and 330.2, higher level courses are designed to serve the interest of geography majors but may be of interest to students in cognate areas. In some cases, the Department may allow a student from a cognate area to take the course without the stated prerequisite: for example, economics students may be admitted to Gpy 301.0 and 400.1; similarly anthropology and history majors may be allowed to take Gpy 409.0.

(2) The course content in most geography courses is cumulative.

(3) Where a prerequisite is specified, a student wishing to take the course must have obtained at least a C grade in the stated prerequisite.

(4) 300 and 400 level courses are not open to students in their first year at university.

General requirements for majors

(1) To obtain a major in geography a student must complete the equivalent of seven university credits in geography.

(2) Students must normally complete three geography courses at the 200 level and four courses at the 300 level or above. Gpy 306.0 must be taken by all majors.

(3) In order to graduate with a major in geography, a student must obtain a quality point average of at least 2.0 in geography courses counting towards the major.

(4) All majors must follow a program of study established in conjunction with, and approved by, a member of the Department of Geography and must have the program approved by the Department at the beginning of each year.

(5) For more complete information on the geography program, the student should obtain a copy of *Notes and Guidelines for Geography Students* from the departmental secretary.

(6) All majors should purchase a copy of *Goode's World Atlas* or the *Oxford World Atlas* (paperback version).

Honors Program

To be admitted to the honors program a student must have a B standing in geography courses and have completed one year at the university. The candidate must have obtained satisfactory grades in non-geography courses.

Applications for admission to the honors program in geography must be submitted to the departmental chairman and approved by the department. After admission to the program, a student will be assigned an adviser. In order to complete an honors program a student must receive an overall grade point average of 3.0 in geography courses. All candidates must complete the following courses: Gpy 200.0 or 201.0, 203.0, 206.0, 306.0, 506.1, 516.2 and 526.0. If a student opts to take Gpy 201.0, he would be required to take an advanced regional geography course at the 300 level. In addition to these required courses, a student must complete the equivalent of six other full courses in geography. The combination of electives chosen must be approved by the departmental chairman. Complete details regarding the program and the honors thesis requirements are contained in *Notes and Guidelines for Geography Students*, available from the departmental secretary.

GEOGRAPHY

200.0   GEOGRAPHY OF CANADA

A study of the geography of Canada with special emphasis on the Atlantic Provinces. Topics considered will include the influence of the physical environment on human activity, the utilization of resources, the spatial distribution of industrial and tertiary sector development, population distribution and movement, regional problems, interregional relationships and the geographical background to national development problems. The course will include an examination of government attempts to promote change through various regional development and planning programs.

Classes   3 hrs. a week. 2 semesters.

201.0   MAN AND THE ENVIRONMENT
         (formerly 152.0)

Course focuses on man's adaptation to, and impact upon, the physical environment. The physical characteristics of the world's natural environments are reviewed, and the human use of the land is then considered in relation to environmental resources and limitations. Planning problems and resource conservation are discussed.

Classes   3 hrs. and lab 1 hr. a week. 2 semesters.

203.0   PHYSICAL GEOGRAPHY

A study of the physical environment of man through an examination of the character and processes of its major components. The course includes: a systematic study of the origin, nature and distribution of landforms; a discussion of the physical principles of climate and weather and methods of delimiting world climatic regions; a study of the spatial characteristics of the world's oceans, soil and vegetation zones. Laboratory work will include the geomorphic intepretation of maps and air photos, the interpretation of weather maps and climatic data and examination of soil profiles.

Classes   3 hrs. and lab or field work 3 hrs. a week. 2 semesters.

206.0   METHODS OF LOCATIONAL ANALYSIS

Prerequisite: Mat 100.0 or equivalent and 200 level geography (may be taken concurrently).

Students will be introduced to methods and problems in the collection, description and analysis of geographic data. The course includes a review of descriptive and inferential statistics as applied to locational problems, computer mapping, location-allocation problems, and methods of regional optimisation.

Classes   2 hrs. and lab 2 hrs. a week. 2 semesters.

300.1   THE ATLANTIC PROVINCES

NOTE: This course is not open to students in their first year at university.

A regional analysis of the Atlantic Provinces including a study of the spatial structure of social and economic development, the geographical distribution of resource activities, manufacturing and tertiary sector development, population distribution, migration patterns, urban development, regional and subregional problems.

Classes   3 hrs. a week. 1 semester.

301.0   ELEMENTS OF ECONOMIC
         GEOGRAPHY

Prerequisite: a 200 level geography course or permission of instructor.

The course considers the principles determining the geographical organization of economic activities. It will include consideration of international and regional variations in the level and structure of economic development and models of the location of production and trade patterns in agriculture, forestry, fishing, mining, manufacturing and tertiary activities. Attention will be given to the geographical relationships between population growth and economic development, to regional economic interaction and to efforts to promote the geographical reorganization of economic activity.

Classes   3 hrs. a week. 2 semesters.

GEOGRAPHY

302.0   SETTLEMENT GEOGRAPHY

Prerequisite: a 200 level geography course or permission of instructor.

An introduction to the study of rural and urban settlement patterns. Attention is focused on the following topics: locational analysis of site and situation; the spatial organization of settlements; the development and functioning of settlement systems; the internal spatial structure and functioning of settlements; factors influencing the evolution of regional settlement patterns. Case studies will be drawn from North America, Europe and parts of the less developed world.

Classes   3 hrs. a week. 2 semesters.

304.0   GEOGRAPHY OF THE SEAS

Prerequisite: Gpy 201.0 or 203.0.

A study of the spatial characteristics of the world's oceans, the land-sea interface and the human use of the sea. Topics include the physical framework of the oceans, regional variations in marine resources and intensity of resource use, the spatial structure and characteristics of oceanic shipping, factors affecting the arrangement of human activities in coastal areas, seaports and seaport terminals, and the political geography of the seas.

Classes   3 hrs. a week and field work. 2 semesters.

306.0   GEOGRAPHICAL TECHNIQUES
(formerly 300.0)

Prerequisite: two lower level geography courses, preferably including 203.0.

A techniques course designed primarily for geography majors. The course will study aspects of the geography of Halifax-Dartmouth and the Atlantic Provinces primarily through the use of basic geographical techniques such as mapping, map interpretation, air photo interpretation, surveys and field work.

Classes   3 hrs. a week and lab 3 hrs. a week. 2 semesters.

309.0   CULTURAL GEOGRAPHY
(formerly 220.0)

Prerequisite: a lower level geography course.

Course ranges from peasant societies to modern urban systems. It is concerned with the total cultural imprint of man on the world's landscapes and the basis of man's understanding of space and time.

Classes   3 hrs. a week. 2 semesters.

310.0   GEOGRAPHY OF THE
UNITED STATES

Prerequisite: a 200 level geography course or permission of instructor.

A geographical analysis of the United States. The first part of the course will discuss the following topics: the physical framework, population distribution and trends, the location of economic activities and regional interaction in the United States. This will be followed by an analysis of geographical patterns and characteristics of selected regions. The course will include a discussion, from the viewpoint of geography, of some of the major problems of present-day U.S.A.

319.0   CULTURAL ECOLOGY
(Ant 319.0)   (formerly 209.0)

Prerequisite: a 200 level geography course.

Introduction to the study of the relationship between man and his environment, ranging from hunting and gathering societies to modern commercial societies. The course considers men as functional entities in ecosystems and the various strategies and information sources used by societies in their interaction with environments.

Classes   3 hrs. a week. 2 semesters.

320.0   GEOGRAPHY OF EUROPE

Prerequisite: a lower level geography course.

A study of the physical, economic, social and political geography of contemporary Europe and its major regions, with particular reference to the European Economic Community.

PORTS AND SHIPPING

Prerequisite: Gpy 200.0 or 201.0.

A study of the seaport as a modern transport node and the spatial dynamics of the world shipping industry. Topics discussed will include: ports as "gateways" and industrial locations; port approaches and port layouts; the process of hinterland penetration and foreland development; port competition and planning; the oceanic shipping trade; break-bulk and bulk cargo traffic; the impact on time-space relationships of increasing ship size, new types of ships and the intermodal transfer of seaborne cargo.

Classes   3 hrs. a week. 2 semesters.

330.2   REGIONAL DEVELOPMENT IN
THE ATLANTIC PROVINCES
(formerly 400.2)

Prerequisite: Gpy 300.1 or permission of instructor.

A study of federal and provincial government efforts to reorganize the spatial pattern of social and economic development in the Atlantic region. The course includes a critical appraisal of both government efforts to modernize Newfoundland's society and economy in the post-1949 era and the aims and achievements of the A.D.A., A.R.D.A., A.D.B., F.R.E.D., and D.R.E.E. programs in the Maritimes.

Classes: 3 hrs. a week. 1 semester.

340.0   CULTURAL GEOGRAPHY
(Ant 331.0)   OF CHINA

Prerequisite: a lower level geography course.

The course will cover the following topics: physical foundations, hydraulic agriculture, the nomad frontier, origins in the loess, Chinese expansion to the south, China's marketing and administrative geography, the Communist revolution.

Classes   3 hrs. a week. 2 semesters.

350.0   GEOGRAPHY OF THE SOVIET UNION

Prerequisite: a lower level course in geography.

A study of the physical, economic, social and political geography of the Soviet Union. Emphasis will be placed on the geographical basis of urbanization, industrialization, regionalization, resource use, transportation and contemporary problems in a centrally planned country.

400.1   REGIONAL DEVELOPMENT

Prerequisite: Gpy 301.0, 302.0 or 330.2.

Consideration of the spatial dimensions of regional development problems and government policies designed to alleviate them. The foundations of regional development theory will be critically assessed in the light of recent experience.

Classes   3 hrs. a week. 1 semester.

402.0   INTERNAL STRUCTURE OF CITIES

Prerequisite: Gpy 206.0, 301.0 or 302.0.

Theories, models and empirical research on the spatial structure of urban areas, including methods of urban analysis. Topics include: overall patterns of land use and land value, locational requirements for residential, commercial, industrial and institutional uses, growth processes, the role of transport in shaping growth, urban climate and hydrology, perception of urban areas and locational conflicts.

Classes   3 hrs. a week and field work. 2 semesters.

406.1   FIELD STUDIES

NOTE: This same course description applies to 416.1, 426.1, 436.1, and 446.1.

Prerequisite: a geography course and permission of the instructor.

This course will introduce students to the methods and scope of fieldwork in geography. It will include lectures, group discussions, and individual or group analysis of selected problems in the field camp area. Readings will be assigned before and after the course. All students must submit a comprehensive field studies report within one month of the end of the course.

3 weeks, including 8-10 days in a field camp area.

NOTE: This course is offered only in summer.

GEOGRAPHY

409.0   THE BIRTH OF THE CITY

Prerequisite: Gpy 309.0, 319.0 or 340.0.

Cross-cultural study of the processes that gave rise to the evolution of cities. The processes assessed involve the cosmo-magical, ecological, demographic and technological bases of urban forms. The primary examples will be from early China, Mesopotamia and Mesoamerica. Secondary consideration will be given to West Africa and South-East Asia. In addition to the obvious neolithic causal sequence, attention will also be paid to such consequences as the relation between urbanization and the state.

Classes   3 hrs. a week. 2 semesters.

410.0   REGIONAL ANALYSIS

Prerequisite: Gpy 301.0, 302.0 or 330.2.

Study of contemporary methods and techniques of regional analysis and their application in regional development and planning. Consideration will be given to methods of examining spatial changes in various sectors of the economy at the regional and subregional levels and to the ways in which intraregional and interregional linkages affect regional growth.

Classes   3 hrs. a week. 2 semesters.

412.2   URBAN TRANSPORTATION

Prerequisite: Gpy 206.0, 301.0 or 302.0.

Course will consider urban transportation networks in relation to underlying principles of spatial behavior. Topics covered will include urban transportation space, traffic generation, trip origins and trip destinations, transit systems, the impact of changes in the structure of the urban transportation network, urban transportation problems and planning, forecasting network needs. There will be some discussion of Halifax-Dartmouth urban transportation problems.

Classes   3 hrs. a week. 1 semester.

422.0   URBAN PLANNING AND URBAN FUTURES

Prerequisite: Gpy 206.0, 301.0 or 302.0.

The planning and control of urban land use patterns, and an examination of the future spatial structures of cities. Topics include: the planning process, subdivision control, comprehensive development areas, municipal planning, metropolitan planning, urban allocation models, new towns, forecasting techniques, long-term futures.

Classes   3 hrs. a week. 2 semesters.

506.1   SEMINAR IN THEORETICAL GEOGRAPHY

Prerequisite: honors standing in geography.

Honors students will be made familiar with major advances in theoretical and philosophical aspects of geography.

Classes   3 hrs. a week. 1 semester.

516.2   SEMINAR IN APPLIED GEOGRAPHY

Prerequisite: honors standing in geography.

Role of the geographer and geographical studies in fields such as environmental, regional and urban planning resource management; mapping and surveys; and marketing.

Classes   3 hrs. a week. 1 semester.

526.0   HONORS RESEARCH PROJECT

Prerequisite: honors standing in geography.

Honors students will be assigned to a research advisor who will guide the student in the formulation of the research proposal, the methodology to be followed during the course of the research and in the analysis of the research findings.

GEOLOGY

Chairman, Associate Professor C. A. R. de Albuquerque
Professor   D. Hope-Simpson
Associate Professor   Q. A. Siddiqui
Assistant Professor   J. Dostal

The Department of Geology offers programs of study for students enrolled in the degree of Bachelor of Science with concentration in geology and for those registered in the degree of Bachelor of Science with major and honors in geology.

The courses of the core program are those numbered 211.1, 213.2, 222.1, 224.2, 311.0, 322.0, 324.0, 413.0.

Registration in other 400-level geology courses is open as an elective to students enrolled for the science degree.

Students enrolled in the geology major program will normally take courses numbered 450 to 499, with a choice of specialization in the field of 'hard rock' or 'soft rock' geology. Registration in these courses is normally contingent on completion of the core program. Some prerequisites may be waived with the consent of the Department.

Students should seek advice from the Department as to their electives and supporting courses. For example, students wishing to specialize in 'soft rock' geology should choose supporting courses in biology, while those in 'hard rock' should give their preference to chemistry.

Senior students are encouraged to participate in research projects being carried out in the Department.

111.0   INTRODUCTION TO GEOLOGY

The earth as a planet; minerals and rocks, surface and deep-seated processes. Structural evolution of North America with special reference to the Maritime area. Historical geology. Economic geology.

Classes   3 hrs. a week plus 1 hr. lab and field work. 2 semesters.

201.1 (.2)   PRINCIPLES OF GEOLOGY

Prerequisite: permission of the Department.

Physical geology; rock forming minerals, igneous, metamorphic and sedimentary rocks. Diastrophism, geological processes. Introduction to earth history, identification of rock forming minerals and rock types. Interpretation of geological and topographic maps and aerial photographs.

Classes   3 hrs. and lab 3 hrs. a week. 1 semester.

202.2 (.1)   GEOLOGY OF ATLANTIC CANADA

Prerequisite: Geo 111.0 or Geo 201.1(.2) or equivalent.

The Precambrian shield of Eastern Canada. Evolution and structure of the Appalachians. Lithology and geological history of the Atlantic Provinces. Field trips to selected localities in the Atlantic Provinces for observation of rock types and structures.

Classes   3 hrs. a week plus field trips. 1 semester.

204.0   THE FACE OF THE EARTH

The earth's upper mantle and crust. The development of continents and ocean basins. Continental drift. The evolution of North America. Special topics will be presented in seminars. Intended for non-science students.

Classes   3 hrs. a week. 2 semesters.

211.1   INTRODUCTION TO MINERALOGY AND PETROLOGY

Prerequisite: Che 101.0 or Phy 101.0.

The earth and the planets. Earth's materials: crystalline and amorphous solids, rocks and rock-forming minerals. Igneous rocks and igneous activity. Metamorphism and metamorphic rocks. The rock cycle. The earth's interior.

Classes   3 hrs. and lab 3 hrs. a week. 1 semester.

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GEOLOGY

213.2   PETROGRAPHY

Prerequisite: Geo 211.1.

Optical properties of minerals. Determinative mineralogy with emphasis on the optical methods of mineral identification. Physical properties of minerals. Crystal symmetry.

Classes   3 hrs. and lab 3 hrs. a week. 1 semester.

222.1   FIELD METHODS

An integrated lecture-laboratory-field work course. Field mapping. Map interpretation. It is strongly recommended that students attend the Maritime Universities Geological Field School early in May following this course.

1 semester.

224.2   HISTORICAL GEOLOGY

Geological cycle. Geological time scale. Principles of stratigraphic interpretation. Continental evolution. Paleoenvironments and the evolution of life.

Classes   3 hrs. and lab 3 hrs. a week. 1 semester.

311.0   MINERALOGY AND PETROLOGY

Prerequisite: Geo 213.2.

Atomic structure of the minerals. Chemical mineralogy. The phase rule and phase diagrams. The origin of magmas and igneous rocks. Igneous processes in the crust and mantle. Metamorphic processes and metamorphic rocks. Metasomatism.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

322.0   PALEONTOLOGY

Prerequisite: Geo 224.1 or 201.0.

Fossils, their nature and mode of preservation. The morphology, classification and stratigraphic ranges of the main groups of invertebrate fossils. Elementary vertebrate paleontology.

Text: R. Moore, *Invertebrate Fossils;* Raup and Stanley, *Principles of Paleontology*.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

324.0   STRATIGRAPHY

Prerequisite: Geo 224.1 or 201.0.

Principles of stratigraphy. Tectonic evolution of North America. Principles of stratigraphic paleontology; paleoecology; facies; faunal and floral assemblages.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

355.0   ANALYTICAL CHEMISTRY FOR
(Che 331.0)   CHEMISTS AND GEOLOGISTS

Prerequisite: Che 201.1 and Geo 201.0.

An integrated lecture-laboratory course at the intermediate level with emphasis on analytical methods of importance to chemists and geochemists.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

413.0   STRUCTURAL GEOLOGY

Prerequisite: Geo 224.2 or 201.0.

Primary and secondary structures of rocks; rock deformation; continental evolution; tectonics.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

GEOLOGY

453.0 IGNEOUS AND METAMORPHIC PETROLOGY

Modern concepts and theories of petrogenesis. Study of selected suites of igneous rocks and metamorphic complexes. Igneous rocks, lunar rocks and meteorites.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

455.0 GEOCHEMISTRY

Principles of distribution of elements; geochemical features of geological processes; chemistry of igneous rocks, lunar rocks and meteorites.

Text: K. H. Wedepohl, *Geochemistry*.

Classes   3 hrs. a week. 2 semesters.

457.0 ECONOMIC GEOLOGY

The occurrence and classification of ore-deposits; theories of origin; field and laboratory investigations; surface and underground mapping problems.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

462.0 MICROPALEONTOLOGY

Principles of Micropaleontology: major groups of micro-fossils and their use in the petroleum industry. Paleoecology and correlation. Techniques of collection, preparation and identification.

Text: F.P.C.M. Van Morkhoven, *Post Palaeozoic Ostracoda;* J. A. Cushman, *Foraminifera*.

Classes   2 hrs. and lab 3 hrs. a week plus field work. 2 semesters.

464.0 SEDIMENTOLOGY

Minerology, petrography and petrogenesis of the main groups of sedimentary rocks.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

466.0 PETROLEUM GEOLOGY

The origin, migration and accumulation of oil and natural gas. Types of oil bearing structures, basic principles in oil exploration, geological and geographical distribution of oilfields.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

513.1 TECTONICS

Prerequisite: 5th year honors standing.

Major geologic structures and tectonic patterns. Ocean basins, ridges and trenches. Plate tectonics. Geosynclines and continental shields. Evolution of the earth.

Classes   2 hrs. and lab 1 hr. a week. 1 semester.

517.0 ADVANCED ECONOMIC GEOLOGY

Prerequisite: 5th year honors standing.

Selected topics in economic geology such as physical and chemical aspects of ore formation. Principles of geochemistry in mineral exploration. Detailed studies of well-known examples of mineral deposits, in particular Canadian deposits.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

GEOLOGY

519.0 PRECAMBRIAN GEOLOGY

Prerequisite: 5th year honors standing or permission of Department.

General characteristics of Precambrian rocks throughout the world. The lithology, tectonics and chronology of the Canadian Precambrian shield. Evolution of the early crust of the earth. Special problems of Precambrian geology.

Classes 3 hrs. and lab 3 hrs a week. 2 semesters.

540.1 SPECIAL TOPICS IN GEOLOGY

Prerequisite: 5th year honors standing and permission of Department.

Readings and discussions of current literature in geology on selected topics. Such topics as plate tectonics, geochemistry, statistics in geology, isotope geochemistry, petrogenesis, ore genesis, may be included.

Classes 3 hrs. a week. 1 semester.

550.0 HONORS PROJECT

Prerequisite: honors standing and permission of Department.

Research project carried out under the supervision of one member of the Department or jointly by more than one faculty member. Originality of the research project is emphasized.

HISTORY

Chairman, Associate Professor   W. Mills
Professors   S. Bobr-Tylingo, J. R. MacCormack
Associate Professors   R. Bollini, R. H. Cameron,
                     E. Haigh, B. Kiesekamp,
                  G. F. W. Young, M. Sun
Assistant Professors   C. Howell, R. Twomey

Departmental Policy

To obtain a major concentration in history, a student must have at least six university courses in history. The program must be approved by the Department.

All prospective honors students should refer to the section of this Calendar pertaining to honors degrees and apply to the Registrar for enrolment in that program after their first year at the University.

All students majoring in history are strongly advised to take two university courses in a foreign language. In the case of students concentrating in Canadian History, French is specified as the recommended language.

General Course Description

(a) All history courses are full year courses with one credit.
(b) History courses numbered on the 100 and 200 levels are survey courses open to students with no university credits in the subject. They are normally lecture courses; some combine lectures with small tutorial group meetings.
(c) To register for a course on the 300 level, a student must normally have at least one university course in history, though it need not necessarily be in the same area of the discipline. 300 level courses are usually structured to consist of both lectures and seminars.
(d) History courses on the 500 level are normally seminar courses designed for advanced work by history majors and honors students in their junior and senior years, and for M.A. candidates.
(e) History courses on the 600 level are graduate courses. Courses on the 300 level may often be taken for graduate credit and are designated as having two numbers in the Calendar; for example, 340.0 (640.0). Graduate students taking such courses will be expected to attain a higher level of achievement and may be required to do additional assignments.

120.0   HISTORY OF CIVILIZATION

A survey of world history from the origin of civilization, ca. 3000 B.C. to the 20th century A.D. The course will focus on the macro-historical development of such civilizations as the ancient Egyptian and Mesopotamian, Greco-Roman and Persian, Islamic and European; on their interaction with each other and with their 'barbarian' frontiers.

121.0   CIVILIZATION IN THE WEST

A course designed to explore the origins and development of the characteristic political, legal, and cultural institutions of western civilizations and their impact on other cultures.

122.0   SURVEY OF THE HISTORY OF CANADA

A survey course from the earliest times to the present with emphasis on the French regime, its rivalry with Great Britain for control of the Continent, British colonial rule, Confederation, and the development of Dominion status.

123.0   SURVEY OF THE HISTORY OF THE UNITED STATES

A survey of U.S. history from its colonial beginnings to the present. Attention will be given to central themes from the Revolution to World War II.

124.0   A HISTORY OF BRITAIN- 1066 TO THE PRESENT

This course is a general survey of British civilization from the Anglo-Saxon period to the present. The emphasis falls on significant themes rather than narrative history.

203.0   THE TWENTIETH CENTURY

An historic approach to the major problems of our time. Emphasis will be placed upon the backgrounds to World Wars I and II, the emergence of the United States as a world power, the Communist Revolution and its impact and the problems of industrial society.

204.0   EUROPE 1890-1945

An introduction to 20th century Europe with particular emphasis on the diplomatic and military background of the first and second world wars.

HISTORY

209.0   MODERN EAST ASIA

China and Japan in the 19th and 20th centuries as they confront the modern west, with special emphasis on the contrast between China's response and that of Japan.

210.0   A SURVEY OF THE HISTORY OF LATIN AMERICA

A survey of Latin American history from the pre-Columbian Amerindian civilizations to the present day. Such topics as the era of exploration and discovery, the colonial society, the independence, the 19th century, and the political and social revolutions of the 20th century will be considered.

211.0   HISTORY OF SCIENCE

The course will cover the major innovations and developments in Science and theory from Babylonian and Egyptian civilizations to the present century. Emphasis will be placed on the interaction between any society and the Science and technology it develops.

212.0   THE HISTORY OF RUSSIA AND THE SOVIET UNION, 882 TO THE PRESENT

An introductory survey beginning with the establishment of the Rurik dynasty, with emphasis on Russia's social situation and the way it shaped political developments.

218.0   SCIENCE IN THE
(Phi 318.0)   WEST SINCE 1500 A.D.

A philosophical and historical examination of the major aspects of western science represented in some texts from the 16th century onwards. The roots of modern scientific and technological society will be examined in an interdisciplinary way.

220.0   BRITISH EMPIRE-COMMONWEALTH

A study of trends in 18th and 19th century Britain with special emphasis on the practice and theory of imperialism.

291.0   HISTORY OF INDIA, A.D. 1500 TO PRESENT

This course surveys the history of India from A.D. 1526 to 1947. It studies several themes including the rise and fall of the Moghul and the British Empires in India. It examines the impact of the alien cultures and rule on India, the evolution of Indian nationalism, and the uniqueness of the Indian struggle for freedom.

302.0 (602.0)   THE ENLIGHTENMENT

The aim of the course is the study of the intellectual revolt which we know as the Scientific Revolution of Western Europe. The point is to examine man's reinterpretation of the natural universe in the context of the philosophical, cultural and social milieu of the 16th, 17th and 19th centuries.

303.0 (603.0)   TUDOR AND STUART ENGLAND

The history of England, 1485-1660 with special emphasis on the development of the English parliament.

304.0 (604.0)   EUROPE 1815-1945

Particular emphasis will be placed on the history of France, the 1848 revolution, the unification of Italy and Germany, and the events leading to World Wars I and II.

306.0 (606.0)   MONARCHY AND REVOLUTION

Between 1648 and 1815, the West made its greatest efforts to build a consensus from the remnants of medieval policy and the strengths of the new, analytical ideal. As the culmination of these efforts, the Atlantic revolutions of the last quarter of the 18th century are at the center of this course.

311.0 (611.0)   MEDIEVAL ENGLAND

The course attempts to trace the evolution and continuity of ideas and institutions in the great formative period of English history.

312.0 (612.0)   MEDIEVAL EUROPE

The main currents of medieval European history with special emphasis on the intellectual and cultural aspects.

HISTORY

315.0 (615.0)   19TH CENTURY BRITAIN

A study of society and values in the leading world power of the age.

316.0 (616.0)   FOUNDATIONS OF AMERICAN HISTORY: COLONIAL PERIOD TO 1789.

A course which is concerned with the founding of the American nation. Attention will be given to colonization, the growth of the Thirteen Colonies, their relationship with Great Britain culminating in the Revolution, and the establishment of the United States of America.

317.0 (617.0)   AMERICA IN THE 19TH CENTURY

A course which discusses the growth of the United States from an agrarian, importing nation to an industrial, exporting nation. Emphasis will be on the internal problems of developing the country, the expansion into the West, the Civil War, and the triumphs of the industrialists.

318.0 (618.0)   AMERICA IN THE 20TH CENTURY

A course concerned with the rise of financial capitalism and its relationship to the development of the United States as a world power.

319.0 (619.0)   CANADIAN-AMERICAN RELATIONS

This course will examine basic developments in Canadian-American relations. Political as well as social, economic, and religious trends will be analyzed. Some opportunity will be afforded students to use the vast quantity of primary source material at the Public Archives of Nova Scotia.

320.0 (620.0)   THE ATLANTIC PROVINCES AND NEW ENGLAND 1534-1974

An examination of the relationship of New England and the Atlantic Provinces undertaken from a comparative point of view. This course deals with political, economic, and religious trends common to the experience of both communities.

321.0 (621.0)   AFRICA IN THE 19TH AND 20TH CENTURIES

A look at some African societies and their values, with some examination of the phenomena of European intrusions, conquests and colonialism, and their impact on African societies.

322.0 (622.0)   SOUTH AFRICA

A study of the complex relationships and conflicts arising from different cultures, religions, and skin colors from the 17th century to the ''apartheid'' state of the mid-20th century.

323.0 (623.0)   DYNASTIC HISTORY OF CHINA 618-1911

A study of society, government and intellectual development in China during the T'ang, Sung, Ming and Ch'ing dynasties, with special attention to factors affecting the rise and decline of dynasties.

324.0 (624.0)   CULTURAL HISTORY OF JAPAN, 710-1868

A study of the evolution of Japanese society and culture from the Nara period to the Tokugawa shogunate in the 19th century. Special emphasis will be placed on the transition from the period of imitation of the Chinese model to the emergence of a characteristically Japanese culture.

326.0 (626.0)   A HISTORY OF SPAIN AND PORTUGAL

A study of the history of Spain and Portugal from their Roman foundations to the present. Special emphasis will be devoted to the period of Spanish imperial preponderance in the 16th Century, and to the ideological conflicts of the 20th Century.

327.0 (627.0)   A HISTORY OF NEW FRANCE TO 1791

This course will involve a study of the cultural, social, political, and economic development of the French regime in America. In addition, it will attempt to deal with the immediate consequences of the Conquest insofar as they were reflected in this development.

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HISTORY

328.0 (628.0)   A HISTORY OF BRITISH NORTH AMERICA 1763-1867

This course will examine the major political, social, economic, religious, and intellectual trends evident in British North America in the period following the Treaty of Paris, 1763. Special attention will be given to the historiography of this period.

329.0 (629.0)   HISTORY OF CANADA 1849-1920

This course deals with the problems arising from the attempt to build a British North American nation in the age of Macdonald and Laurier.

330.0 (630.0)   NORTH AMERICAN INTELLECTUAL HISTORY

An examination of the origins and continuing impact on the North American experience of several key ideas, e.g., the frontier, the character of a good ruler, a sense of national destiny, and nativism.

331.0 (631.0)   THE AMERICAN REVOLUTION, 1763-1789

A consideration of the causes and consequences of the American Revolution from several viewpoints, including military, political, social, economic, religious, and the Loyalist experience.

332.0 (632.0)   CANADIAN SOCIAL HISTORY, 1837-1919

An examination of the process and consequences of change in Canada from a rural to an urban society; and of Canadians from independent commodity producers to an industrial proletariat.

333.0 (633.0)   A HISTORY OF CANADA IN THE 20TH CENTURY

A course designed to examine the emergence of Canada's social, political, and economic structures in the 20th century. Some attention will also be given to Canada's role as an emerging world power, her relationship with the United States and her role within the British Empire and Commonwealth.

334.0 (634.0)   MYTH AND HISTORY: THE PROBLEM OF INTERPRETING HUMAN EXISTENCE

Man's search for meaning. The life of man in relation to his own past and that of his communities; the question put to Marc Bloch: "Papa, what good is history?" Students in this course coregister in Rel 306.0.

335.0 (635.0)   RESTORATION AND 18TH CENTURY ENGLAND

The emphasis will fall on the continuity and development of institutions, procedures and ideas.

336.0, 346.0 (636.0, 646.0)   ENVIRONMENT, INSTITUTIONS AND VALUES IN CANADA AND THE UNITED STATES DURING THE 19TH AND 20TH CENTURIES

Prerequisite: two courses in history, one of which must be in either Canadian or American history.

Students must register concurrently in 336.0 and 346.0 and will receive two credits. These courses will examine the development of institutions and attitudes in Canada and the United States during the 19th and 20th centuries. Unlike traditional courses in Canada-American relations it will deal with the development of the peculiar North-American life-style. Particular emphasis will be put on the role of the frontier and of religion and ideology in the development of national institutions, national myths, and national consensus.

Students will be expected to utilize primary as well as secondary materials including various literary, philosophical, and religious writings.

337.0 (637.0)   RUSSIA IN REVOLUTION

The course will begin with the Decembrist revolt of 1825 and end at the time of Lenin's death when Stalin's rise to absolute power was beginning. It will deal with the social, political and intellectual dissent in response to autocratic intransigence which swept 19th century Russia and finally culminated in the Bolshevik seizure of power.

Some primary sources, including a few relevant novels, will be read in addition to secondary materials.

HISTORY

338.0 (638.0)   VALUES AND CIVILIZATION

The course is cross-cultural in character and will place emphasis on the impact of the Judaic, Greek and Christian value systems on the development of free institutions in the west as compared and contrasted with the corresponding impact of Confucian values on Chinese institutions. The object of the course is to provide an historical perspective on contemporary problems relating to human values.

339.0 (639.0)   RUSSIA AND THE U.S.S.R.
                     SINCE 1917

The course will deal with Russia and the Soviet Union from the abdication of Tsar Nicholas II to the post-Khruschev period. There will be an attempt made to examine the discrepancies between the theory of Communism and its practice, and the possible reasons for that discrepancy. Some time will be spent considering the situation of religion, culture and the arts in the U.S.S.R.

340.0 (640.0)   HISTORY OF THE
                     ATLANTIC PROVINCES

Commencing with the earliest European contact with the region, this course will concentrate on the period after the beginning of permanent settlement. Special emphasis will be given to Nova Scotia as an area of severe clashes between the Indian and European cultures, of intense English-French rivalry, and later of the problems in adopting traditional British models of government, settlement, and society to a colonial region.

341.0 (641.0)   BRITAIN IN THE 20TH CENTURY

The course will attempt to outline and to explain the drastic changes which occurred in the international status and social fabric of the United Kingdom in the present century.

342.0 (642.0)   CHINA IN REVOLUTION
                     1850-1950

An analysis of the causes and consequences of the various revolutions which have drastically changed the course of modern Chinese history. More specifically, the problems of reform versus revolution, leadership, economic and social injustices, subversive ideology and governmental reactions will be dealt with in detail.

343.0 (643.0)   TO THE GREAT WAR

Between the time of Napoleon and World War I, Europeans came to agree to a remarkable extent on a lexicon of political concepts such as honor, duty, citizen/subject, nation and democracy. This course will examine these and similar concepts, particularly the consensus with respect to war as both a supreme test of the community and the agency of its freedom. Emphasis is on Britain, France and Germany.

344.0 (644.0)   A HISTORY OF NOVA SCOTIA

This course will examine political, economic and intellectual aspects of Nova Scotian development.

345.0   BLACKS AND MINORITIES
             IN NOVA SCOTIA

The primary emphasis will be on the history of Blacks in Nova Scotia but attention will also be given to the role accorded native people. Topics to be covered include: slavery, Black Loyalists, fugitive slaves, Nova Scotia No. 2 Construction Battalion, biographical studies, and the contemporary situation.

350.0 Cross-listed as Classics 303.0

351.0 Cross-listed as Classics 304.0

352.0 Cross-listed as Classics 305.0

360.0 (Soc 360.0)   SCIENCE AND SOCIETY
                         FROM THE 17TH CENTURY
                         TO THE PRESENT

Prerequisite: a course in history or sociology.

An interdisciplinary approach to the development of social and natural sciences. The course will examine the social and intellectual context for the rise of the sciences, their institutionalization, and the interrelationship between the natural and social sciences. Subjects looked at will include the effects of the Newtonian and Darwinian revolutions on biological and societal studies.

HISTORY

500.0   READING COURSES IN HISTORY

Prerequisite: permission of the instructor.

Each reading course will be organized by the instructor(s) involved. In general, each course will be centered round a specific theme, and the students will be expected, through their reading, to be familiar with all aspects of the chosen area. Examinations and/or papers will be required at the end of each course.

501.0   THE PURITAN REVOLUTION AND THE CROMWELLIAN PROTECTORATE

Prerequisite: His 303.0.

A pro-seminar with particular emphasis on political and economic changes during the Puritan revolution.

503.0   GERMAN FOREIGN POLICY 1890-1945

The history of Germany with special emphasis on German foreign policy.

504.0   BRITISH FOREIGN POLICY 1890-1945

Prerequisite: one of His 203.0, 315.0, or permission of the instructor.

Particular emphasis will be placed on Anglo-American relations, the Anglo-French Entente before 1914, and Anglo-German relations 1930-1945. Students will be expected to do considerable research in the diplomatic documents of the period.

508.0   KNOWLEDGE, VALUES AND FREEDOM

Prerequisite: a course in either history, philosophy or religious studies, or the permission of the instructor.

An inter-departmental seminar which will explore the connection between knowledge and values in varying historical and cultural contexts as well as the impact of Eastern and Western value systems on the development of free institutions. Students will prepare papers under the guidance of specialists in the given field who will attend the meeting of the seminar at which the paper is presented.

511.0   MODERN EAST ASIA, SELECTED PROBLEMS IN MODERNIZATION

Prerequisite: His 209.0.

The influence of the West on the modernization efforts of China and Japan during the 19th and 20th centuries.

514.0   SELECTED TOPICS IN LATIN AMERICAN HISTORY

Prerequisite: His 210.0, 326.0 or permission of the instructor.

A reading seminar involving an in-depth study and an historiographical research and interpretive paper on a selected period and/or problem in the history of Latin America. The aim of this course is to give students interested in the area a working knowledge of the historiography and an introduction into the problems of original research of the period and/or problem under consideration. While not absolutely required, a reading knowledge of Spanish or Portuguese is strongly desirable.

515.0   DEPARTMENTAL SEMINAR ON HISTORIOGRAPHY

Prerequisite: senior or graduate standing.

A course designed to familiarize students with various viewpoints dealing with historical material. Each instructor will present a viewpoint of historiography and invite comments. Students in turn will present papers dealing with related topics.

521.0   EUROPEAN DIPLOMATIC HISTORY, 1815-1945

Selected themes of European diplomacy in the revolutionary period 1821-1863, Italian and German unification, events leading to World War I and the dissolution of the Habsburg Empire, World War II, and the post-war structuring of Central and Eastern Europe.

690.0   THESIS RESEARCH

Prerequisite: graduate standing.

The students will be engaged in research for and the writing of an M.A. thesis under the supervision of an advisor. No grade will be granted for this course.

Cross-Listed Courses.

Certain courses offered by the Departments of Classics, Anthropology and Religious Studies may, in special circumstances, be cross-listed and counted in a student's history concentration. In those cases, the students should seek the Department's permission.

MATHEMATICS

Chairman, Associate Professor   R. L. Kruse
Professor   D. G. Kabe
Associate Professors   K. Singh, Y. P. Singh
Assistant Professors   F. Chao, W. Finden,
     M. T. Kiang, P. Scobey,
     J. E. Totten

The Mathematics Department offers a broad range of courses, including introductory courses intended for students with little mathematical background, preparatory courses for students intending to enter fields requiring mathematics, and specialized courses for more advanced students and mathematics majors.

INTRODUCTORY COURSES

Mat 117.1 and 118.2 are designed to meet the needs of liberal arts students who desire a mathematics course but do not have a strong background in mathematics.

Mat 119.1 (.2) is an introductory course in statistics, requiring relatively little background in mathematics, and including applications chosen from a broad range of subjects. This course will be particularly valuable as preparation for more specialized courses in applications of statistics offered in other departments.

Mat 125.1 (.2) is an introduction to computer programming designed for the student with little mathematical background and no previous experience with computers, who may have only casual interest in programming or need only limited knowledge for application in other subjects.

If desired, the student may combine the half courses Mat 119 and Mat 125 to make up a full course.

PREPARATORY COURSES

Mat 100.0 and 113.0 are both accepted as the equivalent of Grade XII Mathematics. Mat 100.0 is intended, primarily, for students entering natural sciences or mathematics, and includes emphasis on trigonometry as well as algebra. Mat 113.0 is intended, primarily, for students in commerce and the social sciences, omits trigonometry, and concentrates instead on applicable finite mathematics.

Mat 200.0 is the first course in calculus. Mat 201.0 has been discontinued.

The second course in calculus has been renumbered Mat 300.0, and is equivalent to the previous courses Mat 310.0 and Mat 311.0.

Mat 320.1 provides an introduction to linear algebra. In the second term, engineering students will continue in Mat 305.2, while other students can proceed to further topics in linear algebra in Mat 321.2.

SPECIALIZED COURSES

Mat 225.0, 308.1, 309.2, 335.0, 408.1 and 409.2 are intended for students interested in computer science, operations research, and numerical analysis.

Mat 314.0 and 414.0 are intended for students interested in probability and statistics.

Other applied mathematics courses include Mat 410.0, 425.0, 456.1 and 457.2.

Pure mathematics courses include Mat 330.1, 331.2, 349.0, 435.0 and 449.0.

Mathematics majors who wish to study more specialized topics may, with consent of the instructor, enrol in Directed Study under one of the numbers Mat 490 to 499.

DEGREE REQUIREMENTS

A major in mathematics is offered for students working towards the degrees of B.A. and B.Sc., and for students of above average ability working towards the degrees of B.A. (Honors) and B.Sc. (Honors). In addition to the requirements of the respective faculties, the requirements for a major in mathematics are:

(1) Mat 100.0

(2) Mat 200.0

(3) Mat 300.0

(4) Mat 320.1 and 321.2

(5) Mat 349.0

(6) At least three other mathematics courses chosen in consultation with the department, giving a total of seven courses at the 200 level or above.

MATHEMATICS

The honors program is designed for mathematics majors of above average ability. Mathematics majors in their sophomore year with an overall grade point average of at least 2.5, and with a grade point average of at least 3.0 in their mathematics courses, should consider enrolling in the honors program, and are advised to consult with the department before making a final decision.

The honors requirements in mathematics are:

(1) the courses given in (1) to (5) above

(2) Mat 330.1 and 331.2

(3) Mat 410.0

(4) at least five other mathematics courses chosen in consultation with the department, giving a total of eleven courses at the 200 level or above.

The selection of courses for Arts students who wish a minor in mathematics, and for students working towards the General B.Sc. who wish a concentration in mathematics, will be determined by individual consultation with the department.

CREDIT FOR DUPLICATE COURSES

No student may receive credit for both Mat 100.0 and Mat 113.0, nor for more than one of Mat 200.0, 201.0, or the pair 210.1 (.2) and 211.1 (.2), nor for more than one of Mat 300.0, 310.0 or 311.0. No student who has received credit for an advanced mathematics course may later receive credit for a mathematics prerequisite to the course without permission of the department.

100.0   ALGEBRA AND TRIGONOMETRY

Prerequisite: Grade XI Mathematics.

Elementary logic. Set theory and operations on sets. Real numbers and the real number line, including interval notation. Inequalities and absolute values. The Cartesian plane and representation of ordered pairs of real numbers. Elements of analytic geometry. Relations, functions, and graphs, with emphasis on the polynomial, trigonometric, exponential, and logarithmic functions. Complex numbers. Sequences and series. Mathematical induction. Permutations, combinations and the binomial theorem. Matrices, determinants, and systems of linear equations.

Classes   3 hrs. plus tutorial 1 hr. a week. 2 semesters.

113.0   MATHEMATICS FOR COMMERCE AND THE SOCIAL SCIENCES

Prerequisite: Grade XI Mathematics.

Elementary set theory. Real numbers and the real number line. Inequalities and absolute values. The Cartesian plane and representation of ordered pairs of real numbers. Relations, functions, and graphs with emphasis on polynomial, exponential, and logarithmic functions. Sequences and series. Mathematics of monetary matters. Permutations, combinations, the binomial theorem, and probability. Matrices and systems of linear equations.

Classes   3 hrs. plus tutorial 1 hr. a week. 2 semesters.

117.1(.2)   MATHEMATICS FOR LIBERAL ARTS PART 1

Emphasis is on the logical and historical development of mathematical ideas. The following topics are included: numeral systems; mathematical statements; contrapositive, converse, and negative statements; necessary and/or sufficient conditions; abstract mathematical systems; and set theory.

Classes   3 hrs. a week. 1 semester.

118.1(.2)   MATHEMATICS FOR LIBERAL ARTS PART II

Emphasis is on applying mathematical ideas and acquiring skills in various mathematical operations. Topics to be discussed will include: a review of operations involving fractions; decimals; factorization and percentage; system of real numbers and its geometrical representation; algebra and geometry of elementary functional forms; limitations on the real numbers B, C involved in the operations A/B, $\sqrt{C}$; absolute values; inequalities; graphs and problems dealing with permutations and combinations.

Classes   3 hrs. a week. 1 semester.

MATHEMATICS

119.1 (.2)   BASIC STATISTICS

Prerequisite: Grade XII Mathematics or Mat 100.0, 111.1 (.2) or 113.0.

This course is designed to impart basic statistical concepts common to applications in a variety of fields. In particular it will deal with the following topics: numerical probability; random variables, discrete distributions; normal distributions; sampling theory; estimation of mean and standard deviations; tests of significance; elementary treatment of linear regression, correlation and analysis of variance.

Classes   3 hrs. plus tutorial 1 hr. a week. 1 semester.

125.1 (.2)   BASIC PROGRAMMING AND COMPUTER CONCEPTS

An elementary introduction to computer programming intended for the student with no previous experience. Study of the BASIC computer language with practice in writing and running several programs. Discussion of the capabilities and applications of modern computers.

Classes   3 hrs. a week. 1 semester.

200.0   CALCULUS I

Limits and continuity. The derivative, the indefinite integral. The definite integral and the fundamental theorem of calculus. Continuity and its relation to differentiability and integrability. Techniques of differentiation and integration for algebraic, trigonometric, exponential, and logarithmic functions. Applications of the derivative and the definite integral, including work, density, mass and moments. The Mean Value Theorem. The extended Mean Value Theorem and l'Hopital's Rule. Parametric equations, derivatives and integrals. Vector algebra in the plane. The scalar product. Vector functions of one variable and their derivatives. Vector velocity and acceleration.

Classes   3 hrs. plus tutorial 1 hr. a week. 2 semesters.

225.0   ELEMENTS OF COMPUTER SCIENCE

Prerequisite: Grade XII Mathematics but Grade XI Mathematics also may be acceptable.

Algorithms and flowcharts. Input, output, storage, arithmetic and control. Simple machine language, looping and branching. Computer representation of numbers. Implication of finite word lengths and order of operations. Overflow and round off. Data representation and storage, data manipulation. Numerical applications, functions and procedures, character strings, roots of equations, maxima and minima, areas, averages, root-mean-square. A study of FORTRAN and its application. Time-sharing. Data processing.

Classes   3 hrs. plus tutorial 1 hr. a week. 2 semesters.

300.0   CALCULUS II

Prerequisite: Mat 200.0, 201.0 or 211.1 (.2).

Solid analytic geometry, cylindrical and spherical coordinate systems. Functions of several variables, partial differentiation and differentials. Infinite series, convergence tests, power series expansions of functions, Taylor's Theorem. Double and triple integrals with physical applications. Vector representation of space curves and vector calculus, dot and cross products, divergence, curl, and the integral theorems of Gauss and Stokes.

Classes   3 hrs. plus tutorial 1 hr. a week. 2 semesters.

305.1 (.2)   TOPICS IN COMPLEX VARIABLES AND DIFFERENTIAL EQUATIONS

Prerequisite: Mat 300.0 concurrently, or Mat 310.0 or 311.0.

Complex numbers, functions, derivatives, the Argand diagram, the Cauchy-Riemann equations. Elementary differential equations including first order, separation of variables, homogenous, linear and exact differential equations. Linear differential equations with constant coefficients. Applications to civil, chemical, mechanical and electrical systems.

Classes   3 hrs. plus tutorial 1 hr. a week. 1 semester.

MATHEMATICS

308.1 (.2)   NUMERICAL ANALYSIS I

Prerequisite: Mat 200.0 or 201.0 or 211.1(.2).

A brief introduction to FORTRAN programming. A discussion of errors in numerical analysis. Theoretical and practical consideration of numerical procedures in non-linear equations in one variable including polynomial equations, systems of linear equations, systems of non-linear equations. A brief discussion of vectors, matrices, norms.

Classes   3 hrs. a week. 1 semester.

309.1 (.2)   NUMERICAL ANALYSIS II

Prerequisite: Mat 308.1(.2) or permission of instructor.

Theoretical and practical considerations of numerical procedures in functional approximations, interpolation, least squares and numerical integration.

Classes   3 hrs. a week. 1 semester.

314.0   INTRODUCTION TO STATISTICS

Prerequisite: Mat 200.0, 201.0 or 211.1(.2).

This course is designed to provide a mathematical basis for fundamental statistical concepts. It assumes familiarity with calculus and deals with the following topics: elements of set theory, probability, conditional probability, Bayes-Laplace rule; binomial, hypergeometric, Poisson, multinomial, uniform, exponential, gamma, beta, and normal distributions. Mathematical expectation, moments, generating functions, Chebychev's Theorem, sums of random variables, sampling distributions, chi-square, F and T distributions, point and interval estimation, tests of hypotheses, linear regression and correlation, bivariate normal distribution, the method of least squares. Lab exercises are assigned in class.

Classes   3 hrs. a week. 2 semesters.

320.1 (.2)   LINEAR ALGEBRA I

Prerequisite: Mat 200.0, 201.0 or 211.1 (.2).

This course is meant to equip the student with the minimal basic techniques of linear algebra. Topics to be covered include: matrix algebra, determinants, adjoints, inverses, rank, equivalence, elementary operations and normal forms. Vector spaces, bases, dimensions, coordinates. Characteristic equation, eigenvalues and eigenvectors.

Classes   3 hrs. a week. 1 semester.

321.1 (.2)   LINEAR ALGEBRA II

Prerequisite: Mat 320.1 (.2)

This course is a continuation of Mat 320.1 (.2) and presents further concepts and theory of linear algebra. Topics to be covered include: linear transformations and their representation by matrices, minimal polynominals and the Cayley-Hamilton theorem, canonical forms under similarity, inner product spaces, bilinear and quadratic forms.

Classes   3 hrs. a week. 1 semester.

330.1(.2)   ABSTRACT ALGEBRA I

Prerequisite: Mat 200.0, 201.0 or 211.1(.2).

This course introduces the student to a study of formal algebraic systems with emphasis on group theory and mappings that preserve operations. Topics to be covered include sub-groups, cyclic groups, permutation groups, cosets and factor groups, isomorphisms and homomorphisms.

Classes   3 hrs. a week. 1 semester.

331.1(.2)   ABSTRACT ALGEBRA II

Prerequisite: Mat 330.1(.2).

This course is a continuation of Mat 330 and discusses additional algebraic structures. Topics to be covered include rings and ideals, integral domains, Euclidean, principal ideal and unique factorization domains, fields and field extensions.

Classes   3 hrs. a week. 1 semester.

MATHEMATICS

335.0 (445.0) INTRODUCTION TO OPERATIONS RESEARCH

Prerequisite: Mat 200.0 or 201.0 and (or concurrently) Mat 320.1 (.2).

The course will discuss mathematical models of real world problems, together with a variety of recently developed mathematical programming techniques for their solution. Some theory will be presented but emphasis will be on the problem solving approach and actual implementation of various problem-solving methods on the computer.

Classes   3 hrs. a week. 2 semesters.

349.0 ANALYSIS I

Prerequisite: Mat 200.0, 201.0 or 211.1(.2).

Sets, functions, and relations, real number field; the least upper bound axiom; countability, sequences and subsequences, accumulation points, metric spaces, continuous functions, compactness and connectedness, series of functions, uniform convergence, integration.

Classes   3 hrs. a week. 2 semesters.

408.1(.2) ADVANCED NUMERICAL ANALYSIS I

Prerequisite: Mat 309.1(.2) or permission of instructor.

Theoretical and practical considerations of numerical analysis in the eigenvalue-eigenvector problem and in the solutions of ordinary differential equations.

Classes   3 hrs. a week. 1 semester.

409.1(.2) ADVANCED NUMERICAL ANALYSIS II

Prerequisite: Mat 408.1(.2).

Theoretical and practical considerations of numerical analysis in the solutions of ordinary and partial differential equations.

Classes   3 hrs. a week. 1 semester.

410.0 CALCULUS III

Prerequisite: Mat 300.0, 310.0 or 311.0.

Review of vector algebra. Differential and integral vector calculus, including the integral theorems of Green, Gauss, and Stokes. The general notion of a differentiable function and the relation between the general derivative and the directional derivative. The Jacobian and its relation to volume and orientation. Implicit functions. Some advanced notions of series, including uniform convergence, Fourier series, and double series. Convergence of improper integrals in one and two dimensions and functions defined by such integrals.

Classes   3 hrs. a week. 2 semesters.

414.0 INFORMATION THEORY AND MATHEMATICAL STATISTICS

Prerequisite: Mat 300.0, 310.0 or 311.0.

This course studies the mathematical foundations of statistics, with emphasis on applications to information theory and coding theory, topics which are of some interest in theoretical computer science and electrical engineering.

Classes   3 hrs. a week. 2 semesters.

425.0 ORDINARY AND PARTIAL DIFFERENTIAL EQUATIONS

Prerequisite: Mat 300.0, 310.0 or 311.0.

Classical techniques of solving first and second order equations, systems of equations, series solutions, transform methods, introduction to partial differential equations and discussion of simple types.

Classes   3 hrs. a week. 2 semesters.

435.0 THEORY OF FUNCTIONS OF A COMPLEX VARIABLE

Prerequisite: Mat 300.0, 310.0 or 311.0.

The complex plane. Elementary transformations and mappings, analytic functions, branch points and cuts, infinite series and uniform convergence, conformal mapping, complex integration, Cauchy's theorem, residues, Liouville's theorem and the fundamental theorem of algebra.

Classes   3 hrs. a week. 2 semesters.

MATHEMATICS

449.0   ANALYSIS II

Prerequisite: Mat 349.0.

An advanced study of sets, sequences, and functions, including: measurable functions and measures; Lebesgue integration and Lebesgue integrable functions; relation between Lebesgue integration and Riemann integration; Lp spaces; modes of covergence; properties of functions of bounded variation; decomposition and generation of measures.

Classes 3 hrs. a week. 2 semesters.

456.1(.2)   INTRODUCTION TO APPLIED MATHEMATICS I

Prerequisite: Mat 300.0, 311.0 or concurrently with Mat 425.0.

Review of methods of solving ordinary differential equations. The Frobenius method of solution by series, with applications to the Bessel, Legendre, and other equations. Beta and gamma functions. Orthogonal functions and eigenvalue problems. The Sturm-Liouville problem and eigenfunction expansions. Laplace transforms. Vector analysis with line and surface integration.

Classes 3 hrs. a week. 1 semester.

457.1(.2)   INTRODUCTION TO APPLIED MATHEMATICS II

Prerequisite: Mat 300.0, 311.0 or concurrently with Mat 425.0.

Theory of functions of complex variables, Fourier series and integrals, solutions of partial differential equations and their transformation to curvilinear coordinate systems.

Classes 3 hrs. a week. 1 semester.

490.1 (.2) to   DIRECTED STUDY
499.1 (.2)   IN MATHEMATICS

Prerequisite: permission of instructor.

This course is intended to supplement or provide an alternative to the regular mathematics courses in order to meet the special needs and interests of students. The course provides an opportunity to study a particular subject in detail and requires from the student some measure of independence and initiative. This individual study course may be taken more than once for credit if the syllabus is different.

MODERN LANGUAGES

DEPARTMENT
OF MODERN LANGUAGES

French — German — Spanish — Chinese

Chairman, Assistant Professor	A. Murphy

French
Associate Professors	L. Batiot, F. Pepin, G. LePierrès, J. Mackriss
Assistant Professor	P. Bernard

German
Associate Professor	R. Nahrebecky

Spanish
Assistant Professor	A. J. Farrell

Chinese

DEPARTMENTAL POLICY

A — GENERAL
1. French 100.0 is open both to students who have never taken French and to students covered under General Course Description, paragraph 2.
2. Placement test: See General Course Description, paragraph 2.

B — MAJOR CONCENTRATION
1. The major program in Spanish and German will be worked out in consultation with the professor concerned.
2. To obtain a major concentration in French, a student is required to have six university credits in French beyond Fre 200.0.

   For students declaring their major in French on or after 1 September 1977, both Fre 300.0 and Fre 301.0 are compulsory.
3. The courses at the fourth year level will be offered by rotation, except 421.0 which is offered every year.

C — HONORS
The honors program in French, German and Spanish is predicated on the regulations of the Faculty of Arts. Two of the courses to be taken in French are compulsory: Fre 300.0 and Fre 500.0.

MODERN LANGUAGES — FRENCH

GENERAL COURSE DESCRIPTIONS

1. All courses in French on the 300 and 400 levels are taught in French.

2. All students with Junior or Senior Matriculation are asked to register in Fre 200.0.

   A placement test will be administered during the first week of class. Its purpose is to determine which of the four courses (Fre 100.0, 200.0, 240.0, 250.0) best meets the needs of the individual student.

   Students who have already taken a university course in French at another university are asked to consult the Department before registering for a course in French.

3. The courses at the 500.0 level are seminar courses involving research; they include formal tutoring for the presentation of a thesis.

100.0   INTRODUCTION TO THE FRENCH LANGUAGE

A course for students beginning the study of French. The basic structures of the language will be studied, with special emphasis on the oral aspect.

Note: See Departmental Policy A — GENERAL, paragraph 1, and GENERAL COURSE DESCRIPTION, paragraph 2.

Classes 3 hrs. and lab three $1/2$ hrs. a week. 2 semesters.

200.0   INTRODUCTION TO UNIVERSITY FRENCH

Prerequisite: Placement test.

An introduction to university French combining audio-visual methods with a wide variety of written materials supported by grammatical studies. The aim of the course is to expand the student's oral proficiency and develop his reading ability. The course also includes the writing of short compositions.

Classes 3 hrs. plus lab and/or tutorials three $1/2$ hrs. a week. 2 semesters.

MODERN LANGUAGES — FRENCH

240.0   INTERMEDIATE UNIVERSITY FRENCH

Open to students who have a good knowledge of French, although oral proficiency is not a prerequisite. Students successfully completing Fre 240.0 may, with permission of the Department, continue as majors.

An oral and written approach to French, including composition, translation, conversation and a review of grammar based on contemporary texts.

Classes   3 hrs. plus lab and/or tutorials three $1/2$ hrs. a week. 2 semesters.

250.0   ADVANCED UNIVERSITY FRENCH

Prerequisite: Placement test.

Oral and written French, including composition, translation, conversation and a review of grammar based on contemporary texts. This is an intensive course designed for students with a strong background in French.

N.B. Normal requirement for all majors.

Classes   3 hrs. plus lab and/or tutorials three $1/2$ hrs. a week. 2 semesters.

300.0   THE PRINCIPAL THEMES
OF FRENCH LITERATURE

Prerequisite: Fre 240.0 or 250.0 or permission of the Department.

A study of the main themes in French literature from the *Chanson de Roland* to modern times. Special attention will be given to the relationship between society and literature.

N.B. This course is compulsory for all students who intend to major in French.

Texts: Nelson and Oxen-Handler, *Aspects of French Literature* (Appleton-Century-Crofts)*. Harrap's French-English Dictionary is recommended.*

Classes   3 hrs. a week. 2 semesters.

301.0   COMPOSITION AND CONVERSATION

Prerequisite: Fre 240.0 or 250.0 or permission of the Department.

A practical course intended to continue the development of the student's ability to speak and write French. Contemporary written texts will provide a basis for discussions and compositions of cultural and literary topics. Grammatical points will be detailed as necessary through translation and other exercises. This course is compulsory for all students who intend to major in French.

Classes   3 hrs. plus lab and/or tutorials three $1/2$ hrs. a week. 2 semesters.

303.0   ACADIAN CIVILIZATION

A general survey of the birth and evolution of Acadian society through a study of literary genres including poetry, novels, short stories, chronicles; folklore, oral tradition, and artistic modes of expression other than literature.

Classes   3 hrs. a week. 2 semesters.

310.1   FRENCH PHONETICS

An introduction to articulatory phonetics with application to French. Standard (International) French will be used as a reference point. Certain regional and dialectal differences will be considered. The objective of the course is to increase pronunciation skills.

N.B. Strongly recommended for students considering a teaching career in French.

Classes   3 hrs. and lab two $1/2$ hrs. a week. 1 semester.

MODERN LANGUAGES — FRENCH

311.2   HISTORY OF THE FRENCH LANGUAGE

Prerequisite: Fre 310.0 or Egl 305.0 or 350.0.

An introduction to the history of the French language. The major trends in the evolution of French from Latin to modern times will be examined. Special attention will be given to dialect change and French in North America. Aspects of phonetics, morphology and syntax will be included, together with abbreviated discussion of the social context for language change as manifested in the history of French.

Classes   3 hrs. a week. 1 semester.

413.0   FRENCH CIVILIZATION

An in-depth study of France and the fundamental aspects of French life and culture, history, geography, contemporary political institutions, educational system, social and artistic life. Special attention will be paid to the capital of France. Lectures, readings and discussions. The topic will often be illustrated with slides and films.

Text: Marc Blancpain and Jean-Paul Couchoud, *La civilisation française* (Hachette).

Classes   3 hrs. a week. 2 semesters.

414.0   EVOLUTION OF THE FRENCH NOVEL

An examination of the principal stages in the development of the French novel.

Texts: La Fayette, *La Princesse de Clèves;* Abbé Prévost, *Manon Lescaut;* Balzac, *Eugénie Grandet;* Stendhal, *Le Rouge et le noir;* Flaubert, *Madame Bovary;* Proust, *Du côté de chez Swann.*

Summer reading is strongly advised.

Classes   3 hrs. a week. 2 semesters.

415.0   THE FRENCH THEATRE

A study of some of the major works of French dramatic literature.

Texts: Corneill, *Le Cid;* Molière, *Don Juan;* Racine, *Phèdre;* Marivaux, *Le Jeu de l'amour et du hasard;* Beaumarchais, *Le Mariage de Figaro;* Musset, *On ne badine pas avec l'amour;* Sartre, *Huis clos;* Beckett, *En attendant Godot.*

Classes   3 hrs. a week. 2 semesters.

416.0   POETRY IN FRANCE

Prerequisite: a 300 level course in French or permission of instructor.

An introduction to the various poetic forms of the 16th, 17th and 18th centuries, including a brief survey of French versification, followed by an intensive study and concentration of the *Romantic, Parnassian and Symbolist* movements in the poetry of the 19th century up to the first World War.

N.B. This course will familiarize students with the form and content of French poetic diction and prosody.

Text: Pierre Seghers, *Le Livre d'or de la poésie française*. (Marabout - Paris - Montréal).

Classes   3 hrs. a week. 2 semesters.

417.0   FRENCH CANADIAN POETRY

Prerequisite: a 300 level course in French or permission of instructor.

Based on an in-depth study of the works of contemporary poets, this course will deal with the technical means of aesthetics to determine the characteristics of poetry as a literary genre. The texts themselves and the relevant critique are used with a view to determining the evolution of a critical theory of our poetry.

N.B. This course will be complemented by a workshop of literary creativity and seminars.

Texts: (Reference) Grandpré, Pierre de, *Historie de la littérature française du Québec,* Tome III. (Beauchemin). (Analysis) Colin, M. and Théberge, J. V., *Terre de Québec,* Tome I and II (Renouveau pedagogique).

Classes   3 hrs. a week. 2 semesters.

MODERN LANGUAGES — FRENCH

418.0 THE CIVILIZATION OF FRENCH CANADA

Prerequisite: Fre 300.0 or 301.0.

This course will provide a detailed study of various aspects of the civilization of French Canada: its language, literature, religion, and major historical events as well as an analysis of the achievements in music, art, science and education, and of the current trends in the theatre, cinema, radio and television. Excursions.

Text: Lamontagne, L. *Visages de la civilisation au Canada français* (Les Presses de l'Université Laval).

Classes 3 hrs. a week. 2 semesters.

419.0 FRENCH CANADIAN NOVEL

Prerequisite: Fre 300.0.

A study of the origins until 1930. Comparative development of the Canadian novel and popular tradition. The course is also designed to acquaint students with the ideas of writers from 1930 to the present day.

Texts: (Reference) Grandpré, Piervede, Pierre de Grandpré, *Histoire de la littérature française du Québec* (Beauchemin).

Texts: (Analysis), Guévremont, G., *Le Survenant* (Fides), Roy, Gabrielle, *La Montagne secrète* (Beauchemin), Blais, M. C., *Les Voyageurs sacrés* (HMH), Martin, C., *Doux-Amer* (Cercle du Livre de France, Poche).

Classes 3 hrs. a week. 2 semesters.

420.0 20TH CENTURY NOVEL

In the 20th century the novel has become the most prominent, if not the most significant, literary genre. What is the secret of its appeal for the modern sensitivity? The novels to be studied in this course, reflecting as they do both the depth and the diversity of the form, may provide an answer to this question.

Texts: Proust, *A la recherche du temps perdu;* Gide, *Les Faux-Monnayeurs;* Mauriac, *Noeud de vipères;* Céline, *Voyage au bout de la nuit;* Malraux, *La Condition humaine;* Camus, *L'Etranger;* Butor, *La Modification.*

Classes 3 hrs. a week. 2 semester.

421.0 COMPARISON OF ENGLISH AND FRENCH STYLISTICS

Prerequisite: Fre 301.0.

A course designed to increase the student's knowledge of French beyond vocabulary and grammar and to enable him to grasp the divergence as well as the points of contact between the two languages by means of exercises and class discussion. These include vocabulary expansion by word formation, derivation, synonymy and idiomatic structures. This course will introduce the student to problems of English-French translation.

Classes 3 hrs. a week. 2 semesters.

422.0 TECHNIQUES OF ESSAY WRITING

Prerequisite: Fre 300.0, 301.0 or equivalent.

The purpose of the course is to aid the student in his ability to write in French on topics of various nature. Practical exercises on the structure of the basic paragraph and the relation of paragraphs as vehicles of thought within the total structure of an essay.

Texts: Dassonville, Michel, *La dissertation littéraire;* Dassonville, Michel, *L'analyse de texte;* Beaugrand, J. *Manuel pratique de composition française.*

Classes 3 hrs. a week. 2 semesters.

423.0 INDEPENDENT STUDY

Prerequisite: permission of instructor.

A tutorial course open to students who wish to study a particular subject or author largely through independent reading and research. Registration to this course is made after consultation with a member of the department who will organize the program of studies.

424.0 SPECIAL AUTHOR

Prerequisite: permission of instructor.

A tutorial course open to students who wish to study a particular author largely through independent reading and research. Registration to this course is made after consultation with a member of the department who will organize the program of studies.

MODERN LANGUAGES — FRENCH

425.0   THE FRENCH SHORT STORY

Prerequisite: a 300-level course in French or permission of instructor.

A wide variety of short stories from the eighteenth century to the present day intended to give the student insight into France's political, ideological and social life. Discussions and fortnightly essays.

Classes   3 hrs. a week. 2 semesters.

426.1   EPISTOLARY LITERATURE: IMAGE AND MIRROR OF THE ''ANCIEN REGIME'' IN FRANCE

Prerequisite: Fre 300.0 and 301.1.

A selection and study of the form and content of private, official and unofficial letters as vehicles of gossip, rumor and fact reflecting the social, literacy and religious aspirations of pre-revolutionary France.

Classes   3 hrs. a week. 1 semester.

427.2   EPISTOLARY LITERATURE: IMAGE AND MIRROR OF THE ''ANCIEN REGIME'' IN FRANCE

Prerequisite: Fre 300.0 and 301.1.

A selection and study of the form and content of private, official and unofficial letters as vehicles of gossip, rumor and fact reflecting the social, literary and religious aspirations of pre-revolutionary France.

Classes   3 hrs. a week. 1 semester.

428.0   LITERATURE WITH A PURPOSE: THE FRENCH RENAISSANCE AND FICTION OF THE FRENCH ENLIGHTENMENT

Prerequisite: Fre 300.0 and 301.0.

A study of the literary masterpieces of the 16th and 18th centuries. The course is designed to acquaint the student with the contributions of some world-renowned French authors and their persuasive, often humorous tactics for the expression of new ideas about man and the world in which he lives.

Classes   3 hrs. a week. 2 semesters.

450.0   AFRICAN LITERATURE OF FRENCH EXPRESSION

Prerequisite: Working knowledge of French and/or Fre 300.0 and 301.0.

A survey of sub-Saharan African Literature of French expression designed to familiarize the student with traditional and modern African literature and culture. The approach in this course is both literary (i.e., to study fiction) and humanistic (i.e., to study a people through the writings of its gifted individuals).

Classes   3 hrs. a week. 2 semesters.

500.0   LITERATURE AND CRITICISM

Prerequisite: admission to the honors program.

Weekly seminars to be given by members of the Department on selected literary themes and problems.

501.0   HONORS THESIS

The course will involve the preparation of a thesis of approximately fifty pages on a literary subject of the student's choice. A supervisor will be delegated by the Department. The thesis must be ready for submission by March 15 of the academic year.

Text: Dassonville, Michel, *Initiation à la recherche littéraire* (Université Laval).

YEAR OF STUDY ABROAD: ANGERS

Saint Mary's University has entered into an arrangement whereby qualified students have the opportunity to study at the Catholic University of the West in Angers, France. Permission to participate in this program is granted by the Dean of Arts, the Chairman of the student's area of concentration, and the Chairman of the Modern Languages Department. Usual registration procedures are to be followed, except that tuition fee payments are to be made directly to the University of the West. Students are urged to apply early for this program.

MODERN LANGUAGES — GERMAN

100.0 INTRODUCTION TO THE GERMAN LANGUAGE

An introductory language course for those beginning the study of German. Basic linguistic structures will be studied with particular emphasis on the oral aspects.

Text: Erika Meyer, *Elementary German* (Houghton Mifflin Co.) Second Edition.

Classes   3 hrs. a week. 2 semesters.

200.0 INTERMEDIATE GERMAN

Prerequisite: Ger 100.0.

This course presents an intensified study of grammar and syntax and the reading of German texts.

Texts: Emory E. Cochran, *A Practical German Review* (Prentice-Hall); Two short biographies by C. R. Goedsche and W. E. Glaettli, *Thomas Mann and Mozart* (American Book Co.).

Classes   3 hrs. a week. 2 semesters.

250.0 GERMAN LITERARY PROSE

The aim of this course is to familiarize the student with the artistic qualities of German literary prose. Summaries, compositions and short essays will be written.

Classes   3 hrs. a week. 2 semesters.

300.0 MODERN GERMAN LITERATURE

Prerequisite: Ger 250.0 or equivalent.

A study of trends in modern German literature (Naturalism, Impressionism and Expressionism).

Classes   3 hrs. a week. 2 semesters.

301.0 THE ROMANTIC AGE

Prerequisite: Ger 250.0 or equivalent.

The purpose of this course is to provide the student with an understanding of the characteristic traits of German poetry and prose in the Romantic Age.

Texts: Poems, tales and historic tales by L. Tieck, Novalis, H. von Kleist, C. Brentano, A. von Arnim, A. von Chamisso, E. T. A. Hoffman, L. Uhland, J. von Eichendorff and H. Heine will be read and discussed.

Classes   3 hrs. a week. 2 semesters.

400.0 GERMAN CONTEMPORARY LITERATURE

Prerequisite: Ger 250.0 or equivalent.

A study of significant prose and dramatic works in German literature from 1945 to the present. A selection of works by Max Frisch, Heinrich Böll, Friedrich Dürrenmatt and Günter Grass will be studied and discussed.

Classes   3 hrs. a week. 2 semesters.

MODERN LANGUAGES — SPANISH

101.0 INTRODUCTION TO THE SPANISH LANGUAGE

Designed to offer a firm initial competency in speaking and writing Spanish. This course requires regular attendance and a willingness to participate.

Text: Lamadrid, Bull, and Briscoe, *Communicating in Spanish, Level One* (Houghton Mifflin), and *CIS Workbook, Level One* (Houghton Mifflin).

Classes 3 hrs. and lab three ½ hrs. a week. 2 semesters.

201.0 INTERMEDIATE SPANISH

Prerequisite: Spa 101.0 or Spanish matriculation.

A continuation of elementary Spanish, with emphasis on conversation and reading. The second term offers an introduction to modern Latin-American fiction.

Texts: Lamadrid, Bull, and Briscoe, *Communicating in Spanish, Level One* (Houghton Mifflin), and *CIS Workbook, Level One* (Houghton Mifflin).

Anderson-Imbert and L. B. Kiddle, *20 cuentos hispanoamericanos del siglo veinte* (Prentice-Hall).

Classes 3 hrs. a week, plus language laboratory. 2 semesters.

300.0 SPANISH CULTURE AND CIVILIZATION

Prerequisite: Spa 201.0 or equivalent.

A survey of historical and social developments. Geography and history with regard to literature, fine arts, architecture, painting and music.

N.B. This course is compulsory for majors and honors students.

Classes 3 hrs. a week. 2 semesters.

301.0 REPRESENTATIVE FORMS OF HISPANIC LITERATURE

Prerequisite: a 200-level course in Spanish.

An overview of Spanish and Latin-American literary forms — poetic, narrative, and dramatic — from the Middle Ages through the present day. The autobiography, short story, and prose poem will be considered.

Classes 3 hrs. a week. 2 semesters.

302.0 PROSE AND STYLISTICS

Prerequisite: A sound knowledge of Spanish grammar.

This course examines various literary styles with the aims of increasing oral skills and of developing competence in written composition.

Classes 3 hrs. a week. 2 semesters.

305.0 CERVANTES AND PRE-CERVANTINE SPANISH LITERATURE

Prerequisite: Spa 201.0.

A two-semester course devoted to Cervantes and to exploring the various types of literature in Spain which were synthesized and transcended in his *Don Quijote*. The first semester examines in detail the literary background of 16th century Spain and the most representative prose works of that period, while the second concentrates on *Don Quijote*.

Texts: *Lazarillo de Tormes* (University of Wisconsin Press), Jorge de Montemayor, *La Diana* (Clásicos Castellanos), *El abencerraje y la hermosa Jarifa* (Anaya); Mateo Alemán, *Guzmán de Alfarache*, (Ebro); C. Colin Smith, *Spanish Ballads* (Pergamon Press) Miguel de Cervantes, *Don Quijote de la Mancha* (Juventud).

Classes 3 hrs. a week. 2 semesters.

MODERN LANGUAGES — SPANISH

310.0   THE PICARESQUE NOVEL

Prerequisite: Spa 201.0 or equivalent.

The study of a literary mode which is vigorously represented in Spanish literature, with emphasis on its historical background and aesthetic features.

Texts: *Lazarillo de Tormes* (University of Wisconsin Press); Mateo Alemán, *Guzmán de Alfarache* (Ebro); Francisco Quevedo, *El Buscón* (Ebro); selections from other writers.

Classes   2 hrs. a week. 2 semesters.

400.0   THE GENERATION OF 1898

Prerequisite: a 300 level course in Spanish.

A survey of the principal works of a literary generation which emerged at the close of the 19th century.

Texts: A selection of readings from Ganivet, Clarin, Ortegay Gasset, Unamuno; reference will be made to other writers.

Classes   3 hrs. a week. 2 semesters.

402.0   CONTEMPORARY LATIN-AMERICAN LITERATURE

Prerequisite: a 300 level course in Spanish or equivalent. Open to majors and honors students only.

The course examines a selection of the principal literary movements and works in 19th and 20th century Spanish American literature. In the first term, attention is directed to Romanticism, gauchesque literature, and the cultivation of the short story and of the novel. The beginnings of Modernism and the poetic activity of the 20th century are explored during the second term.

Texts: Selections from Echeverría, Heredia, Acúña, Palma, Hernández, Güiraldes; Mariano Azuela, *Los de abajo* (F.C.E.), Horacio Quiroga, *A la deriva* (C.E.A.L.), Eduardo Barrios, *El hermano asno* (Las Américas), Rubén Darío, *Cantos de vida y esperanza* (Anaya), selections from Julián del Casal and José Asuncion Silva.

Classes   3 hrs. a week. 2 semesters.

405.0   20TH CENTURY SPANISH LITERATURE

Prerequisite: a 300 level course in Spanish.

An examination of the poetry, drama, and novel of 20th-century Spain.

Texts: Readings from Lorca, Laforet, Cela, Arrabal and other writers.

Classes   2 hrs. a week. 2 semesters.

406.0   THE SPANISH THEATRE

Prerequisite: a 300 level course in Spanish.

A study of works representing various types of Spanish dramatic literature, from medieval times to the present.

Texts: Readings from Juan del Encina, Gil Vicente, Lope de Rueda, Lope de Vega, Calderón de la Barca, Ramón de la Cruz, Leandro Fernández de Moratín, José Zorrilla, Antonio Buero Vallejo, and Fernando Arrabal.

Classes   3 hrs. a week. 2 semesters.

MODERN LANGUAGES — CHINESE

100.0   INTRODUCTORY MODERN CHINESE

An introduction to spoken and written modern Chinese (Mandarin). Conversational drill and comprehension exercises in classroom and laboratory provide practice in pronunciation and in the use of the basic patterns of speech. The Chinese ideographs are introduced and studied in combinations. Reading progresses from prepared materials to selections from contemporary writings, including the newspaper.

200.0   INTERMEDIATE MODERN CHINESE

Prerequisite: Chi 100.0.

A continuation of Chi 100.0, this course is intended to develop proficiency in both oral and written Chinese with emphasis on comprehension. Textbooks, newspapers, magazines, and modern short stories will be extensively used, especially in the second semester, to help students acquire the ability to read and write. The abbreviated forms used in the People's Republic of China will also be introduced.

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An introduction to spoken and written modern Chinese (Mandarin). Conversational drill and comprehension exercises in classroom and laboratory provide practice in pronunciation and in the use of the basic patterns of speech. The Chinese ideographs are introduced and studied in combinations. Reading progresses from prepared materials to selections from contemporary writings, including the newspaper.

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PHILOSOPHY

Chairman, Professor	A. P. Monahan
Professors	R. H. Beis, W. A. Stewart, S.J.
Associate Professor	R. C. Marshall
Assistant Professor	R. N. Ansell

DEPARTMENTAL POLICY

1. THE BASIC LOGIC COURSE (Phi 200.0) is designed for students entering the University from Junior or Senior Matriculation. It is intended to develop a capacity for sound reasoning and critical analysis. This course fulfills a requirement for the B.A. degree.

2. THE INTRODUCTION TO PHILOSOPHY COURSE (Phi 201.0) is designed to introduce philosophy to students who are unlikely to have encountered the subject before. This course provides a good background to other philosophy courses and satisfies the humanities requirement for the B.A. degree. A philosophy course above 201.0 also meets the humanities requirement in the B.A. program.

3. THE MINOR AND NON-MAJOR PROGRAM: After completing Phi 201.0, students who do not wish to major in philosophy may select courses in the 200 and 300 range, or at higher levels. Such students are advised to select courses that relate to each other or to their area of concentration, and are encouraged to consult the appropriate course instructor before registration.

4. THE MAJOR PROGRAM: A philosophy major is required to complete six courses in philosophy. After Phi 201.0 (or 200.0), courses in ethics, epistemology, metaphysics and at least one course in the history of philosophy are normally required. A course in logic or philosophical methodology is strongly recommended. Other patterns of study may be arranged to suit individual needs, e.g., the needs of double majors and pre-law students.

5. THE HONORS PROGRAM: Prospective honors students should refer to the Faculty of Arts regulations pertaining to honors degrees and apply to the Registrar's Office for enrolment in the honors program, preferably after their first year in the University.

The following is a list of honors requirements in recommended order:

Phi 200.0 or 201.0
Phi 215.0 or 230.0
Two from Phi (345.1, 346.2), (440.1, 441.2), (442.1, 443.2), (444.1, 445.2)
Phi 306.0
Phi 407.0
Phi 466.0
400 level elective
400 level or above elective
400 level or above elective

All prospective honors students must consult with the Chairman about admission to the program; after admission, the Chairman will assign an advisor to the candidate.

6. A student may register for a major concentration in philosophy concurrently with a major concentration in another subject approved by the Department. Examples of such subjects are classics, economics, English, history, political science and religious studies.

7. Philosophy courses at the 600 level are graduate courses. Certain courses at other levels may be taken for graduate credit and will be designated as follows: e.g., 300.0 (600.0).

8. A background in philosophy will help to prepare students for careers in the professions, especially law, government service, media and any field where a creative approach and critical judgement are required; and provides, generally, a useful complement to various other branches of learning.

200.0   BASIC LOGIC

A course to establish and refine basic logical abilities. First term: the nature of argument, deduction, formal and informal fallacies, definition, conceptual analysis and uses of language. Second term: induction, probability, analogy, explanation, prediction, scientific method, and method in the social sciences and the humanities.

Classes   3 hrs. a week. 2 semesters.

PHILOSOPHY

201.0   INTRODUCTION TO PHILOSOPHY

Students will be introduced to philosophy through an examination of some of the main areas in which philosophical problems have arisen, e.g., God, man, freedom, knowledge and morality. They will be encouraged to develop their own critical intelligence through the study of the major past and present contributions toward the solutions of these problems.

Classes   3 hrs. a week. 2 semesters.

202.0   INTRODUCTION TO ETHICS
(222.0)

An introduction to moral philosophy designed to lead the student to examine the foundations of his moral positions. To this end historical and contemporary answers by philosophers to questions such as the following will be examined: what ought I to do morally, and why ultimately ought I to do it? Are ethical positions simply relative: (a) to a person? (b) to a society? What is the relation between science and morality?

Classes   3 hrs. a week. 2 semesters.

215.0   INTRODUCTION TO SYMBOLIC LOGIC

Prerequisite: Phi 200.0.

A thorough grounding in the propositional and predicate calculi with emphasis on the development of facility in natural deductive and axiomatic methods, and with some attention to metalogic, applications and set theory.

Classes   3 hrs. a week. 2 semesters.

218.0   SCIENCE IN THE WEST
(His 218.0)   SINCE 1500 A.D.

A philosophical and historical examination of the major aspects of Western science as represented in some texts from the 16th century onwards. The roots of modern scientific and technological society will be examined in an interdisciplinary way.

Classes   3 hrs. a week. 2 semesters.

220.0   MEDIEVAL PHILOSOPHY
AND POLITICS

An examination of the medieval conception of society, with particular emphasis on the problem of the relation between political society and the society of the Church.

Texts: Readings in Augustine, John of Salisbury, The Canonists, Thomas Aquinas, Dante, John of Paris, William of Ockham, Marsilius of Padua.

Classes   3 hrs. a week. 2 semesters.

226.0   PHILOSOPHY OF MIND

Prerequisite: An introductory course in philosophy and/or psychology would be helpful.

This course will examine what, if anything, is unique about man. Is he just an animal or a little lower than the angels? The most complex machine of all or an integrated unity of mind and body? A self-organizing system developed through a long process of evolution or a unique product of special creation? Various philosophical and psychological theories will be discussed, but special emphasis will be given to those of S. Freud and B. F. Skinner.

Classes   3 hrs. a week. 2 semesters.

229.0   PHILOSOPHY OF LAW

Theories of the nature of law. Analysis of the concepts law, international law, right, justice, motive, reason and cause. The logic of judicial reasoning. Theories of property. Liberty, morality, justice and the law. Free will, sanity and responsibility in relation to fitness to plead. Permissiveness, authoritarianism and theories of punishment.

Texts: Martin P. Golding, *Philosophy of Law,* Edward A. Kent, ed., *Law and Philosophy*.

Classes   3 hrs. a week. 2 semesters.

PHILOSOPHY

230.0 PHILOSOPHICAL FOUNDATIONS AND METHODOLOGY

Prerequisite: one course in philosophy.

Instruction in the use of methods for evaluating philosophical writings and solving philosophical problems. Basic papers and problems are selected for their value as exercises in the application of standard logical and semantical techniques, but also because familiarity with them is necessary in later courses. Controversial techniques are evaluated with the aid of uncontroversial ones.

Classes   3 hrs. a week. 2 semesters.

244.1 HUMAN FREEDOM

The traditional problems of free will and political freedom. Different concepts and conceptions of freedom and liberation. An examination of some contemporary thought on freedom and liberation.

Classes   3 hrs. a week. 1 semester.

245.2 PHILOSOPHIES OF LIFE

A comparative examination of philistinism, individualism, collectivism, hedonism, utilitarianism and other related outlooks.

Classes   3 hrs. a week. 1 semester.

260.0 PHILOSOPHY IN LITERATURE

This course involves making a critical assessment of philosophical positions found in selected contemporary stories, plays and novels. It should interest students who are intrigued by the philosophical significance of some literature.

Texts: Readings in selected literature reflecting contemporary issues, e.g. Dostoevsky, Camus, Orwell, Hemingway, Iris Murdoch, Margaret Atwood, Virginia Woolf, Margaret Laurence.

Classes   3 hrs. a week. 2 semesters.

300.0 HEGEL'S POLITICAL PHILSOPHY (600.0)

Prerequisite: a social science or philosophy course will be helpful but is not required.

A lecture and seminar course examining Hegel's political writings in general and his *Philosophy of Right* in greater detail. The evolution of his political thought will be traced from his earliest writings to his mature works within the context of his philosophical system. An endeavor will be made to relate the more relevant aspects of his political philosophy to current concepts and problems.

Texts: G. W. F. Hegel, *Philosophy of Right*.

Classes   3 hrs. a week. 2 semesters.

306.0 EPISTEMOLOGY

Freshmen may not enrol in this course.

This course attempts to answer three fundamental questions concerning the problem of knowledge: What am I doing when I am knowing? Why is *that* knowing when I am doing it? What do I know when I have done it? The answers present the position of Bernard Lonergan. Other (counter) positions will be examined, including empiricism, idealism, relativism, scepticism, rationalism, positivism.

Text: B. Lonergan, *Insight*.

Classes   2 hrs. a week and seminars. 2 semesters.

310.0 PHILOSOPHICAL FOUNDATIONS OF POLITICS

Prerequisite: a philosophy or political science course.

An examination of some philosophical concepts basic to any philosophy of politics: society and social obligations, the common good, the individual and individual rights, law, freedom, tolerance and repression, popular consent, sovereignty. The course will investigate the relationship, if any, between ethics and philosophy of politics and, with reference to contemporary experience of differing state systems, raise the question of whether the expression "making a better world" has any meaning.

Classes   3 hrs. a week. 2 semesters.

PHILOSOPHY

320.0 ADVANCED AESTHETICS: THE PHILOSOPHY OF ART

Prerequisite: a course in philosophy or permission of instructor.

Man responds to objects of art; he reacts as creator, performer, spectator; he thinks about his responses. The interrelations of art, artist and spectator in their social and cultural context are focal points for this course. In particular, philosophic inquiry will be directed towards expanding critical awareness about art forms and artistic expression.

Classes 3 hrs. a week. 2 semesters.

324.0 MARXIST PHILOSOPHY

Courses in philosophy, sociology and/or economics would be helpful.

Marxist philosophy has at present more followers than any other systematic philosophy. The emphasis in this course is on the scientific naturalism of the later Marx and contemporary Marxists. The early, ''humanistic'' Marx will also be considered. Marx's theory of knowledge, which claims to replace ideology with science and supplement synchronic with diachronic analysis, will be analyzed in detail. Historical materialism is examined as a scientific theory and as an alternative to various other social and political theories. Such misunderstood Marxian concepts as 'dialectic', 'necessity', and 'contradiction' will be shown to refer to underlying, basic economic laws. Evidence for and against Marxism will be investigated.

Classes 3 hrs. a week. 2 semesters.

330.1* PHILOSOPHY OF RELIGION I

Prerequisite: a philosophy or religious studies course.

The course begins with the problem of identifying the characteristic feature of all the major religions. After considering the nature of proof itself the course scrutinizes in detail the classical arguments for God's existence, then considers miracles and religious experience as means of showing that God exists.

Classes 3 hrs. a week. 1 semester.

331.2* PHILOSOPHY OF RELIGION II

Prerequisite: a philosophy or religious studies course.

After considering some difficulties facing theistic religion, the course attempts to clarify the relations between faith, knowledge, belief and reason as they exist in a religious context.

Classes 3 hrs. a week. 1 semester.

*NOTE: Phi 330.1 and 331.2 together are cross listed as Rel 311.0.

340.0 ALIENATION AND THE BODY POLITIC

Prerequisite: a course in philosophy or political science.

A study of the notion of alienation in Karl Marx and Bernard Lonergan, with special reference to the body politic. The course will also explore briefly the historical background and development of the notions of alienation and dialectic in earlier philosophers, especially Hegel, as well as in contemporary communism. Finally, an attempt will be made to develop the implications of Lonergan's thought for the body politic and political science.

Classes 3 hrs. a week. 2 semesters.

345.1 (250.0) GREEK PHILOSOPHY: THE PRESOCRATICS AND PLATO

A brief examination of the origins of ancient Greek Philosophy in the works of speculative cosmologists and the subsequent shift in interest from nature to humanity as initiated by Socrates and developed in the works of Plato. Most of the course will consist of reading Plato's major dialogues, including his *Republic*.

Classes 3 hrs. a week. 1 semester.

346.2 (250.0) GREEK PHILOSOPHY: ARISTOTLE, THE HELLENISTS

A brief examination of Aristotle's views on drama, psychology, knowledge, ethics, and politics, to be followed by a brief study of Stoicism, Epicureanism, and Plotinus.

Classes 3 hrs. a week. 1 semester.

PHILOSOPHY

348.1 (247.1, 248.2) AESTHETICS: THE WORK OF ART, THE ARTIST

This course considers works of art as the product of creative artists, and problems about the interpretation and criticism of works of art.

Classes   3 hrs. a week. 1 semester.

349.2 (248.1) AESTHETICS: THE AESTHETIC EXPERIENCE

This course analyzes the concept of aesthetic experience and its relation to the appreciation and understanding of works of art.

Classes   3 hrs. a week. 1 semester.

351.0(651.0) PHILOSOPHY OF SCIENCE

An introduction to the main problems of the philosophy of science designed to familiarize students with some of the contemporary analyses of scientific concepts and methods.

Classes   3 hrs. a week. 2 semesters.

390.0-395.0 READING COURSES IN PHILOSOPHY

Prerequisite: permission of instructor.

These courses are organized by the faculty member(s) involved, and are designed to supplement and/or provide an alternative to regular courses in philosophy according to the special needs and interests of students. Each course may be on a particular subject and/or author(s) and could include, if desired, philosophical texts in a language other than English.

402.0 PHILOSOPHY OF THE SOCIAL SCIENCES

Prerequisite: a course in philosophy or permission of instructor.

A philosophical examination of the purpose and character of the social sciences and of the major conceptual, logical and methodological problems which arise in them.

Classes   3 hrs. a week. 2 semesters.

407.0 (607.0) PHILOSOPHY OF BEING

This course is a philosophical investigation into the foundations of metaphysics in cognitional theory, of the principles of proportionate being, of the problems of a transcendent being or God. It also investigates related problems such as the problems of human freedom and of evil and the positions of atheism, agnosticism and pantheism.

Text: B. Lonergan, *Insight*.

Classes   2 hrs. a week and seminars. 2 semesters.

440.1 (350.0) MEDIEVAL PHILOSOPHY: EARLY PERIOD TO 12TH CENTURY

Prerequisite: a course in philosophy or consent of instructor.

An examination of the major philosophical doctrines and currents in Western Europe from the period of Augustine to the end of the 12th century.

Classes   3 hrs. a week. 1 semester.

441.2 (350.0) MEDIEVAL PHILOSOPHY: 13TH, 14TH CENTURIES

Prerequisite: a course in philosophy or consent of instructor.

An examination of the major philosophical doctrines and currents in Western Europe in the 13th and 14th centuries.

Classes   3 hrs. a week. 1 semester.

442.1 (352.0) EARLY MODERN PHILOSOPHY: THE RATIONALISTS

Prerequisite: a course in philosophy or consent of instructor.

A critical examination of works by Descartes, Spinoza and Leibniz with attention focused on their theories of knowledge, and metaphysics.

Classes   3 hrs. a week. 1 semester.

PHILOSOPHY

343.2 (352.0)   EARLY MODERN
                   PHILOSOPHY: THE
                   EMPIRICISTS

Prerequisite: a course in philosophy or consent of instructor.

A critical examination of works by Locke, Berkeley and Hume with attention focused mainly on their theories of knowledge, meaning, and perception.

Classes 3 hrs. a week. 1 semester.

444.1 (350.0)   LATER MODERN
                   PHILOSOPHY: KANT

Prerequisite: a course in philosophy or consent of instructor.

A lecture and seminar course dealing with Kant's epistemological and moral philosophy.

Classes 3 hrs. a week. 1 semester.

445.2 (353.0)   LATER MODERN
                   PHILOSOPHY: THE GERMAN
                   IDEALISTS

Prerequisite: a course in philosophy or consent of instructor.

A lecture and seminar course dealing with the works of some of the German philosophers characterized as "Idealists" in virtue of their similar reactions to Kant. Fichte and Hegel will receive special attention.

Classes 3 hrs. a week. 1 semester.

450.0 (650.0)   PHENOMENOLOGY

Prerequisite: one course in philosophy or consent of the instructor.

The origins, developments, concepts, method and influence of the phenomenological movement in contemporary philosophy.

Texts: Selections from Husserl, Heidegger, Sartre, Merleau-Ponty.

Classes 3 hrs. a week. 2 semesters.

453.0   PHILOSOPHY OF HISTORY

Prerequisite: a course in philosophy or consent of instructor.

A critical study of the philosophical views on the course of human history (its pattern, purpose and value) and an examination of the aim, nature and validity of historical knowledge.

Classes 3 hrs. a week. 2 semesters.

455.1 (355.0)   EXISTENTIALISM: THE 19TH
                   CENTURY: KIERKEGAARD,
                   NIETZSCHE

Prerequisite: a course in philosophy or consent of instructor.

A lecture and seminar course examining the 19th century origins of the existentialist movement in contemporary philosophy, with specific investigation of the writings of Kierkegaard and Nietzsche.

Classes 3 hrs. a week. 1 semester.

456.2 (355.0)   EXISTENTIALISM: THE 20TH
                   CENTURY: JASPERS, MARCEL,
                   CAMUS, SARTRE

Prerequisite: a course in philosophy or consent of instructor.

A lecture and seminar course examining 20th century expression of the existentialist movement in philosophy, through study of the writings of Jaspers, Sartre, Marcel and Camus.

Classes 3 hrs. a week. 1 semester.

465.0 (655.0)   ANALYTIC PHILOSOPHY

Prerequisite: a course in philosophy or consent of instructor.

A lecture and seminar course that examines the origins, expressions and significance of the contemporary analytic movement in philosophy.

Texts: Readings from representative members of the analytic school.

Classes 3 hrs. a week. 2 semesters.

PHILOSOPHY

466.0 (666.0)   ADVANCED ETHICAL THEORY

Prerequisite: a course in philosophy or permission of instructor.

A lecture and seminar course that examines certain fundamental problems of contemporary ethics. Attention will be concentrated on metaethical problems which arise from and are discussed in the writings of Moore, Stevenson, Hare, Nowell-Smith, Frankena, and Baier.

Texts: Selected readings from the authors above.

Classes   3 hrs. a week. 2 semesters.

467.1 (467.0)   AUGUSTINE ON PHILOSOPHY

Prerequisite: a course in philosophy or consent of instructor.

A lecture and seminar course which explores the meaning of philosophy and its relation to theology in the writings of the early great Christian thinker, Augustine of Hippo.

Classes   3 hrs. a week. 1 semester.

468.2 (567.0)   AQUINAS ON PHILOSOPHY

Prerequisite: a course in philosophy or consent of instructor.

A lecture and seminar course which explores the meaning of philosophy and its relation to theology in the writings of the dominant Christian thinker of the high medieval period, Thomas Aquinas.

Classes   3 hrs. a week. 1 semester.

469.0   MEANING AND TRUTH

Prerequisite: a course in philosophy or consent of instructor.

First Term: What is the meaning of "meaning"? Is meaning: a particular kind of entity? a response to a stimulus? the thing to which an expression refers? How is it that certain sounds and certain marks convey meaning whereas other sounds and marks do not? *Second Term:* What is "truth"? Is truth: the correspondence of our thoughts to reality? what works out in practice? the proper fitting together of our ideas?

Classes   3 hr. seminar a week. 2 semesters.

490.0 - 495.0   READING COURSES IN PHILOSOPHY

Prerequisite: consent of instructor.

These courses are organized by the faculty member(s) involved and are designed to supplement and/or provide an alternative to regular courses in philosophy according to the special needs and interests of students. Each course may be on a particular subject and/or author(s) and could include, if desired, philosophical texts in a language other than English.

690.0 - 695.0   READING COURSES IN PHILOSOPHY

Prerequisite: consent of instructor.

These courses are organized by the faculty member(s) involved, and are designed to supplement and/or provide an alternative to regular courses in philosophy according to the special needs and interests of students. Each course may be on a particular subject and/or author(s) and could include, if desired, philosophical texts in a language other than English.

PHOTOGRAPHY

200.0   PHOTOGRAPHY

Prerequisite: Permission of the instructor.

The fundamental laws, principles and procedures of photography are explored and applied specifically within the black and white and color format. This is an elective course and will not satisfy sections 4(b) or 5(b) of the science degree requirements.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

PHYSICS

Chairman, Associate Professor   U. S. Merdsoy
Professor   D. S. Murty
Associate Professor   W. Lonc, F.V. Tomscha
Assistant Professor   K. Fillmore

As society continues to struggle with environmental problems, interest is expected to grow in the fields of environmental physics, earth physics, bio-physics, etc. Physicists at all degree levels are engaged by oil and mining industries, while others are involved in the search for mineral deposits or petroleum. They are employed in governmental research laboratories and in industry in the development of new products. Physicists are also employed in hospitals to supervise such services as high voltage x-ray equipment and cobalt therapy. Still others study radiation and its effects on living organisms. Graduates with a Bachelor's degree in physics or in physics and mathematics also fill teaching positions at the secondary school level (adapted from *University Careers Outlook,* Department of Manpower).

Contingent on General Science Degree requirements, (see p. 32) students may choose to follow either of the following core programs:

A: Physics Concentration

First Year

Phy 111.0
a course in mathematics

Second Year

Phy 221.0   Mat 200.0

Third Year

Phy 321.1   Mat 300.0
Phy 322.2   Phy 331.1
                 Phy 332.2

Fourth Year

Phy 431.1
Phy 432.2
Phy 438.1
Phy 439.2
An elective in physics, or mathematics, or astronomy

B: Physics Major

First Year

Phy 111.0
a course in mathematics

Second Year

Phy 221.0   Mat 200.0

Third Year

Phy 321.1   Phy 331.1
Phy 322.2   Phy 332.2
Mat 300.0

Fourth Year

Phy 431.1   Phy 439.2
Phy 432.2   Phy 453.1
Phy 438.1   Phy 471.2

Any departure from **A** or **B** schemes must receive departmental approval.

Non-physics majors/non-concentration may substitute alternative prerequisites for courses at the 300-level or higher at the discretion of the Physics Department.

111.0   GENERAL PHYSICS

Prerequisite: Algebra and Trigonometry (concurrently).

Introduction to mechanics, sound, heat, electricity and light.

Text: Tilley and Thumm, *Physics for College Students.*

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

Recommend 111.0A for physics, chemistry,
               engineering and others.
               111.0B for biology, psychology,
               geology and others.

221.0   UNIVERSITY PHYSICS

Prerequisite: Phy 111.0 or a knowledge of Grade XII Physics. It is essential that students take an introductory calculus course concurrently.

Topics will include mechanics, heat, sound, light and electricity.

Text: Halliday and Resnick, *Fundamentals of Physics.*

Classes   3 hrs. plus tutorials and lab 3 hrs. a week. 2 semesters.

PHYSICS

260.0   ELECTRONICS FOR SCIENCE

Prerequisite: Phy 111.0 or equivalent, Mat 200.0 or permission of the department.

Characteristics of electronic circuits and devices, especially IC's, sensors for light, temperature, sound, telemetry, microwaves, communications, solid state analog and digital circuits.

Classes   4 hrs. a week including lab. 2 semesters.

Note: (1)   This course cannot be a substitute for Phy 111.0 or 221.0.
(2)   This course cannot be a credit course for a concentration or majoring student in Physics.

321.1   OPTICS

Prerequisite: Phy 221.0, Mat 300.0 concurrently.

Geometrical Optics: image formation by spherical surfaces, thin and thick lenses, lens aberrations, telescopes, mircoscopes. Physical optics: speed of light, dispersion, interference, diffraction, resolving power of optical instruments, polarization.

Text: Morgan, *Introduction to Geometrical & Physical Optics*.

Classes   3 hrs. and lab 3 hrs. a week. 1 semester.

322.2   ELECTRICITY AND MAGNETISM

Prerequisite: Phy 221.0, Mat 300.0 concurrently.

Electric and magnetic fields, and their corresponding potentials, properties of conductors and insulators, Lorentz force and applications, resistance, capacitance and inductance in AC circuits. The lab will introduce the student to the use of a variety of electric and electronic measuring instruments.

Text: Kip, *Fundamentals of Electricity and Magnetism*.

Classes   3 hrs. and lab 3 hrs. a week. 1 semester.

331.1   CLASSICAL MECHANICS I

Prerequisite: Phy 221.0, Mat 300.0 concurrently.

Introduction to vector analysis, work, potential energy, principle of virtual work, the damped harmonic oscillator, the forced harmonic oscillator.

Text: R. A. Becker, *Introduction to Theoretical Mechanics*.

Classes   3 hrs. a week. 1 semester.

332.2   CLASSICAL MECHANICS II

Prerequisite: Phy 331.1.

Motion of a particle under the action of a central force, deduction of the law of force from Kepler's Laws, the two-body problem, motion of a system of particles, motion of a particle in an accelerated reference system, generalized coordinates, holonomic and non-holonomic constraints, degrees of freedom. Lagrange equations.

Text: R. A. Becker, *Introduction of Theoretical Mechanics*.

Classes   3 hrs. a week. 1 semester.

350.1   PHYSICAL ELECTRONICS

Prerequisite: Phy 221.0.

Solid state principles; atomic structure, energy levels and band structure, electron mobility and conductivity; semiconductors, intrinsic semiconductors; P-type and N-type material; PN-junction diodes; PNP and NPN junction transistors; diodes as rectifiers, power supplies; diode logic circuits and transistor amplifiers.

Classes   3 hrs. and lab 3 hrs. a week. 1 semester.

PHYSICS

431.1   ELECTROMAGNETIC THEORY I

Prerequisite: Phy 321.1, 322.2, and Mat 300.0.

Development of the theory of electric and magnetic fields and Maxwell's equations in non-polarized media, leading to applications such as waveguides.

Text: Lorraine and Corson, *Electromagnetic Fields and Waves*.

Classes   3 hrs. and lab 3 hrs. a week. 1 semester.

Note: A student with the approval of the chairman of the department in which he is majoring and also the Physics Department may substitute non-laboratory projects (e.g. term papers) for the laboratory parts of the course.

432.2   ELECTROMAGNETIC THEORY II

Prerequisite: Phy 431.1.

Development of the theory of electric and magnetic fields and Maxwell's equations in polarizable media, including an introduction to a relativistic formulation of the Maxwell equations.

Text: Lorraine and Corson. *Electromagnetic Fields and Waves*.

Classes   3 hrs. and lab 3 hrs. a week. 1 semester.

Note: A student with the approval of the chairman of the department in which he is majoring and also the Physics Department may substitute non-laboratory projects (e.g. term papers) for the laboratory parts of the course.

438.1   NUCLEAR PHYSICS I

Prerequisite: Phy 321.1, 322.2 and Mat 300.0.

Atoms, electrons, radiations, the nuclear atom, x-rays, and atomic structure, quantum theory of radiation, special theory of relativity, group velocity and wave velocity. Mass spectrometers, atomic spectra and atomic structure, the nucleus and isotopes.

Text: Irving Kaplan, *Nuclear Physics*.

Classes   3 hrs. and lab 3 hr. a week. 1 semester.

439.2   NUCLEAR PHYSICS II

Prerequisite: Phy 438.1.

Natural radioactivity and the radioactive laws, artificial nuclear disintegration, artificial radioactivity, alpha-decay, beta-decay, and gamma-decay, nuclear reactions, nuclear forces, nuclear fission, nuclear energy sources, particle accelerators.

Classes   3 hrs. and lab 3 hrs. a week. 1 semester.

453.1   THERMOPHYSICS

Prerequisite: Phy 221.0, Mat 300.0.

Temperature, internal energy, 1st and 2nd laws of thermodynamics and their implications, entropy, systematic study of state functions and the resulting Maxwell distribution, transport phenomena.

Text: King, *Thermophysics*.

Classes   3 hrs. a week. 1 semester.

471.2   INTRODUCTION TO QUANTUM MECHANICS

Prerequisite: Phy 438.1, Mat 410.0 concurrently.

Wave mechanical concepts, wave packets and uncertainty, linear operators, Schroedinger equation, energy eigenfunctions, harmonic oscillator, hydrogen atom, elastic scattering, co-ordinate momentum and energy representations.

Text: Dicke and Wittke: *Introductory to Quantum Mechanics*.

Classes   3 hrs. a week. 1 semester.

NOTE: All 500 courses will be offered by consultation with the department.

550.0   TOPICS IN THEORETICAL PHYSICS

Prerequisite: Phy 332.2, Mat 410.0.

Fluid dynamics, elasticity, tensor calculus, the theory of relativity. The areas of greatest concentration will be decided upon in consultation with the students.

Texts: G. H. A. Cole, *Fluid Dynamics*, (Methuen). B. Spain, *Tensor Calculus*, (Oliver and Boyd).

Classes   3 hrs. a week. 2 semesters.

PHYSICS

551.0 THERMODYNAMICS AND STATISTICAL MECHANICS

Prerequisite: Phy 453.1, Mat 410.0.

First and second law of thermodynamics and their application to simple thermodynamic systems and to chemical reaction, kinetic theory and transport phenomena. In statistical mechanics, the macro canonical and grand canonical ensembles, Bose-Einstein and Fermi-Dirac statistics are discussed and applied to gases, electrons in metals, and low temperature physics.

Classes 3 hrs. a week. 2 semesters.

552.0 QUANTUM MECHANICS

Prerequisite: Phy 471.2, Mat 410.0.

Wave mechanical concepts, wave equation of Schroedinger, energy eigen functions, examples of energy eigen functions, general principles of quantum mechanics, interpretative postulates of quantum mechanics, operators with continuous spectra, uncertainty principle, matrix mechanics, the equation of motion of operators, the Dirac notation for wave functions and operators, spin, Pauli's principle, time independent perturbation theory, collision processes, elastic scattering by fixed center of force, Born approximation, inelastic scattering processes, Dirac equation for a free particle.

Text: Mandl, *Quantum Mechanics* (Butterworth).

Classes 3 hrs. a week. 2 semesters.

553.1 UPPER ATMOSPHERE

Prerequisite: Phy 432.2, Mat 410.0.

Meteorological conditions in the lower stratosphere, structure and circulation of the upper stratosphere and mesosphere, the sun's radiation and the upper atmosphere, composition of the stratosphere and mesosphere, composition and structure of the thermosphere, heat transfer and radiative processes, atmospheric tides and winds in the lower thermosphere, introduction to some other aeronomic problems, transport properties in the upper atmosphere.

Text: Craig, *The Upper Atmosphere*, (Academic Press).

Reference: Ratcliffe, *Physics of the Upper Atmosphere*, (Academic Press).

Classes 3 hrs. a week. 1 semester.

554.1 INTRODUCTION TO SOLID STATE PHYSICS

Prerequisite: • Phy 471.2.

Crystal structure, lattice vibrations, free electron Fermi gas, band structure, properties of simple metals, semiconductors and insulators, superconductivity.

Text: C. Kittel, *Introduction to Solid State Physics,* (Wiley and Sons).

Classes 3 hrs a week. 1 semester.

555.2 TOPICS IN ADVANCED NUCLEAR PHYSICS

Prerequisite: Phy 439.2, Mat 410.0.

Some selected topics in Nuclear Physics will be discussed. Topics will be oriented towards research problems.

Reference: K. Siegbahn, *Alpha-Beta-Gamma Ray Spectroscopy,* Vol. 1 and 2, (North-Holland).

Classes 3 hrs. a week. 1 semester.

605.0 FUNDAMENTAL ASTROPHYSICS (Ast 605.0)

Prerequisite: Phy 432.2 and 439.2, and Mat 410.0 (may be taken concurrently).

The physical conditions in the outer layers of stars will be deduced from their continuous radiation and their spectral lines. This treatment of *stellar atmospheres* will involve a discussion of ionization and excitation, atomic and molecular spectra, and the thermodynamics of a gas. The topic of *stellar structure* will include an application of nuclear physics to stellar energy production and a treatment of nuclesynthesis in stars (explosive and non-explosive). A discussion of the *interstellar medium* will include interstellar clouds, the intercloud medium, ionized hydrogen regions, interstellar molecules, dust grains, and the galactic magnetic field.

POLITICAL SCIENCE

Chairman, Associate Professor	J. G. Jabbra
Professors	R. C. Boyd, T. B. Ciuciura, H. D. Gillis
Associate Professor	E. J. McBride
Assistant Professors	G. Chauvin, D. J. Higgins, R. G. Landes

DEPARTMENTAL POLICY

Students who intend to complete a major concentration in political science must take a minimum of six courses in political science. There are two required courses: political science 200.0 and 304.0. (With the permission of the department, students may be permitted to take another course in lieu of political science). The Department also strongly recommends that a student take Pol 301.0 and one seminar at the 500 level in one of the following sub-fields: Canadian Government, Comparative Government, International Relations, Political Thought.

Applications for admission to the political science honors program must be submitted to the Honors Program Committee which has the following objectives: (a) evaluate applications for admission to the honors program in political science; (b) seek out potential candidates and encourage them to apply for admission to the honors program in political science; (c) assist political science honors students in selecting their supervisors from the Department.

Candidates should normally complete the formalities for admission to the political science honors program not later than the beginning of their Junior Year.

A student, in order to be admitted to, and remain in, the political science honors program must have and maintain an overall average of B, with no grade below C.

A student also must enrol in and complete at least two seminars at the 500 level.

An honors student must take a number of courses, approved in consultation with his supervisor, in cognate disciplines over and beyond the B.A. prerequisites.

The following courses are strongly recommended to all honors students:
a. Scope and Methods (301)
b. One course in political philosophy

An honors student must pass a general oral examination before a departmental board composed of his advisor, and at least two other members selected by the Department. (The scope of the general oral examination will be determined by the Department, in consultation with the student's supervisor.)

Students are reminded that the requirements mentioned above constitute a minimum. If graduate work is contemplated, additional courses in political science and in cognate disciplines will be required. For more complete information, the student is advised to consult *Notes and Guidelines for Students in Political Science,* issued by the Department.

200.0   INTRODUCTORY POLITICAL SCIENCE

An introduction to the scope and methods of political science. The nature of the state will be examined, as well as the various purposes advanced for its existence. The student will be introduced to various aspects of government, political parties, international relations and political philosophies.

Classes   3 hrs. a week. 2 semesters.

301.0   SCOPE AND METHODS OF POLITICAL SCIENCE

Prerequisite: Pol 200.0.

An introduction to the concerns and methodologies of modern political science. Included will be a discussion of theories and approaches developed by the empirical school of political scientists.

Classes   3 hrs. week. 2 semesters.

302.0   DEMOCRATIC GOVERNMENT

An examination of fundamental concepts in democratic theory. Special emphasis is placed on the relationship between theory and practice. Great Britain, the United States and Canada serve as the source of examples of the practice of politics in Western democracies.

Classes   3 hrs. a week. 2 semesters.

POLITICAL SCIENCE

303.0 GOVERNMENT AND POLITICS IN THE USSR AND EASTERN EUROPE

A study of the Soviet socio-economic and political system which constitutes the most serious and enduring challenge to Western democracy. It includes a survey of history and political institutions — from the old Kievan Rus to the Russian Empire, the Russian Soviet Federal Socialist Republic, and the Union of Soviet Socialist Republics; the development of political institutions and processes from the Revolution to the present, with attention to the largest non-Russian Soviet republics in Europe (Ukraine) and Asia (Kazakhstan, Uzbekistan); contemporary political institutions and processes in Communist party-states of (or East Central) Europe; the German Democratic Republic, Poland, Czechoslovakia, Yugoslavia, and others.

Classes   3 hrs. a week. 2 semesters.

304.0 CANADIAN GOVERNMENT AND POLITICS

Prerequisite: Pol 200.0.

A study of Canadian constitutional democracy, encompassing an analysis of both political institutions and political behavior.

Classes   3 hrs. a week. 2 semesters.

305.0 INTERNATIONAL RELATIONS

Prerequisite: Pol 200.0.

A survey of and introduction to the study of international relations. The first term will concentrate on the following topics: nationalism and the rise of the nation-state; elements and evaluation of a nation's power; the balance-of-power system in the classical and nuclear age; international law; and the United Nations. The second term will concentrate on foreign policy decision-making and current foreign policy problems of the major powers. Consideration of Canadian foreign policy will be included in the second term's work.

Classes   3 hrs. a week. 2 semesters.

306.0 GOVERNMENT AND POLITICS IN WESTERN EUROPE

Prerequisite: Pol 200.0.

A detailed comparative analysis of the institutions and functions of the national political systems, primarily of the United Kingdom, France, Western Germany, Switzerland and Austria, with an emphasis on both the long history of, and the recent changes in, the core area of Western civilization.

Classes   3 hrs. a week. 2 semesters.

307.0 PROVINCIAL GOVERNMENT AND POLITICS

Prerequisite: Pol 200.0.

An analysis of the dynamics and structures of provincial government in Canada, with special reference to Nova Scotia. Provincial political parties, voting behavior, legislatures, bureaucracies and policy formulation constitute the core of this course. Inter-provincial and federal-provincial relations are examined, with particular reference to Maritime Union, Quebec, and the Western provinces.

Classes   3 hrs. a week. 2 semesters.

312.0 GOVERNMENT AND POLITICS IN THE UNITED STATES

Prerequisite: Pol 200.0.

An analysis of the American political system in terms of the interrelationship of characteristics salient in the political culture, the social base, the constitutional order, the governmental structure and the policy process, with special emphasis on the political party system, voting behavior, and the Presidency.

Classes   3 hrs. a week. 2 semesters.

407.0 GOVERNMENT AND POLITICS IN THE MIDDLE EAST

A comparative study of the governments and politics of Middle Eastern countries, with an emphasis on the analysis of the fundamental political and socio-economic changes that are occurring in the area and attempting to shape its modernizing pace.

Classes   2 hrs. a week. 2 semesters.

POLITICAL SCIENCE

418.0 INTERNATIONAL LAW AND ORGANIZATION

Prerequisite: Pol 200.0.

The principal features of public international law as they have developed and have been invoked in diplomatic practice, international adjudication, and national courts; a study of the structures and the processes of co-operation and conflict within the United Nations, the Commonwealth and other international organizations.

Classes 3 hrs. a week. 2 semesters.

419.0 COMPARATIVE CONSTITUTIONAL LAW

Prerequisite: Pol 200.0.

A comparative analysis of constitutional systems, this course focuses upon the theory and exercise of judicial review, in the context of either Canadian and American constitutional law, or European constitutional practice. It combines lectures, collateral readings, and the case method.

Classes 3 hrs. a week. 2 semesters.

420.0 URBAN GOVERNMENT AND POLITICS

Prerequisite: Pol 200.0.

An analysis of political ramifications of urbanization, focusing on Canada. Using historical, comparative, and structural approaches, analysis in the first semester is concerned largely with municipal government — its development in Canada, inter-government relations, the concept of autonomy, and structures of decision-making. The second semester is devoted to an examination of urbanization and the political problems to which it gives rise — problems of structural adequacy and reform, and selected problems of functions such as urban development and renewal, urban transportation, and the urban physical environment.

Classes 3 hrs. week. 2 semesters.

430.0 INTRODUCTION TO PUBLIC ADMINISTRATION

Prerequisite: Pol 200.0.

A study of the structure and operation of the administrative branch of government, both in theory and practice. Included will be an examination of the evolution of the Canadian federal public administration and public service, with some attention for comparative purposes to related experience in other nations. The administrative responsibilities and powers of the modern state will be assessed and a sampling of recent organization theories will be undertaken.

Classes 3 hrs. a week. 2 semesters.

435.0 POLITICAL THOUGHT TO THE FRENCH REVOLUTION

Prerequisite: Pol 200.0.

An historical treatment of the most important political ideas from the earliest writings on politics to the immediate precursors of the French Revolution. Some attention is paid to the mutual interaction of social conditions and ideas.

Classes 3 hrs. a week. 2 semesters.

436.0 MODERN POLITICAL THOUGHT

Prerequisite: Pol 200.0.

An examination of the major currents in political thought from the era of the French Revolution to the 20th Century. The major emphasis is on the liberal and the socialist traditions.

Classes 3 hrs. a week. 2 semesters.

440.0 THE POLITICS OF THE DEVELOPING AREAS

Prerequisite: Pol 200.0.

An examination of problems of political development in Asian and African states, in the context of their modernization processes, with special reference to factors responsible for the emergence of authoritarian governments.

Classes 3 hrs. a week. 2 semesters.

POLITICAL SCIENCE

441.0   GOVERNMENT AND POLITICS IN EAST ASIA

Prerequisite: Pol 200.0.

A study of government structures and political dynamics in mainland China, Southeast Asia and Japan, with emphasis on current trends in the Chinese system.

Classes   3 hrs. a week. 2 semesters.

445.0   AN INTRODUCTION TO PUBLIC POLICY

Prerequisite: Pol 200.0.

A critical analysis of the process of public policy formation, the contents of public policies, and their impact upon society.

Classes   3 hrs. a week. 2 semesters.

446.0   POLITICAL PARTIES AND VOTING BEHAVIOR

Prerequisite: Pol 200.0.

An analysis of the structures and functions of individual parties and party systems, with emphasis on Canada, the United States and Western Europe.

Classes   3 hrs. a week. 2 semesters.

550.0   SEMINAR IN THE HISTORY OF POLITICAL THOUGHT

Prerequisite: Pol 200.0.

An intensive study of major trends in political thought, ancient and modern, with special attention to contemporary political doctrines and ideologies, their transformation and interrelation in the course of history and their interrelation with social and political conditions.

Classes   2 hrs. a week. 2 semesters.

551.0   CANADIAN GOVERNMENT SEMINAR

Prerequisite: Pol 200.0 and 304.0.

An analysis of selected aspects of Canadian politics and government, using a comparative approach. Topics include: political culture, interests groups, political parties, voting behavior, Parliamentarians, and bureaucracy. This seminar emphasizes student presentations and group discussions.

Classes   2 hrs. a week. 2 semesters.

552.0   SEMINAR IN COMPARATIVE GOVERNMENT

Prerequisite: Pol 200.0.

Conceived as a work-study group, this seminar is designed for students interested in the use of the comparative method in the analysis of contemporary national political systems.

Classes   2 hrs. a week. 2 semesters.

553.0   INTERNATIONAL STUDIES SEMINAR

Prerequisite: Pol 200.0.

A seminar on the contemporary interaction of the major powers, with special consideration of selected world problems, tensions, trends and developments.

Classes   2 hrs. a week. 2 semesters.

555.0   SEMINAR ON CANADIAN FOREIGN POLICY

Prerequisite: Pol 304.0 and 305.0.

Application of recent foreign policy models to Canadian data, survey of Canadian external relations, 1867-1970, detailed examination of contemporary problems in Canadian foreign policy, both geographic and functional. The latter includes defense, external trade, foreign aid and international organizations of special concern to Canada. Student presentations on selected topics are an important part of the course.

Classes   2 hrs. a week. 2 semesters.

PSYCHOLOGY

Chairman, Associate Professor	I. Lenzer
Professor	J. Chadwick-Jones
Associate Professors	V. Catano, J. Darley, R. Konopasky
Assistant Professors	K. Hill, P. Street
Lecturer	H. Chang

Psychology is normally begun at the sophomore level. The introductory course is a broad survey of the discipline and is a prerequisite for all other psychology courses. The *compulsory* core program for those concentrating in psychology consists of the introductory course (201.0), Learning (301.0), and Experimental Design and Psychological Statistics (305.0). An average grade of C (2.0) in psychology courses is required for psychology majors.

The Department offers an honors program which follows the general regulations, as stated in this Calendar. An additional departmental regulation is that honor students take 449.0, and 549.0. The latter is restricted to honor students.

201.0   INTRODUCTION TO PSYCHOLOGY

Prerequisite: sophomore standing.

The science of behavior, methods and measurement, psychological basis of behavior, maturation and development, individual differences and intelligence, personality, sensory processes and perception, learning, memory and thinking, motivation and emotion, social and clinical psychology, applications of psychology.

Each person taking this course must act as a subject for psychological experiments for a certain number of hours as a prerequisite for credit. The number of hours will be announced at the beginning of the course. A final grade of C is required for psychology majors.

Classes   3 hrs. a week. 2 semesters.

301.0   PSYCHOLOGY OF LEARNING

Prerequisite: Psy 201.0. The student is advised to take Psy 305.0 concurrently.

Classical conditioning and instrumental learning will be studied as examples of the learning process. Additionally, factors such as reinforcement, punishment, generalization, discrimination, transfer of training, extinction, short-term and long-term retention, interference, all-or-none versus incremental learning, and the physiological correlates of learning. A final grade of C is mandatory for majors.

Classes   3 hrs. and lab 3 hrs. a week. 2 semesters.

305.0   PSYCHOLOGICAL STATISTICS AND EXPERIMENTAL DESIGN

Prerequisites: Psy 201.0 and a 100 level mathematics course or equivalent. The student is advised to take Psy 301.0 concurrently.

Importance of statistics in psychology, probability and probability distributions, binomial and normal distributions, characteristics of distributions, measures of central tendency and dispersion, sampling and hypothesis testing, parametric and non-parametric.

The designing of experiments in psychology in the light of the above, the variation of factors and observation of changes in responses, interpretation of results based on experimental design and application of the relevant statistics. A final grade of C is mandatory for majors.

Classes   3 hrs. and lab $1\frac{1}{2}$ hrs. a week. 2 semesters.

310.1   INTRODUCTORY SOCIAL PSYCHOLOGY: BASIC CONCEPTS

Prerequisite: Psy 201.0.

The history of this major branch of psychology is outlined showing how the scientific study of interpersonal behavior has progressed, up to the present, in theory and methodology. The aim of this course is to give an understanding of basic concepts, assumptions and contemporary theories in social psychology and to give a sound acquaintance with the logic and procedures for formally testing these theories.

Classes   3 hrs. a week. 1 semester.

PSYCHOLOGY

311.2 INTRODUCTORY SOCIAL PSYCHOLOGY: RESEARCH METHODS

Prerequisite: Psy 201.0.

This second course in social psychology introduces the student to the research methods and paradigms which have been developed over fifty years of work in this major branch of academic psychology. Some of these methods are now applied to current Canadian problems such as bilingualism, language, and group relations. Discussion of these special issues is intended to exemplify research models and to throw light on the general questions and controversies of the discipline.

Classes 3 hrs. a week. 1 semester.

331.1 CHILD PSYCHOLOGY I

Prerequisite: Psy 201.0, 301.0.

An introduction to child psychology including a consideration of genetic and prenatal factors in development, early socialization, sexual differentiation, cognitive and intellectual development.

Classes 2 hrs. and lab 2 hrs. a week. 1 semester.

334.1 PSYCHOLOGY AND RELIGION

Prerequisite: Psy 201.0.

Interdisciplinary study of various aspects of the interface between religion and psychology. Competing value orientations in psychology and psychotherapy: the role of sin and guilt in mental illness; behaviorism, the medical model, and ethics; freedom and responsibility; the psychologizing of religion, and the ritualizing of psychology; contrasting images of man. Discussion of various phenomena, e.g., faith healing, conversion, speaking in tongues, transcendental experience. This course will not satisfy 4(b), 5(a) or 5(b) of the Science Degree Requirements.

Classes 3 hrs. a week. 1 semester.

348.1 PSYCHOLOGY OF SEX ROLES

Prerequisite: Psy 201.0. (enrolment limited to 40 students).

An examination of the psychology of sex role differences; sex role identity as determined by biological and environmental factors; discussion of sex role behavior among animals; theories as they relate to sex role differentiation, e.g., the psychoanalytic and social learning theory.

Classes 3 hrs. a week. 1 semester.

349.2 DRUGS AND BEHAVIOR

Prerequisite: Psy 201.0 (enrolment limited to 40 students).

Effects of psychoactive drugs on normal and abnormal behavior and on consciousness, explanation in terms of brain functioning, discussion of methods used in the study of drug effects on animals and humans.

Classes 3 hrs. a week. 1 semester.

402.0 PSYCHOLOGY OF SENSATION AND PERCEPTION

Prerequisite: Psy 305.0.

An examination of how sensory systems (e.g., vision, audition) abstract and process information from the physical world and the resultant effect on awareness and attention. Topics include neural communication and organization, receptor and cortical processes, coding mechanisms, specification of the stimulus, perception of brightness and color, perceptual memory, form perception and recognition, perception of space, time and motion, extra-sensory perception, perceptual illusions.

Classes 3 hrs. and lab 3 hrs. a week. 2 semesters.

403.1 PSYCHOLOGY OF MOTIVATION

Prerequisite Psy 301.0 and 305.0.

A study of the impelling factors in behavior: instincts, needs, drives, incentives: behavioral and physiological components of hunger, thirst, sex, aggression and curiosity.

Classes 3 hrs. and lab 2 hrs. a week. 1 semester.

PSYCHOLOGY

404.0 INTRODUCTION TO PHYSIOLOGICAL PSYCHOLOGY

Prerequisite: Psy 301.0 and 305.0.

Introduction to neuroanatomy of the brain. Neural mechanisms of sleep, arousal and attention; physiological basis of learning, language and motivation. Introduction to clinical neuropsychology. Physical control of the mind through electrical stimulation of the brain and through drugs.

Classes 3 hrs. and lab 2 hrs. a week. 2 semesters.

406.2 ETHOLOGY

Prerequisite: Psy 301.0 and 305.0.

An examination of human and animal behavior: comparative development of social and emotional behavior, evolution, reflexive behavior, courtship, mating, and parental behavior.

Classes 3 hrs. and lab 2 hrs. a week. 1 semester.

410.0 · EXPERIMENTAL SOCIAL PSYCHOLOGY

Prerequisite: Psy 301.0, 305.0, and either Psy 310.1 or 311.2.

The units of study in social psychology are the individual, the dyad (or pair relationship) and the primary group. For each of these units we shall study theories, research methods, and applications which are currently utilized. This takes us into questions about personal social skills, non-verbal commuincaton, language, and wider problems of social conformity, aggression, and interpersonal "trading" in mixed-motive situations of cooperation or conflict. Students are introduced to laboratory experiments which illustrate both the classic and the most recent methods of social psychology.

Classes 2 hrs. and lab 2 hrs. a week. 2 semesters.

411.0 INDUSTRIAL AND APPLIED PSYCHOLOGY

Prerequisite: Psy 305.0.

The application of psychological concepts to behavioral problems encountered in the work environment. Topics will include organizational structure, personnel selection, placement and training, leadership, human performance and capacity, motivation and morale, consumer psychology and how modern technology and organizations affect human behavior.

Classes 3 hrs. a week. 2 semesters.

412.0 HUMAN INFORMATION PROCESSING

Prerequisite: Psy 301.0 and 305.0.

An examination of the processes by which sensory inputs are transformed, reduced, elaborated, stored, recovered and used. The course may include topics such as contemporary theories of perception and memory, psycholinguistics, computer simulation of cognitive processes, models of information processing, concept learning and formation, and decision making processes.

Classes 3 hrs. and lab 3 hrs. a week. 2 semesters.

413.0 ENVIRONMENTAL PSYCHOLOGY

Prerequisite: Psy 301.0 or 305.0.

An examination of the evolutionary and biological background of humans relative to present industrial environment. Territoriality, space and human movements, privacy and crowding. Architectural design: housing, offices and hospitals, lighting. Perception of the city: cognitive maps, the sonic environment, the street and its social functions, stress in the urban environment, noise. Calhoun's rats and the rat race.

Classes 3 hrs. and lab 2 hrs. a week. 2 semesters.

PSYCHOLOGY

431.2   CHILD PSYCHOLOGY II

Prerequisites: Psy 301.0 and 331.1.

An examination of socialization and the development of individual differences in children and adolescents. There will be an emphasis on the development of prosocial behavior and attitudes, such as cooperation, altruism, and moral development. Other probable topics include aggression, egocentrism, television and the child, and child-rearing influences on development.

Classes   2 hrs. and lab 2 hrs. a week. 1 semester.

432.0   ABNORMAL PSYCHOLOGY

Prerequisite: Psy 301.0.

Examination of theoretical, research, and applied aspects of abnormal psychology. Consideration will be given to the description, origin, and planned change of maladaptive functioning. Topics may include the role of social, economic, and political factors in disorder, the history of the area, professional roles.

Classes   3 hrs. a week. 2 semesters.

433.0   PERSONALITY THEORY AND RESEARCH

Prerequisite: Psy 301.0 and 305.0.

Comparative analysis of fifteen or more contemporary theories of personality through intuitive, rational, and empirical methods with a view to determining the most promising direction of theorizing about the types, origins and effects of individual differences, in adult behavior and experience.

Classes   2 hrs. and lab 2 hrs. a week. 2 semesters.

434.2   PSYCHOLOGY OF ART

Prerequisite: Psy 301.0 and 305.0.

A study of theory and research on psychological principles underlying the creation, meaning, and appreciation of art experience. Review of traditions in art criticism, e.g., psychoanalytic, as well as consideration of major theories addressed to analysis of aesthetic stimuli, experience and response, e.g., gestalt and information theory. Analysis of art as emotional communication, and its interpretation in the broader context of personality and culture.

Classes   3 hrs. a week. 1 semester.

440.0   EDUCATIONAL AND PSYCHOLOGICAL TESTS AND MEASUREMENTS

Prerequisite: Psy 201.0 and 305.0.

Basic principles of statistical sampling, psychological measurement and the construction of scales. Test construction: standardization, evaluation of validity and reliability. Tests in common use: intelligence, aptitude, ability, personality, educational, and vocational tests. Special tests: language, clerical, perceptual and vocational selection tests. Clinical tests: personality, psychopathology, impairment and traditional psychiatric classification. Ethics.

Classes   3 hrs. and lab $1\frac{1}{2}$ hrs. a week. 2 semesters.

449.0   SENIOR SEMINAR

Prerequisite: senior standing and permission of the Department. Applications for this course must be made in March of the junior year to the Chairman of the Department of Psychology.

An individual research course in psychology. This is a required course for fourth year honors students.

Classes and lab 6 hrs. a week. 2 semesters.

PSYCHOLOGY

450.2 BEHAVIOR PROBLEMS OF CHILDREN

Prerequisite: Psy 301.0, 331.1 and 432.0 (the last may be taken concurrently).

A review of problems exhibited by children in home and educational settings, (e.g., autism, depression, hyperactivity, learning disabilities). Approaches to treatment will also be discussed.

Classes   2 hrs. and lab 2 hrs. a week. 1 semester.

460.2 DEVELOPMENT IN HUMAN INFANCY

Prerequisite: Psy 331.1 or permission of the instructor.

An examination of the development of behavioral processes of the human infant. Surveys of recent research in infant learning, habituation, visual and auditory perception, the perception of space, distance and objects.

Classes   2 hrs. and 1 hr. seminar a week. 1 semester.

485.1 BEHAVIORAL ANALYSIS AND CHANGE

Prerequisite: Psy 201.0 and 301.0.

A review of learning theory as it applies to behavior therapy in man. Survey of behavior modification techniques including relaxation training, counter conditioning, assertive training, token economies, modeling, shaping, and aversive techniques.

Classes   3 hrs. and lab 1 1/2 hrs. a week. 1 semester.

486.2 ADVANCED BEHAVIORAL ANALYSIS AND CHANGE

Prerequisite: Psy 201.0, 301.0, and 485.1.

Cognitive behavior therapy. Self-directed behavior therapy. Special topics in behavior therapy: smoking, alcoholism, drug addiction, obesity, mood change, and improving performance levels.

Classes   3 hrs. and lab 1 1/2 hrs. a week. 1 semester.

498.0 COMMUNITY PSYCHOLOGY

Prerequisite: Psy 201.0 and 301.0.

Delivery systems of psychological services: social services, agencies, institutions and private practicing professionals. Epidemiological surveys. Preventitive psychiatry. Community psychology. Interventions: individual-social-systems interventions and intersystem relationships.

Classes   3 hrs. a week. 2 semesters.

549.0 HONORS SEMINAR

Prerequisite: fifth year honors standing.

An individual research course in psychology. It is expected that the student will produce an honors thesis based on his work in this course. The course is required for fifth year honors students.

Classes and lab 6 hrs. a week. 2 semesters.

RELIGIOUS STUDIES

Associate Professor, Chairman   L. F. Murphy, S.J.
Associate Professors   E. Stiegman, S. A. Armstrong
Assistant Professor   P. Bowlby

The purpose of university studies in religion is to discover and explore the many dimensions of religion both as a universal human concern and as a tradition of reflection and worship. In this pursuit religious studies combines the methods and perspectives of theology, history of religions, social ethics, liturgy and spirituality with those of other disciplines in the humanities and social sciences.

The Religious Studies Department offers courses in three general areas:

Religion in Western Civilization
History of Religions (Comparative Religion)
Religion in Contemporary Society

Because so many students who are not majors in religious studies enrol in the Department for elective courses, special provisions are made in their regard. Many courses are offered as 300-level electives without prerequisites. The lectures of these courses can form the basis of advanced-majors courses, in which case a student informs the instructor of his wish to take the course at an advanced level, is admitted only with stated prerequisites, and is asked to accept more ambitious assignments.

Science students seeking electives will find 202.0, 230.0, and 347.2-348.1 of special interest.

MAJORS IN RELIGIOUS STUDIES

Students majoring in religious studies must fulfill the following requirements:
(1) The equivalent of six full courses; four of these beyond the 200-level, at least two of which must be at an advanced level.
(2) A grade of at least *C* in each course counted toward the major.

PREREQUISITES FOR MAJORS IN RELIGIOUS STUDIES

Students majoring in religious studies should undertake at least two of their courses at an advanced level. An advanced course, for this purpose, is distinguished by more mature assignments and a higher level of achievement, which can reasonably be expected only of students entering such courses with particular prerequisites.

The following prerequisites apply only to majors who choose to take the designated courses at an advanced level.

305.0 — Egl 200 and a course in religious studies
306.0 — A course in history and in the history of religions (the latter may be taken concurrently)
310.0 — Rel 202.0
313.0 — Rel 202.0
315.0 — A 200 level course in religious studies and a course in Canadian history (the latter may be taken concurrently)
323.0 — A 200 level course in religious studies
324.0 — A 200 level course in religious studies
330.0 — Rel 230.0
338.0 — Rel 202.0 or 313.0
340.0 — A 200 level course in religious studies and a course in either sociology or economics
345.0 — A 200 level course in religious studies
347.2 — A 200 level course in religious studies
348.1 — A 200 level course in religious studies
351.1 — A course in religious studies, and a 300 level course in English, modern languages, or classics
352.2 — A course in religious studies, and a 300 level course in English, modern languages, or classics

HONORS STUDENTS

The Department offers an honors program in preparation for graduate studies or for professions appropriate to the academic study of religion, such as journalism, social work, personnel management, civic leadership, teaching, and the ministry. General requirements for honors programs in the Arts Faculty are followed. Students write an honors essay, which may be prepared through an honors seminar (see Rel 590.0-595.0).

RELIGIOUS STUDIES

100.0   THE RELIGIOUS DIMENSION OF HUMAN LIFE: INTRODUCTION TO RELIGIOUS STUDIES.

There are many common life experiences (for instance, the encounter with death, suffering, loneliness, the quest for personal identity, sexuality, wonder, good and evil) which most men and women have sought to address in the context of an organized religion. In addition to studying these experiences which point toward the religious dimension in human life and the ways in which several religions have dealt with them, we shall also look at some secular approaches to the same experiences.

Classes   3 hrs. a week. 2 semesters.

201.0   THE GOD PROBLEM

Does God exist? Can personal and social values be supported by humanist alternatives to religion? The course considers these and other classic questions of the philosophy of religion, together with more recent issues, e.g., the nature of language about God, mythology in religious Scriptures, and the dialogue between science and religion.

Classes   3 hrs. a week. 2 semesters.

202.0   INTRODUCTION TO THE BIBLE

A critical approach to the Bible, involving an inquiry into the cultural and historical context of biblical literature, the meaning and relevance of the Bible for modern man.

Classes   3 hrs. a week. 2 semesters.

215.0   MORAL PROBLEMS IN CONTEMPORARY SOCIETY

An introduction to the meaning of Christian ethics through selected contemporary problems: Is morality a private affair (abortion)? Can religion and politics be separated (revolution)? Do moral norms change (the proper distribution of wealth)?

Classes   3 hrs. a week. 2 semesters.

230.0   THE MEASURE OF MAN

Who am I? Who do the experts say I am? Who do I think, feel, wish, fear I am? Am I one or many? Am I alone? Scientists, historians, psychoanalysts, artists, philosophers, theologians have struggled with these and related questions. We will seek the relevance of their views of what man is to our own questioning of who we are.

Classes   3 hrs. a week. 2 semesters.

235.0   INTRODUCTION TO ASIAN RELIGIONS

An introductory, non-technical study of Eastern religions through an examination of the historical and cultural roles of religions in Asian societies, such as Islam in the Middle East, Hinduism in India, Confucianism and Taoism in China, and Shinto and Buddhism in Japan.

Classes   3 hrs. a week. 2 semesters.

RELIGION IN WESTERN CIVILIZATION

305.0   DRAMA AND RELIGION

A close reading of great plays from world literature, emphasizing Greek tragedy, Shakespeare, and the modern stage. The course strives for an awareness of religious dimensions in the fictional universe which every play creates, and of the mythical character of the play's central action. Attention is drawn to the origin of both classical and modern drama in religious ritual, and to the dramatic essence of Judaism and Christianity as religions of event.

Classes   3 hrs. a week. 2 semesters.

IMPORTANT REVISION

After this _Calendar_ was printed a revision was made with respect to the 1977-78 tuition fees as indicated in Section 6, pages 194-197. The up-to-date figures are:-

A/ Subsection 1:
   A) Tuition Fees:
      Full-time students
         Full-time students $ 760.00
         University fee   52.00
         Student Council fee $ 812.00

      Part-time students
         Each full-credit course   165.00
         Each half-credit course   82.50

B/ Revisions, as appropriate in subsections 9(a) and 12(a).

RELIGIOUS STUDIES

306.0   MYTH AND HISTORY: THE PROBLEM OF INTERPRETING HUMAN EXISTENCE

His 334.0 to be taken concurrently.

Man's search for meaning. The life of man in relation to his past and that of his communities: the question put to Marc Bloc: "Papa, what good is history?"

Classes   3 hrs. a week. 2 semesters.

309.0   HISTORY OF ISRAEL
(Cla 310.0)

A study of the history of the ancient Hebrew kingdoms of Israel and Judah from the earliest settlements in Palestine to the fall of Jerusalem in 70 A.D.

Classes   3 hrs. a week. 2 semesters.

310.0   CHRISTIANITY IN MODERN CIVILIZATION: 1521 — TODAY

Questions arising from the history of Christianity in the reformation and modern periods. Martin Luther: reformer of medieval superstition or destroyer of European unity? John Calvin and the rise of capitalism, the radicals, Henry VIII and Elizabeth, Puritans and religious freedom. The French revolution and the attack on Christianity; science, liberalism, marxism and the modern critique of Christianity. The de-christianization of contemporary culture.

Classes   3 hrs. a week. 2 semesters.

313.0   JESUS OF NAZARETH

Jesus of Nazareth: God, man or superstar? Did Jesus really exist? What did he teach? Was he a radical revolutionary? An impractical dreamer? Why was he killed? What does the resurrection mean? Does his ethical teaching have any challenge or meaning for us today? Many answers have been given to Jesus' question, "Who do men say that I am?" An examination of the views of some representative modern scholars with an analysis of the texts on which their views rest.

Classes   3 hrs. a week. 2 semesters.

HISTORY OF RELIGIONS (COMPARATIVE RELIGION)

321.0   PRIMITIVE RELIGIONS IN ASIA

A study of the primitive religions among (1) hunters and food-gathers ·in Australia and (2) agriculturalists in Indonesia and Melanesia. Various modern theories of myth and mythic thought will be correlated with readings and interpretations of specific myths and symbols in Asian communities. In the second semester the course will concentrate on a study of various types of cosmogonic myth, their meanings and functions in Asian societies.

Classes   3 hrs. a week. 2 semesters.

323.0   BUDDHIST AND HINDU RELIGIOUS TRADITIONS

Why does the Buddha smile and tell humanity that all experience is suffering? Why does Lord Krishna in the *Bhagavad Gītā* smile and tell his friend that he must fight in a war? Such questions will focus a survey of basic ideas in the Buddhist and Hindu traditions and an examination of a sacred text such as the Buddhist *Dhammapada,* or the Hindu text, the *Bhagavad Gītā.*

Classes   3 hrs. a week. 2 semesters.

324.0   RELIGIONS OF CHINA

What did Confucius say? How does a Taoist and a Buddhist conceive of the world and his place in it? How have Chinese religious traditions shaped the character of Chinese culture? These questions will be examined through the reading in translation of selected Chinese classics such as: Confucius' *Analects,* Lao Tzu's *Tao te Ching*, The Buddhist *Platform Scripture* and selected writings of Chairman Mao.

Classes   3 hrs. a week. 2 semesters

RELIGION IN CONTEMPORARY SOCIETY

255.1   UNDERSTANDING JUDAISM
What are its basic tenets? Who is a Jew? What are the similarities and dissimilarities between the Jewish and Christian traditions? What is the Bible for Jews and how is it relevant in modern life? How do Jews differ? What are Jewish conceptions of abortion, capital punishment, evolution, women's rights, the Hereafter, Marriage, Messiah, Zionism, Prayer?

Classes   3 hrs. a week. 1 semester.

RELIGIOUS STUDIES

340.0   SOCIAL ETHICS: MAN AND FREEDOM IN A TECHNOLOGICAL SOCIETY

What is human freedom? Does technology set us free to act creatively or does it impose a constraining boundary on our freedom? The course examines the relationship between Christian and other accounts of the idea of freedom and modern technological society. The purpose is to understand the problem of ethical choice in a pluralistic, Canadian setting.

Classes   3 hrs. a week. 2 semesters.

345.0   THEOLOGY OF LOVE AND SEXUALITY

This course will explore man's self-understanding in the areas of love and sexuality from a theological perspective. The scriptures of various religions will be the focus for an exploration of how man has responded to the comedy and sublimity of his embodied being. Topics to be discussed are: the cultural history of love, sexual ethics and the new morality, the myth of sexual roles, psychological insights on sexuality, alternative styles of marriage, and the family.

Classes   3 hrs. a week. 2 semesters.

347.2   ECOLOGY AND RELIGION

The course reviews the phenomenon of human ecology in order to advance to further questions: In man's relationship to nature, does nature have rights? To reduce pollution, may the rich deprive the poor of advanced technology? Is a low-consumption life-style desirable in itself? Should we leave development and progress to the experts? Such questions prepare the ground for a theology that finds religious meaning in the worldly realities of science, commerce, and government.

Classes   3 hrs. a week. 1 semester.

348.1   GOD IN SECULAR EXPERIENCE

Is Christian life altogether different from human life? Or can one discern the action of God in the sheer process of human maturing? The student is led to inquire whether ordinary human life is ordinary at all, or whether it is the field of a dramatic conflict between forces of self destruction and powers of creativity and new life.

Classes   3 hrs. a week. 1 semester.

351.1   LOVE

Our culture has represented love, variously, as effecting self-fulfillment, the affirmation of another personality, union with deity, merit for a future life; or, as sex, a passing neurosis, an unreasoned self-annihilation, or a social contrivance. This course explores the assumptions and implications of these views, particularly as they involve ultimate human concerns, that is, religion. The course can be continued into Rel 352.2 where a coordinate theme is studied in a similar manner.

Classes   3 hrs. a week. 1 semester.

352.2   DEATH

The student considers such questions as what dying is really like, whether dying provides a valuable point of view on living, whether people continue in some form of existence after dying, how one is to understand the symbols in religious talk about death, and why mythologies deal so heavily in death.

Classes   3 hrs. a week. 1 semester.

490.0-495.0   READING COURSES IN RELIGIOUS STUDIES

Prerequisite: permission of the Department.

These courses are organized by individual faculty members in agreement with the Department as a whole; they are designed to supplement or provide an alternative to regular courses in religious studies according to the special needs and interests of students. Course content can be proposed by the student.

590.0-595.0   HONORS SEMINARS IN RELIGIOUS STUDIES

Prerequisite: fifth-year honors status and permission of the Department.

RELIGIOUS STUDIES

311.0 (Phi 330.1 and 331.2) THE PHILOSOPHICAL BASIS OF RELIGION

A consideration of the meaning, truth, and logic of religious language and religious teachings about the existence and nature of God. Towards this purpose basic religious texts such as the *Bhagavad-Gītā,* the *I Ching,* the *Homeric* poems, the *Koran,* and the *Bible* will be read in relation to some philosophical texts such as Aristotle's *Metaphysics,* Aquinas' *Summa Theologiae,* and Hegel's *Lectures on the Philosophy of Religion.*

Classes   3 hrs. a week. 1 semester.

315.0 THE CHRISTIAN IN SOCIETY

What sense does it make to speak of a Christian response to social and political problems in present-day Canada? An examination of the impact of earlier Christian groups on Canadian life, e.g., the Winnipeg General Strike of 1919, the Antigonish Movement, and the theology that led them to act. An analysis of at least one contemporary national problem and one local problem with respect to a possible Christian response.

Classes   3 hrs. a week. 2 semesters.

316.0 (Ant 350.0) ANTHROPOLOGY OF RELIGION

The course will examine religious behavior as one way in which humans adapt to their environments. It will consider (but not be limited to) such questions as the origin and nature of religion as a panhuman phenomenon; religion as culture in the antropological sense; functional relations between religion and politics, economy, family; nativistic movements as responses to oppression.

Classes   3hrs. a week. 2 semesters.

317.0 (Soc 317.0) SOCIOLOGY OF RELIGION

An analysis of the functions of religion and the interactions between religious belief systems and institutions and the major institutional areas of society.

Classes   3 hrs. a week. 2 semesters.

330.0 OTHER PEOPLE: THE RELIGIOUS SIGNIFICANCE OF HUMAN RELATIONSHIPS

Friends, acquaintances, strangers, enemies, fools — how are we to understand ourselves in relation to each of these? Is it wise to depend upon other people? Is there anything more valuable than friendship? Do only fools love their enemies? We will examine these and related questions from a variety of religious and secular perspectives. A principal thesis to be explored is that there is a major typological distinction between and within religions according to the seriousness with which they regard the singular other person.

Classes   3 hrs. a week. 2 semesters.

335.0 RELIGION IN A SCIENTIFIC AGE

Science has been the most dramatically successful adventure of our age. What has been the effect of science on religious understanding? Is there still a conflict between science and religion? Can science disprove or prove religious claims? Can there be constructive conversations between scientists and humanists about ultimate issues? No previous understanding of scientific method is required for this course.

Classes   3 hrs. a week. 2 semesters.

338.0 PROBLEMS IN CONTEMPORARY CATHOLICISM

The Catholic Church is undergoing perhaps the greatest crisis in its history. Can the Church survive? Has it lost its soul? Why has it changed? What does it teach today? What contribution can it make to modern man? A general introduction to the Catholic crisis after Vatican II.

Classes   3 hrs. a week. 2 semesters.

SOCIOLOGY

Chairman, Assistant Professor	H. Veltmeyer
Associate Professors	R. Cosper, S. Halebsky, I. Okraku, M. Overington, L. Ruffman
Assistant Professors	P. Connelly, H. Ralston, D. Perrier
Lecturer	D. MacInnes

DEPARTMENTAL STATEMENT

Soc 200.0 is the introductory course and is a prerequisite for most 300 level courses.

To major in sociology, a student must receive credit for Introductory Sociology (Soc 200.0), Research Methods (Soc 300.0), and Sociological Theory (Soc 301.0) — which are normally taken in the junior year — and Modern Sociology (Soc 430.0) which is taken in the senior year. In addition, a sociology major must take a minimum of two electives in sociology and three courses from allied fields (anthropology, geography, economics, political science, psychology); with the Department's permission, another field may be substituted. At least one course in an allied field must be on the 300 or 400 level. The sociology electives should be selected in consultation with the Department.

To minor in sociology, a student must. complete the following courses with a quality point average of at least 2.0: Introductory Sociology (Soc 200.0); Research Methods (Soc 300.0) or Sociological Theory (Soc 301.0); and two electives.

There is an honors program in sociology which follows general university requirements. Each honors student's program is supervised by the department.

Note: courses are all the equivalent of three hours a week each academic year, although specific course schedules are decided by the department.

Students are urged to check with the department prior to registration to confirm the department's offerings.

200.0   INTRODUCTORY SOCIOLOGY

An introductory study of sociological perspectives and concepts; man's interaction and organization in society, particularly in modern Canadian society; relationship between sociological theory and research; analysis of major social institutions, e.g. familial, religious, educational, economic and political.

Classes   3 hrs. a week. 2 semesters.

300.0   RESEARCH METHODS

Prerequisite: Soc 200.0.

An examination of basic methods and techniques in social research. Topics to be discussed include science and sociology, theory, conceptualization, research design, and methods of data collection and analysis. The student is introduced to sampling, measurement and statistical analysis of quantitative data. Students also get intensive experience in data collection and analysis through laboratories and independent research.

Classes   3 hrs. a week. 2 semesters.

301.0   SOCIOLOGICAL THEORY

Prerequisite: a course in sociology or permission of the instructor.

A critical examination of some classical statements in sociological theory, giving particular emphasis to key concepts in the development of contemporary notions in sociological analysis. The circumstances giving rise to sociology as a special field are considered, as are the relationships of specific theorists and their ideas to modern times.

Classes   3 hrs. a week. 2 semesters.

302.0   SOCIAL PROBLEMS INVOLVING DISORGANIZATION AND DEVIANCE

Prerequisite: a course in sociology.

An analysis of factors generating social disorganization in contemporary society focusing on minority groups, such as blacks, women and Indians, and on the poor. The course also considers the dynamics of varieties of deviant behavior as in organized crime and juvenile delinquency.

Classes   3 hrs. a week. 2 semesters.

SOCIOLOGY

303.0   CRIMINOLOGY

Prerequisite: an introductory sociology course and a second course in sociology which may be taken concurrently.

An analysis of criminal deviance which examines theories of its genesis, social definition, maintenance, control, and social consequences. The course is intended to give students an opportunity to examine major theoretical and methodological issues in the study of crime and crime control.

Classes   3 hrs. a week. 2 semesters.

305.0   SOCIAL AND ECONOMIC DEVELOPMENT

Prerequisite: a course in sociology or economics.

The application of sociological principles to problems of the third world, economic development and urbanization. Problems in the transition from agrarian to urban societies.

Classes   3 hrs. a week. 2 semesters.

306.0   SOCIOLOGY OF EDUCATION (Edu 507.0)

Prerequisite: a course in sociology or enrolment in Education.

The structural dynamics of educational systems in different societies, with special emphasis on Canada. The main focus will be on the nature of the relationship between educational institutions and the wider social systems and the implications of this relationship for educational alternatives.

Classes   3 hrs. a week. 2 semesters.

308.0   URBAN SOCIOLOGY

Prerequisite: a course in sociology.

An analysis of different ways in which sociologists approach the city; the historical and comparative approach, human ecology, urban and suburban interaction, informal urban social structures, community and power structure. Emphasis is on theory and research and their application to selected problems in the metropolitan area.

Classes   3 hrs. a week. 2 semesters.

311.1 (.2)   POPULATION

Prerequisite: Soc 200.0.

An introductory course in demography and population studies designed to acquaint the student with the basic materials and techniques of demographic analysis, and to explore the interrelationships of demographic phenomena and various aspects of social structure. Topics include population size, composition, and distribution; and the dynamics of demographic change: i.e., fertility, mortality and migration. Particular attention is given to current population issues and problems in both developed (especially Canada) and developing nations.

Classes   3 hrs. a week. 2 semesters.

313.0   SOCIOLOGY OF KINSHIP AND FAMILY

Prerequisite: a course in sociology.

Cross-cultural analysis of family and changing family patterns, relationship between family and other institutions, male and female roles and patterns of interaction at each stage of family life-cycle.

Classes   3 hrs. a week. 2 semesters.

314.0   SOCIOLOGY OF PROFESSIONS

Prerequisite: Soc 200.0.

Examination of the models used to study increasing professionalization in modern societies. Professions such as medicine, law, social work, teaching, librarianship, and nursing will be analyzed. The role played by professionals within Canadian society will be examined. Topics include professional ideologies, interprofessional relations, socialization, colleague control, career lines, deviant behavior, government and bureaucratic influences on professional practice.

Classes   3 hrs. a week. 2 semesters.

316.0   ORGANIZATION THEORY AND BUREAUCRACY

Prerequisite: a course in sociology.

An examination of the formal structure and bureaucratic organization of systems of modern society. Organizational theory in relation to occupational, professional, industrial and work situations.

Classes   3 hrs. a week. 2 semesters.

SOCIOLOGY

Chairman, Assistant Professor   H. Veltmeyer
Associate Professors   R. Cosper, S. Halebsky,
      I. Okraku, M. Overington,
      L. Ruffman
Assistant Professors   P. Connelly, H. Ralston,
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Lecturer   D. MacInnes

DEPARTMENTAL STATEMENT

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Classes   3 hrs. a week. 2 semesters.

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Prerequisite: Soc 200.0.

An examination of basic methods and techniques in social research. Topics to be discussed include science and sociology, theory, conceptualization, research design, and methods of data collection and analysis. The student is introduced to sampling, measurement and statistical analysis of quantitative data. Students also get intensive experience in data collection and analysis through laboratories and independent research.

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Prerequisite: a course in sociology or permission of the instructor.

A critical examination of some classical statements in sociological theory, giving particular emphasis to key concepts in the development of contemporary notions in sociological analysis. The circumstances giving rise to sociology as a special field are considered, as are the relationships of specific theorists and their ideas to modern times.

Classes   3 hrs. a week. 2 semesters.

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Prerequisite: a course in sociology.

An analysis of factors generating social disorganization in contemporary society focusing on minority groups, such as blacks, women and Indians, and on the poor. The course also considers the dynamics of varieties of deviant behavior as in organized crime and juvenile delinquency.

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Prerequisite: an introductory sociology course and a second course in sociology which may be taken concurrently.

An analysis of criminal deviance which examines theories of its genesis, social definition, maintenance, control, and social consequences. The course is intended to give students an opportunity to examine major theoretical and methodological issues in the study of crime and crime control.

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Classes   3 hrs. a week. 2 semesters.

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(Edu 507.0)

Prerequisite: a course in sociology or enrolment in Education.

The structural dynamics of educational systems in different societies, with special emphasis on Canada. The main focus will be on the nature of the relationship between educational institutions and the wider social systems and the implications of this relationship for educational alternatives.

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Prerequisite: a course in sociology.

An analysis of different ways in which sociologists approach the city; the historical and comparative approach, human ecology, urban and suburban interaction, informal urban social structures, community and power structure. Emphasis is on theory and research and their application to selected problems in the metropolitan area.

Classes   3 hrs. a week. 2 semesters.

311.1 (.2)   POPULATION

Prerequisite: Soc 200.0.

An introductory course in demography and population studies designed to acquaint the student with the basic materials and techniques of demographic analysis, and to explore the interrelationships of demographic phenomena and various aspects of social structure. Topics include population size, composition, and distribution; and the dynamics of demographic change: i.e., fertility, mortality and migration. Particular attention is given to current population issues and problems in both developed (especially Canada) and developing nations.

Classes   3 hrs. a week. 2 semesters.

313.0   SOCIOLOGY OF KINSHIP AND FAMILY

Prerequisite: a course in sociology.

Cross-cultural analysis of family and changing family patterns, relationship between family and other institutions, male and female roles and patterns of interaction at each stage of family life-cycle.

Classes   3 hrs. a week. 2 semesters.

314.0   SOCIOLOGY OF PROFESSIONS

Prerequisite: Soc 200.0.

Examination of the models used to study increasing professionalization in modern societies. Professions such as medicine, law, social work, teaching, librarianship, and nursing will be analyzed. The role played by professionals within Canadian society will be examined. Topics include professional ideologies, inter-professional relations, socialization, colleague control, career lines, deviant behavior, government and bureaucratic influences on professional practice.
Classes   3 hrs. a week. 2 semesters.

316.0   ORGANIZATION THEORY AND BUREAUCRACY

Prerequisite: a course in sociology.

An examination of the formal structure and bureaucratic organization of systems of modern society. Organizational theory in relation to occupational, professional, industrial and work situations.

Classes   3 hrs. a week. 2 semesters.

SOCIOLOGY

317.0 SOCIOLOGY OF RELIGION
(Rel 317.0)

Prerequisite: a course in sociology or religious studies.

An analysis of the functions of religion and the interactions between religious belief systems and institutions and the major institutional areas of society.

Classes 3 hrs. a week. 2 semesters.

318.0 SOCIAL CHANGE

Prerequisite: a course in sociology.

This course has two objectives: to present a sociological view of history and to introduce the student to the more important theories of the form, causes and processes of social change.

Classes 3 hrs. a week. 2 semesters.

321.0 CANADIAN SOCIETY

Prerequisite: a course in sociology.

An examination of the institutional framework and value basis of Canadian society. Topics include ethnic composition, class structure, economic and political institutions, and industrialization. A broad spectrum of social problems confronting Canada will also be considered.

Classes 3 hrs. a week. 2 semesters.

322.0 POLITICAL SOCIOLOGY

Prerequisite: a course in sociology or political science.

Prevailing theories of radical or dissident behavior will be assessed critically and alternate emerging approaches suggested. Protest and radical movements in Europe, Latin America, and elsewhere will be considered.

Classes 3 hrs. a week. 2 semesters.

323.0 THE INDIVIDUAL AND SOCIETY

Prerequisite: a course in sociology.

An approach to understanding the social world through an investigation of the formation, change, and performance of individual identities. We shall take society to be a process of communication in which meaning, roles, selves, and institutions are enacted in forms of interaction, and shall treat human persons as creative producers of social diversity. In personal terms, we shall struggle with a sociological response to the traditional questions: "Who am I?" and "What must I do?"

Classes 3 hrs. a week. 2 semesters.

324.0 SOCIAL STRATIFICATION

Prerequisite: a course in sociology.

An analysis of the main features of social inequality in modern industrial societies: distribution of power and wealth, existence of power elites or governing classes, comparative community power structures, institutionalization of class conflict, problems of social mobility, political expression of class and status groups.

Classes 3 hrs. a week. 2 semesters.

332.0 STUDIES IN SELECTED SOCIETIES AND CULTURES: SOCIOLOGY OF ATLANTIC CANADA

Prerequisite: a course in sociology.

An in-depth study of the social organization, institutions and customs of the Atlantic region of Canada with a concentration on those social movements, ethnic-religious groupings and patterns of socio-economic change that best characterize the life-styles of Newfoundland, New Brunswick, Nova Scotia and Prince Edward Island. This course may be taken: in conjunction with the Atlantic Studies Program; in conjunction with a concentration in sociology; as a social science elective.

Classes 3 hrs. a week. 2 semesters.

SOCIOLOGY

333.0   SOCIAL MOVEMENTS

Prerequisite: a course in sociology.

Analysis of the origin and development of social movements and their role in social change. The political and sociological sources of social movements will be stressed, as well as their institutional and ideological transformations. The course will have a comparative focus, with attention to both contemporary and earlier social movements.

Classes   3 hrs. a week. 2 semesters.

335.1 (.2)   QUANTITATIVE METHODOLOGY

Prerequisite: Soc 300.0.

Designed to familiarize students with a broad range of quantitative statistical methods used in both basic and applied research problems in sociology. Special attention is given in the course to analysis of data using automated data processing techniques.

Classes   3 hrs. a week. 1 semester.

336.1 (.2)   WORK IN CONTEMPORARY SOCIETY

Prerequisite: Soc 200.0.

In this course, the work people do is analyzed as a product of industrialization and accompanying major social changes. Aspects of the social organization of work are studied, such as its relation to social class and the organiation of work into occupations. The importance of work for the individual in contemporary society is also studied; issues are raised such as the impact of work on personal identity and life style, alienation, occupational community, occupational choice and socialization, and careers.

Classes   3 hrs. a week. 1 semester.

337.1 (.2)   LEISURE IN CONTEMPORARY SOCIETY

Prerequisite: Soc 200.0.

In this course, leisure is seen as the converse of work in industrial society. Leisure is analyzed in relation to social structural features, such as social class and occupation. The course examines the social organization of such leisure activities as: social interaction with family and friends; voluntary associations, varieties of play including sports, pastimes, hobbies, games and holiday travel; participation in expressive culture; use of mass media, the arts and entertainment.

Classes   3 hrs. a week. 1 semester.

340.0   ETHNIC AND MINORITY GROUPS

Prerequisite: a course in sociology.

An analysis of racial, ethnic, and minority group structure and of inter-group processes in different societies, with special emphasis given to Canadian society.

Classes   3 hrs. a week. 2 semesters.

342.1 (2.)   SOCIAL INTERACTION

Prerequisite: a course in sociology.

An investigation of the social world through an examination of the nature and variety of human relationships. In personal terms, we shall struggle to understand our own places in the network of groups that make up society.

Classes   3 hrs. a week. 1 semester.

343.1 (.2)   SOCIETY AS DRAMA

Prerequisite: a course in sociology.

An effort to present a dramaturgical perspective on society is made. The scope and limits of this approach are explored and students introduced to its application through observational exercises. If ''all the world's a stage'', what's the play about?

Classes   3 hrs. a week. 1 semester.

SOCIOLOGY

351.1 (.2) CONTEMPORARY ISSUES IN SOCIOLOGY: POPULATION GROWTH AND SOCIO-ECONOMIC CHANGE

Prerequisite: a course in sociology.

In 1977-78, the course will examine the interrelationships between population growth and various aspects of socio-economic change in both "developing" and "developed" countries.

Classes   3 hrs. a week. 1 semester.

401.0 SELECTED STUDIES IN SOCIOLOGICAL THEORY: SYMBOLISM AND SOCIETY

Prerequisite: Soc 200.0, 300.0 and 301.0 or permission of the instructor. (Students outside sociology with an interest in symbolism are encouraged to seek permission).

For 1977-78 this seminar course will examine a variety of thinkers who contribute to our understanding of Kenneth Burke's statement that "man must perceive nature through the fog of symbol-ridden social structures that he has erected atop nature."

Classes   3 hrs. a week. 2 semesters.

402.0 PHILOSOPHY OF THE
(Phi 402.0) SOCIAL SCIENCES

Prerequisite: permission of the instructor.

A seminar course on basic assumptions and concepts used in the social sciences, particularly sociology and allied fields. Open to students in philosophy and the social sciences with permission of the instructor.

Classes   3 hrs. a week. 2 semesters.

403.0 SEMINAR IN SOCIOLOGICAL ANALYSIS

Prerequisite: Soc 200.0, 300.0 or 301.0, or permission of the instructor.

An examination of selected methods of analysis in sociology.

Classes   3 hrs. a week. 2 semesters.

405.0 (Gpy 409.0) SELECTED TOPICS: BIRTH OF THE CITY

Prerequisite: Soc 200.0, 300.0 and 301.0 or permission of instructor.

A cross-cultural study of the processes that gave rise to the evolution of cities. The processes assessed involve the cosmo-magical, ecological, demographic and technological bases of urban forms. The primary examples will be from early China, Mesopotamia and Mesoamerica. Secondary consideration will be given to West Africa and South-East Asia. In addition to the obvious neolithic causal sequence attention will also be paid to such consequences as the relation between urbanization and the state.

Classes   3 hrs. a week. 2 semesters.

407.0-408.0 DIRECTED READING IN SOCIOLOGY

Prerequisite: Soc 200.0, 300.0, 301.0.

These courses provide an opportunity for students to read in depth in an area of sociology not normally covered by regular Departmental course offerings. Students are expected to demonstrate some initiative and independence.

430.0 MODERN SOCIOLOGY

Prerequisite: open only to senior majors in sociology.

The course examines the relationship between sociological theory and research in terms of specific theoretical propositions and related research findings. Students may be required to design and execute a research project, and their active participation in the course is stressed.

Classes   3 hrs. a week. 2 semesters.

SOCIOLOGY

555.0   SELECTED TOPIC: PENOLOGY

Prerequisite: Soc 200.0, 300.0 and 301.0 or permission of instructor.

This course traces the history of penal methods and the development of contemporary corrections. The Canadian correctional apparatus is examined in relation to current issues and proposals. Correctional methods, problems, and efficacy are considered in some detail in institutional programs and in community programs. Correctional processes as these relate to typologies of offenders, and special problems of female, youthful, and persistent offenders will be examined.

Classes   3 hrs. a week. 2 semesters.

530.0   HONORS SEMINAR

Prerequisite: enrolment in honors program.

The purpose of this seminar is to help students prepare a major research paper on a topic agreeable to both the student and the department.

WEST EUROPEAN STUDIES

West European Studies offers a coherent program in the humanities and certain social sciences with an emphasis on language skills and a specialized general knowledge of West European affairs and their relations to North America. The program seeks to establish a modern context for a concentration in the humanities and to produce graduates suitable to the recruitment needs of public service, trade, industrial, union and commercial organizations concerned with Western Europe or associated institutions such as NATO or the EEC. It is possible for participating students to study in certain European countries during the summer months with financial assistance from the host country. Such grants become available on a competitive basis.

Students graduating from the program will have a thorough grounding in at least one major West European language other than English, as well as a specialized acquaintance with the political and economic affairs of the region, and a particular interest in the thought, history, or literature of Western Europe. Since graduate departments in European Studies exist already in Canada and elsewhere, students interested in graduate studies need be at no disadvantage.

REQUIREMENTS

There are five basic requirements:
1. Two courses above the elementary level in one modern language other than English.
2. One course in economics and one in political science to be selected from the prescribed electives.
3. Three of the courses taken within the major concentration should deal with Western Europe or with principles directly relevant to comparative studies concerning Western Europe.
4. Each student will prepare a senior paper in the final year. The subject will be set by the faculty members concerned.
5. A special, obligatory seminar will be convened four times in the initial year of the program to hear and discuss papers presented by students enrolled in the area studies courses.

LIST OF ELECTIVES

Any students wishing to enrol in the program are encouraged to discuss their selection of courses with the co-ordinating Chairman, Dr. C. J. Terry of the English Department.

CLASSICS
120.0   The Classical Civilization of Greece and Rome
303.0   History of Greece
304.0   History of Rome
305.0   Hellenistic History

ENGLISH
300.0   Comparative Literature: Europe
301.0   The Modern Novella
304.0   The Development of Drama in the Theatre
413.0   Anglo-Irish Literature

ECONOMICS
101.0   Economic History of Europe
313.1   International Finance
314.2   International Trade

GEOGRAPHY
320.0   Geography of Europe

HISTORY
121.0   Civilization in the West
124.0   A History of Britain, 1066 to the Present
203.0   The 20th Century
204.0   Europe 1890-1945
304.0   Europe 1815-1945
311.0   Medieval England
315.0   19th Century Britain
341.0   Britain in the 20th Century
501.0   The Puritan Revolution
521.0   European Diplomatic History 1815-1945

WEST EUROPEAN STUDIES

MODERN LANGUAGES

FRENCH
100.0   Introduction to the French Language
200.0   Intermediate Oral and Written French
300.0   The Principal Themes of French Literature
301.0   Advanced Conversation and Cultural Studies

GERMAN
100.0   Introduction to the German Language
200.0   Intermediate German
250.0   German Literary Prose
301.0   Modern German Literature

SPANISH
101.0   Introduction to the Spanish Language
201.0   Elementary Spanish
406.0   The Spanish Theatre

PHILOSOPHY
442.1   Early Modern Philosophy:
            The Rationalists
443.2   Early Modern Philosophy:
            The Empiricists
444.1   Later Modern Philosophy: Kant
445.2   Later Modern Philosophy:
            The German Idealists

POLITICAL SCIENCE
306.0   Government and Politics in Western
            Europe
553.0   International Studies Seminar

RELIGIOUS STUDIES
202.0   Introduction to the Bible
310.0   Christianity in Modern Civilization

SOCIOLOGY
301.0   Sociological Theory

Detailed descriptions of the above courses can be found
under the relevant departmental headings.

S E C T I O N   6

Financial
Information

RESPONSIBILITY

It is the responsibility of each student to be familiar with
University regulations pertaining to financial matters.

FINANCIAL INFORMATION

DEFINITIONS

Full-time student: one who is enrolled in three or more courses in one semester.

Part-time student: one who is enrolled in less than three courses in one semester.

1. FEES

Fees indicated here will be in effect in the 1977-78 academic year.

a) Tuition Fees
    Full-time students —
    University Fee $770.00
    Students Council Fee   52.00

    (see note) $822.00

    Part-time students —
    Each full-credit course $170.00
    Each half-credit course   85.00

b) Special Fees
    Graduation: Degree or Diploma $20.00
                 Binding of 3 copies
                 of Master's Theses   20.00
    Official transcript   1.00
    Special examination   10.00

Note: All non-Canadian students who are not eligible for medical coverage under Nova Scotia's Medical Services Insurance or who do not carry private medical insurance will be assessed a fee of $70.00, by the Students' Council, to provide them with medical insurance.

2. STUDENTS' REPRSENTATIVE COUNCIL FEE

The Students' Representative Council fee is required of all full-time students. It supports an extensive program of activities organized by the student government. This fee is set and administered by the Students' Representative Council.

3. THESIS SUPERVISION

Graduate students who have completed course requirements but have not completed the thesis are required to pay a registration fee of $25.00 plus a supervisory fee of $70.00, if under a thesis supervisor at the commencement of each academic year until the thesis is completed.

4. RESIDENCE ACCOMMODATION AND FEES

a) Residence fees cover accommodation for two full semesters. The board portion of residence fees covers meals served in the residence cafeteria for two full semesters.
Breakfast, lunch and dinner are served from Monday to Friday inclusive; brunch and dinner are served on Saturday and Sunday.

b) High Rise 1 (Edmund Rice Residence)
Furnished apartments for unmarried students (four students to each) contain living room, kitchen, two double bedrooms and bathroom.

Students applying for accommodation in this residence have the option of selecting a room-and-board plan or room only. The only meal plan available to students in this residence however, is the fourteen meal plan.
Fee for each student for room and board: $1,630.00
Fee for each student for room only: $780.00

c) High Rise II (Ignatius Loyola Residence)
Furnished responsibility suites for students wishing room and board. Each contains four single bedrooms, one double bedroom and bathroom.
Single rate for each student:
19 meals a week $1,660.00
Any 14 meals a week   1,600.00

Double rate for each student:
19 meals a week   1,560.00
Any 14 meals a week   1,500.00
There is no reduction for meals not taken at the University.

d) High Rise II (Ignatius Loyola Residence)
One and two bedroom apartments for married students. Stove, refrigerator and drapes are provided. Available on a 12 month lease only.

e) Low Rise (Vanier Residence)
Furnished responsibility suites for students wishing room and board. Each contains two single bedrooms, two double bedrooms and bathroom. A common lounge serves each floor.
Single rate for each student:
19 meals a week $1,660.00
Any 14 meals a week   1,600.00

Double rate for each student:
19 meals a week   1,560.00
Any 14 meals a week   1,500.00
There is no reduction for meals not taken at the University.

FINANCIAL INFORMATION

f) Meal Plans

Students may change from one meal plan to the other any time before September 25.

No changes are permitted for the first semester after that date. Students may change meal plans for the second semester before December 18.

Students wishing to change meal plans should notify the Director of Residences in writing.

Meal plans are not accumulative.

Unlimited servings of menu items on both meal plans.

5. CATERER'S SPECIAL PLAN

Students accommodated in High Rise 1, and non-resident students, may wish to take advantage of the Caterer's special plan for any 14 meals. Details may be obtained from the Caterer.

6. EXTENDED ACCOMMODATION

a) For an additional charge of $5.00 a day, students may enter residence on a room-only basis, one week prior to the first date of the academic year, and remain for a maximum of one week after the final date of the academic year. Students interested in making such arrangements should contact the Director of University Residences.

b) Christmas Recess

A student may arrange to remain in residence during the Christmas recess, on a room-only basis, for a total additional charge of $50.00. Interested students should make arrangements in advance with the Director of University Residences.

c) Summer Accommodation

Residence accommodation is available to students during the summer months at rental rates applicable at the time.

d) Graduating Students in Residence

Provision is made for graduating residence students to remain in residence, on a room-only basis, up to and including Convocation day at no additional charge.

7. PARKING ON CAMPUS

Residence outside parking	$25.00 a year
Underground	$15.00 a month or
	$135.00 a 12 month period
Other parking	$10.00 a year

Parking fees are payable in advance.

8. APPLICATION FOR RESIDENCE ACCOMMODATION

Application for residence accommodation, together with a $50.00 residence deposit should be made to the Director of University Residences. When the application is accepted, the deposit is retained and applied as a payment against residence fees for the first semester after the student has entered residence. $45.00 of this deposit will be refunded if notice of cancellation in writing is received by the Director of University Residences by August 15. Deposits on applications accepted after August 15 are not refundable.

9. PAYMENT OF FEES

a) Although tuition and residence fees are due and payable at the time of registration, provision is made for payment in two installments: the first at registration; the second at the beginning of the second semester. The amount of each payment is stated below.

Tuition	First Semester	Second Semester
Full-time	$411.00	$411.00
Part-time — each course	85.00	85.00
Residence		
Single room, 19 meal plan	830.00	830.00
Single room, 14 meal plan	800.00	800.00
Double room, 19 meal plan	780.00	780.00
Double room, 14 meal plan	750.00	750.00
Room only — High Rise I	390.00	390.00
Room, 14 meals - High Rise I	815.00	815.00

b) Fees must be paid, or arrangement for payment made with the Business Office, before a student is considered registered. Exceptions to this regulation may be considered on presentation of valid reason.

The applicable instalment on residence fees is to be paid on entrance to residence.

Students who have an unpaid account with the University may not be permitted to register.

c) Cheques or money orders should be made payable at par in Canadian funds, to Saint Mary's University, and addressed to the Business Office, Saint Mary's University, Halifax, Nova Scotia, Canada. B3H 3C3.

FINANCIAL INFORMATION

10. SCHOLARSHIPS, BURSARIES, LOANS, ASSISTANTSHIPS

a) One-half of the value of any scholarship or bursary awarded by the University may be deducted from tuition fees for the first semester. If the award exceeds the applicable tuition fees, the excess portion may be applied to residence fees. Students who have applied for a Canada Student Loan may, on presentation of official acknowledgement of the application, register with payment of only a nominal portion of tuition fees for the first semester.

b) Payment of residence fees cannot be deferred pending receipt of a Canada Student Loan.

c) Students whose fees are to be paid by government or some other agency are required to present a signed statement, certificate or other appropriate supporting material.

d) Scholarships and bursaries awarded by Saint Mary's University are credited to the student's account at the beginning of a semester. If the award is made during a semester, the credit becomes effective on the date on which the Business Office receives notification.

e) Assistantships awarded to students by academic departments are credited to the student's account in two equal instalments, usually on November 1 and March 1.

11. LATE PAYMENT

a) A student whose account is in arrears may be denied course marks, transcripts and graduation.

b) A student who has not paid at least half of the tuition and residence fee by October 31 in the first semester and any unpaid balance by February 28 in the second semester will be charged a late payment penalty of $20.00 in either or both semesters.

c) If fees are to be paid by a Canada Student Loan or a Provincial Bursary which has been delayed, the late payment charge may be waived if the student provides evidence of the delay to the Business Office.

12. WITHDRAWALS AND REFUNDS

a) No tuition or residence fee will be refunded to a student who withdraws after November 15 in the first semester, or after February 28 in the second semester.

b) In order to be eligible for an adjustment of tuition fees, a student who wishes to withdraw from the University must notify the Registrar in writing and apply directly to the Business Office for refund. The official date of withdrawal will be the date on which the Registrar receives written notice.

The following scale is applied in computing refund of tuition fees:

	Applicable Fee	
	Full-time	**Part-time**
First Semester		each course
1st week of classes	$ 35.00	$20.00
Remainder of September	65.00	20.00
October 1 to 15	130.00	45.00
October 16 to 31	200.00	45.00
November 1 to 15	290.00	55.00
After November 15	411.00	85.00
Second Semester		
To January 15	$ 45.00	$20.00
January 16 to 31	110.00	20.00
February 1 to 15	165.00	45.00
February 16 to 28	225.00	45.00
After February 28	411.00	85.00

c) **Withdrawal from Residence**

A student who wishes to withdraw from residence is required to pay the appropriate portion of the room fee, or room and board fee, to the date of withdrawal, plus a penalty of $100.00. The appropriate portion of the room and board fee is determined by the Business Office on the basis that the full fee is prorated over the period commencing with the beginning of a semester to November 15 or February 28 whichever is the applicable date, being the last date for which a refund will be granted in either semester. The penalty charge is necessitated because of commitments made by the University on the understanding that the student would be in residence for the full academic year. It may be waived if the student withdraws simultaneously from all courses for the remainder of the academic year, or if the student finds an acceptable replacement who is willing to assume the balance of residence fees for the academic year.

FINANCIAL INFORMATION

Application for remission of the penalty charge should be made to the Director of University Residences.

If withdrawal is at the beginning of a month, or at any time within the month, the student may be charged for the full month.

d) No tuition or residence fee will be refunded to a student who withdraws after November 15 in the first semester, or after February 28 in the second semester.

13. MISCELLANEOUS

a) Students will be charged for damage to University property.
b) A $5.00 charge is made for any cheque returned by the bank.
c) Repeated NSF cheques may result in cancellation of registration.
d) Post dated cheques are not accepted.
e) Receipts for income tax purposes are issued after January 31 and will be mailed to students who request them from the Business Office.

FINANCIAL AID

Scholarships, Bursaries and Loans

Financial assistance is available to students at Saint Mary's University from four main sources: scholarships, bursaries, Canada Student Loans, (Quebec Student Loans) and Provincial Government Bursaries. The scholarships and bursaries are administered either directly by the donor or by the University through the Financial Aid Officer in cooperation with the Senate Scholarship Committee. The Student Loans and Provincial Bursaries are administered by the provincial authorities listed later in this section.

DEFINITIONS

Scholarship — A grant of aid given to an individual deserving academic merit.
1. Entrance — An award given to a student entering Saint Mary's University from high school.

2. Continuing — An award given to a Saint Mary's University student who in the previous year received an entrance or achievement scholarship.

3. Achievement — An award given to a student who achieved academically in the previous year at the University but did not hold an award during that year.

Bursary — A grant of aid given to an individual who gives proof of financial need.

Canada Student Loan — The Canada Student Loan Plan was introduced by the federal government as a broad program to assist students who, in the absence of a loan, would be unable to pursue full time post-secondary studies at a university or other educational institution. It is accepted as a loan and must be repaid plus interest following completion of the student's academic career.

Government Bursary — This program combines loan assistance available through the Canada Student Loan Plan with grant assistance. It is designed to supplement the resources of a student who, lacking such aid, would be unable to proceed to university studies. It is accepted as a gift from the province of which the student is a resident and is therefore non-repayable. For more details please contact provincial authority.

Satisfactory Academic Standing — Please refer to the formula following which is derived from the top 50% of the student population at Saint Mary's University and is used by the Senate Scholarship Committee to determine ''satisfactory academic standing''.

Normal Progression Toward a Degree — Following degree regulation in the Calendar on a consecutive yearly basis.

Demonstrators and Assistantships — A limited number of research, laboratory or teaching assistant positions are available each year at Saint Mary's and are with duties defined by the relevant department. (For more information please contact the appropriate department).

FINANCIAL INFORMATION

REGULATIONS

All regulations pertain to undergraduate awards.

1. Applications for awards must be made each year to the Financial Aid Officer by May 30th.
2. Each award is granted for one year only. However, scholarships may be renewed each year on a competitive basis, provided the student applies and maintains a satisfactory academic standard.
3. It is the student's responsibility to inform the Financial Aid Officer of late course completions or grade changes which were not recorded at the time of application. After May 30th, consideration will not be given to late submissions.
4. Students must carry 5 full courses or equivalent.
5. A student who receives an award from Saint Mary's University must register as a full time student at Saint Mary's in order to hold the award during that academic year.
6. A student will lose his scholarship should he change from full-time to part-time or withdraw from the university completely.
7. A student who receives an entrance scholarship, continuing or achievement scholarship and fails to maintain a satisfactory academic standard will lose his status as a continuing scholar and will have to enter the competition as an achievement scholar, should he subsequently obtain the required academic standard.

FUNDS ADMINISTERED BY
SAINT MARY'S UNIVERSITY, 1977-78

1. Entrance — Special Scholarships

Conditions: Special entrance scholarships are available to students from Nova Scotia who live beyond commuting distance from the University. To be eligible the student must be a Grade XII student and have maintained the highest accumulative scholastic average.

Value: Free tuition, free single room and board. Equal in value to $2,300-$2,400.

Duration: One year. Renewable each year the student progresses satisfactorily towards a first degree, while attending Saint Mary's University and maintains a high academic standing. It is not necessary for the recipient to apply each year.

II. Entrance Scholarships — OTHER

Condition: Candidate must be a resident of Canada

Value: $1,500 — renewable up to $1,000
         1,200 — renewable up to   1,000
         1,000 — renewable up to   1,000
         200-900 — renewable up to $700

Duration: One year. Renewable each year the student progresses satisfactorily towards a first degree, while attending Saint Mary's University and maintains a satisfactory academic standing.

III. Continuing Scholarships:

Formula: 3.2-3.3 = $100.00
           3.4   =   300.00
           3.5   =   400.00
           3.6   =   500.00
           3.7   =   600.00
           3.8-4.0 =   700.00 or renewable amount

(This formula is subject to annual fluctuation of student achievement).

Conditions: Candidate must have received a scholarship (entrance, continuing, or achievement) in the previous academic year at Saint Mary's.

Value: $100-$700 or renewable amount.

Duration: One year, renewable each year the student progresses satisfactorily towards a first degree, while attending Saint Mary's University and maintains a satisfactory academic standing.

IV. Achievement Scholarship

Conditions: To be eligible a candidate must have achieved a satisfactory academic standard in 5 full courses or its equivalent in the previous year at Saint Mary's University. Upon receipt of the award the student must register as a full-time student in order to hold the award during that academic year.

Duration: One year. Renewable each year the student progresses satisfactorily towards a first degree, while attending Saint Mary's University and maintains a satisfactory academic standing.

Included in the scholarships and bursaries administered by Saint Mary's University are the following gifts:

FINANCIAL INFORMATION

Brother Stirling Scholarship (full tuition)
Donated by Mr. John H. Dickey. Open annually to an entering student.

Mary C. Daley Scholarship ($100)
Awarded in alternate years. Open to all students.

William J. Dalton Memorial Scholarship
Established in 1976 through the contributions of his former students, colleagues, and friends, the interest from the memorial fund will be used to provide a scholarship each year. Applications for this award are to be forwarded to the Director of Financial Aid, Saint Mary's University.

Eleanor M. Florian Scholarship ($300)
Open annually to all students.

Ford Motor Company of Canada Engineering Scholarship ($700)
Open annually to a second year engineering student.

Duncan W. Lynch Memorial Scholarship ($400)
Open annually to a Catholic student from Dartmouth.

John Glenister Memorial Scholarship ($150)
Open annually to all students.

Joseph E. Donohue Memorial Scholarship ($400)
Donated from the estate of Eva Mae Donohue in memory of her late husband and open annually to all students.

Errol Davison Memorial Award ($500)
A scholarship to be held by a student in the Commerce Faculty in either the third or fourth year. High academic standing is required, although financial need will be considered. This scholarship is granted by the partners of H. R. Doane and Company in memory of Mr. Davison, a former partner of the firm and an alumnus and friend of Saint Mary's University.

Barbara Flanders Goldberg Memorial Scholarship
Open to a student in the Commerce Faculty, who has expressed an interest in pursuing studies in Public Administration.

V. Bursaries:

A small number of bursaries are awarded on the basis of financial need. Included in the bursaries administered by Saint Mary's University are the following endowed gifts:

The Raymond W. Ferguson Bursaries
Two bursaries of $400 each per year to be awarded annually by the scholarship committee after consulting the Dean of the Faculty of Commerce. The applicant must be a Nova Scotian in junior or senior year who is not receiving another bursary scholarship or prize exceeding $300 in that year. Financial need must be evident and the candidate should show academic ability and possess those qualities of character and initiative which indicate potential leadership in the business world.

Rebecca Cohn Memorial Bursary ($100)
Open annually to all students.

Bernard Zwicker Memorial Bursary ($150)
Donated by Mr. and Mrs. Ivan Zwicker in memory of their son. Awarded in alternate years commencing 1969-70. Open to students in the Commerce Faculty.

Lord Nelson Hotel Ltd. Bursary ($250)
Preference is given to applicants from the Atlantic Provinces. Open annually to students in either their Freshmen or Sophomore year.

IBM — IBM Canada Bursary Program
IBM Canada Ltd. makes an annual grant of $1,000 for bursaries to students registered in a full-time course at the university who have satisfactory standings and who demonstrate financial need.

The Birks Family Foundation Bursaries
The Birks Family Foundation has established a plan of annual contributions to the Student Aid Fund of recognized Canadian universities for the creation of the Birks Family Foundation Bursaries.

The Bursaries are awarded by the Foundation on the recommendation of the University Scholarship Committee and are not restricted to faculty or year and may be renewed. The number and amount of such awards may vary annually, depending upon the funds available for the purpose from the Foundation.

FINANCIAL INFORMATION

FUNDS ADMINISTERED BY THE DONOR

Association of Universities and Colleges of Canada — The awards service of the Association of Universities and Colleges of Canada, (151 Slater Street, Ottawa, Ontario, K1P 5N1), does not itself offer any awards but it does administer several national and international programs on behalf of Canadian and foreign donors, both private and governmental. Inquiries may be addressed directly to the Association or to the Financial Aid Officer, Saint Mary's University, Student Centre — 409.

I. Scholarships

Scholarships are offered in varying amounts up to full coverage of tuition fees. They include:

The Canadian Mathematical Congress Scholarships
The Canadian Mathematical Congress offers a number of scholarships for students of Grade XII in Nova Scotia schools on the basis of a competitive examination usually held early in May of each year. They are tenable at any university in Canada. The amount of each award is determined by a consideration of financial need based upon applications from the leading candidates. Further information is available from the guidance departments of the various high schools.

Imperial Oil Higher Education Awards
Imperial Oil Limited offers annually free tuition and other compulsory fees to the children of employees and annuitants who proceed to higher education courses. Initial awards, or renewal of awards, are restricted to students under twenty-five years of age on the date of registration for any undergraduate year.

To qualify, a student must attain an average mark of 70% or higher in the appropriate secondary school examinations in the subjects required for admittance to the approved institution, or must have attained an average of 70% or more in a college year upon which application is based.

Courses may be taken at any Canadian university or other approved institution of higher learning, and awards are tenable for a maximum of four academic years, or the equivalent, at the undergraduate or bachelor degree level. The four levels of academic years are measured from the first year of entering a post-secondary institution.

Further information and application forms may be obtained from The Secretary, Committee on Higher Education, Imperial Oil Limited, 111 St. Clair Avenue West, Toronto 7, Ontario.

Joe Gannon Memorial Scholarship
The scholarship, valued at $500, is awarded to the son, daughter or legal ward of a trade unionist who is a member of a union affiliated with the Nova Scotia Federation of Labour. Applications should be addressed to Selection Committee, c/o Nova Scotia Federation of Labour, 6074 Lady Hammond Road, Halifax, Nova Scotia.

Municipal School Board, Halifax County, Scholarships
Four awards of $100 are made annually to students who have been accepted by the Education Faculty of a Maritime university. The award is restricted to residents of Halifax County. Further information may be obtained from Municipal School Board, P.O. Box 90, Armdale, Halifax, Nova Scotia.

Hockey Canada Scholarships
Hockey Canada Scholarships were established in 1969, as a result of recommendations by a government task force on sports. This scholarship program is intended to encourage young men in two important endeavors — the pursuit of a post-secondary education and the development of proficiency in the game of hockey. These scholarships are open to candidates with outstanding hockey ability, who are Canadian citizens or landed immigrants of at least one year status, and who have graduated or are about to graduate from a secondary school with an average of at least 65 per cent in the year of graduation, or who are presently enrolled or have been enrolled in a post-secondary institution. Tenable for four years. Further information and application forms may be obtained from Hockey Canada, 333 River Road, Vanier City, Ottawa, K1L 8B9.

Canadian University Students' Scholarships
Annual awards by Canadian University Students enable specially selected students to take one year of their studies at a university in a different part of Canada.

FINANCIAL INFORMATION

Education Fund for Black Students
This fund was established in April, 1965 for the purpose of assisting and encouraging black students to continue in high schools, vocational schools, technological institutes, nursing schools and universities.

University Award — is available to students in full-time attendance at universities or technical institutes (post-secondary) only if they are not eligible for assistance from Nova Scotia Student Aid.

Assistance is available to students attending summer schools for credit towards a degree. Assistance is not available to repeat courses that were previously failed. The closing date for application is May 1. Inquiries should be directed to Dr. W. P. Oliver, Regional Representative Continuing Education Program, Department of Education, P.O. Box 578, Halifax, Nova Scotia, Canada.

Nova Scotia Power Commission Centennial Scholarship
— Engineering
The Nova Scotia Power Commission offers four permanent scholarships tenable at the Nova Scotia Technical College in Halifax and open to competing students from the following universities: Acadia, Dalhousie, Mount Allison, Saint Francis Xavier, Saint Mary's. Candidates must be residents of the Province of Nova Scotia. Each scholarship is valued at $850.00 per year and is applicable to the electrical, mechanical, civil or industrial engineering disciplines. Applications should be made in writing to the Dean of Engineering of applicant's university by February 28 of each year. Further information is available from the Director of Financial Aid.

Many parishes and parish organizations offer scholarships to deserving students. Students interested in such scholarships should make inquiries from their parish or the parish organization concerned. These awards include:

Saint Agnes Parish Holy Name Society Scholarship
One award of $100.

Saint Joseph's Parish Scholarships
Two awards, one of $200 and one of $150.

Saint Mary's Basilica Parish
The Monsignor Carroll Memorial Scholarship, valued at $300.

Saint Peter's Parish Holy Name Society Scholarships
These awards vary in number and value.

Saint Stephen's Parish Scholarships
Four awards of $100.

Saint Stephen's Educational Association Scholarships
Three awards of $100.

The Home and School Associations of various schools offer scholarships to deserving students. Students interested in such assistance should seek further information from their respective Home and School Association. These awards include:

Bedford Home and School Association Scholarship ($100)

Oxford Home and School Association Scholarship ($50)

Saint Thomas Aquinas Home and School Association Scholarship ($100)

In addition, many councils of the Knights of Columbus offer scholarships to deserving students. Students interested in such scholarships are advised to direct their enquiries to the council in their area.
These awards include:

Knights of Columbus Council 1097 (Halifax) Scholarships
Seven awards of $150.

Knights of Columbus Council 2181 (Yarmouth) Scholarship
One award of $200.

FINANCIAL INFORMATION

MILITARY SERVICE SCHOLARSHIPS

The high professional ability required of present-day military officers demands the best in education and training. The Department of National Defence therefore sponsors programs of university education and leadership training for selected service personnel who have the potential to become officers in the Canadian Armed Forces. The admission standards are high, but for those who qualify the way is open to a challenging and rewarding career.

The programs sponsored are the Regular Officers Training Plan (ROTP), Medical Officer Training Plan (MOTP), Dental Officer Training Plan (DOTP) and Reserve Officer University Training Plan (ROUTP). Training given under these plans is divided into two parts: normal attendnace at university throughout the academic year and military training each summer.

Interested students are requested to contact one of the following:

Commanding Officer
Canadian Forces Recruiting Centre
Sir John Thompson Building
1256 Barrington Street
Halifax, Nova Scotia

OR
University Liaison Officer
Canadian Forces Base Halifax
FMO
Halifax, Nova Scotia

For ROUTP, contact the Commanding Officer of your local reserve unit.

BURSARIES

Assistance for students in financial need is available from various sources.

The Birks Foundation Bursaries
Each year the Birks Family Foundation pays the tuition and fees of all children of its employees in attendance at Canadian universities. On or before September 30 of each year the Birks employee should file with the Foundation, an application of intent to enrol a son or daughter in a university of his choice in the ensuing year. In the case of a student who wishes to continue studies on a Birks grant, notification should be given to either the Foundation or the Director of Financial Aid at the end of each school year.

Royal Canadian Legion Bursaries, Nova Scotia Command
Four bursaries, valued at $350 and $400, are offered annually. These awards were established to assist dependents of veterans in furthering their education. Application forms available from L. M. Rhodenizer, Education Committee, New Glasgow, Nova Scotia.

Children of War Dead Education Assistance Act
This act provides fees and monthly allowances for children of a veteran whose death was attributable to military service. Inquiries should be directed to the nearest District Office of the Department of Veterans Affairs.

The Post Discharge Rehabilitation Grants
Ex-service personnel seeking educational grants should contact the Director of Financial Assistance at Saint Mary's University. If accepted by the University, they will be given a letter with which to support their application to the Department of Veterans Affairs.

Metropolitan Life Insurance Company
Financial assistance is available to students whose parents are or have been full-time employees of the Metropolitan Life Insurance Company. This company also has a matching gift program available at Saint Mary's University. For full information contact the Director of Financial Aid at Saint Mary's University.

I.O.D.E. Bursaries — Nova Scotia
I.O.D.E. Bursaries, value $100 to $200, are awarded to entering students who show academic ability and financial need. Address applications to the Provincial Education Secretary, Provincial Chapter, I.O.D.E., 2037 Parker Street, Halifax, Nova Scotia, B3K 4T6. Applications open MARCH 1ST and close MAY 1ST.

I.O.D.E. Second War Memorial Entrance Bursaries
Awarded to children of deceased or permanently or seriously disabled Canadian men and women of the services, who served in World War II. Further information is available from I.O.D.E. Educational Secretary, 2037 Parker Street, Halifax, Nova Scotia.

Provincial Chapter of Nova Scotia I.O.D.E.
A number of bursaries are awarded to university students in need of financial assistance. Preference is given to first-year students. Further information is available from Provincial Educational Secretary, I.O.D.E., 5667 Victoria Road, Halifax, Nova Scotia.

FINANCIAL INFORMATION

Canadian Army Welfare Fund and Bursary Program (up to $1000.00)
In 1974, the Canadian Army Welfare Fund established an Educational Bursary Program to assist dependents of former members of the Canadian Army (regular) with post-secondary education.

Qualifying service of the parent in the Canadian Army (regular) must be between October 1, 1946 and January 31, 1968.

Financial need is the determining factor. Applications may be obtained from the Manager, Canadian Army Welfare Fund, East Memorial Building, Wellington Street, Ottawa, Ontario, K1A 0P4.

Deadline for submission of Applications is July 1, of each year.

In addition to the above award, students whose parents were enlisted in the RCN or RCAF should have their parents apply to the appropriate authority listed below:

Royal Canadian Navy Benevolent Fund
Room 117
Administration Building
Canadian Forces Base
Halifax

OR

Royal Canadian Air Force
Benevolent Fund
c/o Canada Permanent Trust Co.
1646 Barrington Street
Halifax

FUNDS ADMINISTERED BY THE PROVINCIAL GOVERNMENT

The University cooperates fully with both the Canada Student Loan Plan and the Nova Scotia Bursary — Canada Students Loans Program.

Canada Student Loan Plan
Canada Student Loans, available only on the basis of Certificates of Eligibility issued by the appropriate authority (Issuing Agency) of a Province, may be made by any branch of the chartered banks and by certain designated credit unions with the guarantee of the Federal Government.

Applications for Certificates of Eligibility must be made to provinces participating in the plan, and decisions on individual applications are made by the appropriate provincial authority (Issuing Agencies). Students applying for certificates who meet residence and other requirements must also demonstrate that the financial means available to them from all other sources are insufficient and that a guaranteed loan is needed. In no case will a loan for an academic year exceed a maximum of $1,800, or total loans exceed $9,800 during the student's academic career. Provincial authorities may issue Certificates of Eligibility under the plan up to the limits of provincial allocations in each loan year. Borrowers under the plan are required to repay the principal and to pay interest, but no payments are required as long as they are full-time students at a specified post-secondary educational institution or for six months thereafter. Interest during this period is paid by the Federal Government on behalf of the student. After a student's interest-free period has expired, he is required to make regular monthly payments which include repayment of principal and interest on the outstanding balance at the rate that is in effect for student loans at the time the student takes out his loan. The number of years over which a loan may be repaid depends on the loan amount and other considerations, but may not exceed ten years from graduation. A student applying for a loan under this plan should only request the funds needed to enable him to continue his studies. In doing so, he should give responsible consideration to the repayment obligations he is assuming.

Any student needing a loan should apply to the appropriate authority in the province where he officially resides both for full information and application form. Enquiry should be directed to one of the following addresses, or the Director of Financial Aid at Saint Mary's University.

Nova Scotia	Canada Student Loans Committee, Department of Education, Box 578, Halifax, Nova Scotia.

FINANCIAL INFORMATION

Alberta	Students Assistance Board, Department of Education, Administration Building, Edmonton, Alberta.
British Columbia	The British Columbia Student Aid Loan Committee, c/o Department of Education, Parliament Buildings, Victoria, British Columbia.
Manitoba	Department of Youth and Education, Student Aid Officer, 1181 Portage Avenue, Winnipeg 10, Manitoba.
New Brunswick	Department of Youth, Centennial Building, Fredericton, New Brunswick.
Newfoundland	Canada Student Loans Authority, Department of Education, Confederation Building, St. John's, Newfoundland.
Northwest Territories	Director of Education for the Northwest Territories, Department of Education, Yellowknife, Northwest Territories.
Ontario	Department of University Affairs, Student Awards Officer, Suite 700, 481 University Avenue, Toronto 2, Ontario.
Prince Edward Island	Canada Student Loans Committee, Department of Education, Charlottetown, Prince Edward Island.
Quebec	Office of Student Aid Services, Department of Education, Parliament Buildings, Quebec 4, Quebec.
Saskatchewan	Department of Education, Avord Tower, Victoria Avenue & Hamilton Street, Regina, Saskatchewan.
Yukon Territory	The Students Financial Assistance Awards Committee, Superintendent of Education, Box 2703, Whitehorse, Yukon Territory.

Nova Scotia Government Bursary — Canada Students Loan Program

This program **combines** loan assistance available through the Canada Students Loan Plan grant and loan assistance available from the Province of Nova Scotia. It is designed to supplement the resources of a student who, lacking such aid, would be unable to proceed to university studies. The ratio of grants to loans is determined in accordance with a formula fixed by the Province of Nova Scotia.

The Canada Students Loan portion of the award is guaranteed by the Federal Government. No interest or payments on principal are required during the period that the student is in full-time attendance at the university and for six months thereafter. The interest during this period is paid by the Federal Government. The maximum amount available under the Canada Students Loan Plan is $1,800 in any one year, and the total indebtedness permitted is $9,800. With the addition of free grants from the Province of Nova Scotia, the maximum assistance a student receives in any year may exceed $1,800 depending on the formula in effect in the year of application.

Assistance under the Nova Scotia Bursary — Canada Students Loan Program is available to all residents of Nova Scotia, including graduates at the Bachelor's level from designated educational institutions. (Graduates proceeding to degrees in education should specifically check with the Financial Aid Officer of the institution which they plan to attend or the Director of Financial Aid at Saint Mary's University). A student from another province must apply for assistance to the government of his own province. Application forms can be obtained from the Supervisor of Student Aid, Department of Education, Box 578, Halifax, Nova Scotia.

FINANCIAL INFORMATION

POST GRADUATE SCHOLARSHIP ASSISTANCE

Students whose university performance gives promise of successful graduate studies should seek advice on availability of fellowships and scholarships. Interested students should contact the Office of Graduate Scholarships in the Student Center or the Director of Financial Aid at Saint Mary's University.

Canadian Tire Corporation Scholarship ($500)
Established in 1976, by the Canadian Tire Corporation, for a graduate commerce student proceeding toward an M.B.A. Degree. Applications should be submitted to the Chairman of the Graduate Awards Committee.

Ford Motor Company of Canada MBA Scholarships ($1,500)
Graduate awards, administered by Saint Mary's University, offer $1,500 each to one male student and one female student in the Master of Business Administrtion Program.

Xerox of Canada Limited Fellowship ($2,000)
Established in 1977, through the generosity of Xerox of Canada, to support a graduate student in the general area of Business Administration. Applications should be submitted to the Chairman of the Graduate Awards Committee.

Candidates are also alerted to outside sources of support for graduate study:

Nova Scotia Government scholarships for persons engaged in public education in Nova Scotia.

For information write:
> Director of Teacher Education
> P.O. Box 578
> Halifax, Nova Scotia

Nova Scotia Teachers Union bursaries and scholarships for public school teachers.

For information write:
> Scholarship Committee
> Nova Scotia Teachers Union
> P.O. Box 1060, Armdale,
> Halifax, Nova Scotia.

Canada Council Special M.A. Scholarships.

For information write:
> Canada Council
> P.O. Box 1047
> Ottawa, Ontario
> K1P 5V8

United States Students
All students proceeding to Saint Mary's University from the United States of America who require financial assistance should apply for information to the Higher Education Authority of their particular state or to the Office of Education, Department of Health, Education and Welfare, Washington, D.C. 20202, or personal bank.

SECTION 7

Student
Services
and
University
Residences

STUDENT SERVICES

STUDENT SERVICES

At Saint Mary's University the Student Services area encompasses Chaplaincy, Counselling, Health Services, Cultural and Recreational Activities (including Athletics and the Art Gallery), Financial Aid, the Canada Manpower Centre, and Student Discipline.

CHAPLAINCY

Because of its traditional commitment to Christian education, Saint Mary's University continues to emphasize personal and social values deriving from the experience of Christian civilization. Its students and teachers represent a diversity of cultural and religious backgrounds and the University encourages participation in activities related to all faiths.

Catholic, Protestant and Jewish chaplaincy services are available to students. During the academic year a variety of religious events — pastoral guidance, liturgical services, ecumenical worship and inter-faith contacts — are available on campus and all students are encouraged to share in them.

COUNSELLING SERVICES

Professional Counsellors are available at all times to provide free, confidential, individual assistance to any registered student. Their services include:

Personal Counselling — Help with social, family and emotional problems, adjustments conflicts, interpersonal difficulties, and problems associated with drug and alcohol use. Medical referral and consultation are available when necessary.

Freshman Orientation — New students are offered assistance in planning courses, making adjustments to residence living, obtaining accurate information or entry into professions, occupations, etc.

Career Information and Vocational Counselling — University calendars, occupational-vocational monographs, application forms for admission tests to graduate schools are kept on file, and assistance is offered to facilitate course selection and career decision-making.

Handicapped Students — A service for disabled students is offered out of the counselling service. Much of this work involves helping blind students with their special problems of study methods and mobility as well as helping any student with a physical disability requiring special consideration or special attention.

Study Skills Program — Consists of a series of videotaped presentations and discussions covering such topics as organization of material, essay writing and concentration improvement.

HEALTH SERVICES

Students are required to submit a completed medical report to Health Services prior to registration. Medical files are maintained in the strictest confidence and no medical information is included in any academic record.

Physicians and nurses at the campus clinic provide medical care in the same fashion as a family doctor. Consultants are available for special health problems, surgical procedures, x-rays or special lab tests.

The Campus Clinic is located at MN 127, McNally Building and is open from 9:00 a.m. to 4:30 p.m. Monday to Friday. After hours a doctor may be contacted at 425-6230. In an emergency, a student should go to the Emergency Department, Victoria General Hospital, 1278 Tower Road, (Phone 428-2040).

MEDICAL INSURANCE

Nova Scotia Students

Questions about a student's status or eligibility regarding hospital or medical insurance should be directed to Medical Insurance, 5675 Spring Garden Road, P.O. Box 500, Halifax, N.S. (Phone 429-9700).

Students from other Provinces

These students are required to continue their own provincial medical coverage and should be prepared to produce a medical insurance identification number.

Landed Immigrants and Students with 12 month visa

These students are eligible for coverage under the Nova Scotia Medical Services Insurance Plan, and should contact Medical Services Insurance, 5675 Spring Garden Road, P.O. Box 500, Halifax, N.S. (Phone 429-9700).

STUDENT SERVICES

Students from other Countries

These students are not eligible for coverage under the Nova Scotia Provincial Medical Services Insurance. A medical insurance plan is therefore compulsory for all full-time, non-Canadian students attending Saint Mary's University. Premium for 1977-78 (September 1-August 31) is $70.00. This fee is payable at registration.

Foreign students who withdraw from university up to and including November 15, 1977 will not be charged for medical insurance.

Exemptions from this compulsory payment include only those full-time foreign students who *AT REGISTRATION* present proof (and duplicate copies) of their MSI (or equivalent Canadian Provincial) registration card *OR* proof of Blue Shield coverage.

ART GALLERY

Designed and constructed to National Gallery of Canada standards, Saint Mary's University gallery is located on the ground floor of the Ignatius Loyola Building.

Opened in October, 1971 by the Honourable Jean Chretien, then Minister for Northern Development and Indian Affairs, the gallery was the first University Art Gallery in Halifax. The initial exhibition consisted of sculptures and graphics by Eskimo artists and since then approximately 65,000 visitors have attended 500 exhibitions and other cultural events.

The Gallery also sponsors lectures and slide demonstrations on the history of Canadian Art, and life drawing and painting classes by the University Artist-in-Residence, C. Anthony Law.

A hospitable atmosphere exists in the Gallery, and among the audience at lunchtime recitals one frequently finds a broad cross-section of the university community.

The Halifax public as well has been able to view the work of internationally known artists at Saint Mary's University; for example: graphics by George Roault, paintings by Wilhelm Webels, drawings by Otto Dix, graphics by Ernst Barlach, Max Beckman, Lovis Corinth, Oskar Kokoschka, Kathe Kollwitz, Emile Nolde, and Karl Schmidt-Rottluff. Works by Arthur Lismer, A. Y. Jackson, L. L. Fitzgerald, David Milne, and Lawren P. Harris Jr., have been on display at the Gallery.

A permanent collection of Nova Scotia Pottery exists at Saint Mary's University Art Gallery in which potters such as Alma and Ernst Lorensen and Max Roulston are represented. The University Art Collection has been made possible through the generosity of private donors and organizations who enjoyed the facilities of the Art Gallery.

During the past four years, over 3,500 works of art have been handled by the Gallery's Curator, Robert Dietz, who has brought the Saint Mary's University Art Gallery to its present prominent position in the Maritimes.

MUSIC AT SAINT MARY'S

The Music Program at Saint Mary's University provides an opportunity for students to develop musical talents and to perform with the Concert and Marching Bands.

Under the direction of award-winning Bandmaster Ron MacKay, the program offers individual and group instruction in wind, string, and percussion instruments. The program covers a period of twenty weeks and includes one hour of instruction each week plus practice sessions.

Students from other universities and musicians from the community are invited to join Saint Mary's University students and staff and should contact the Music Coordinator for further information. (Phone 422-7361 ext. 120).

Fees: Saint Mary's University students $25.00 (refundable on perfect attendance). Others $45.00.

ATHLETIC PROGRAM

The Department of Athletics organizes a variety of athletic activities on a number of different levels, providing an opportunity for students at Saint Mary's University to participate in some aspect of the total program. The Intramural and Recreational Programs are designed to promote fun, recreation, and sportsmanship by encouraging students to compete on a friendly basis. Emphasis is placed on participation.

The Representative Program offers competition at a high level of excellence and, as a member of the Atlantic Universities Athletic Association, the Canadian Intercollegiate Athletic Union, and the Canadian Women's

STUDENT SERVICES

Intercollegiate Athletic Union, Saint Mary's participates in regularly scheduled and tournament sports with other universities in the Atlantic region and non-conference competitions arranged with teams across Canada and the United States.

Representative (Men)
Soccer
Football
Ice Hockey
Basketball
Rugby

Representative (Women)
Field Hockey
Basketball
Ice Hockey

Tournament
Volleyball — M & W
Tennis — M & W
Golf — M
Skiing
Badminton — M & W
Curling — M & W
Fishing — M & W
Judo — M & W
Wrestling — M
Bowling — M & W

M — Men
W — Women

Intramural
Softball — M & W
Football — M & W
Volleyball — M & W
Basketball — M & W
Broomball — M & W
Floor Hockey — M
Ringette — M & W
Ice Hockey — M
Soccer — M
Badminton — M & W

On Campus Facilities
Alumni Arena
Huskies Stadium
SMU Gymnasium
Swimming Pool
Tennis Courts
Combatives Room
Recreation Room
Weight Room
Practice Field
Golf, Curling, and
  Skiing facilities are
  available off-campus.

Recreational
Table Tennis — M & W
Swimming — M & W
Keep-fit Classes — W
Badminton M & W
Scuba Diving — M & W
Skating — M & W

ATHLETIC DEPARTMENT INFORMATION

Athletic equipment is available on a temporary loan basis for student recreation through the Equipment Controller.

Registration for Intramural Sports is processed by the Intramural Co-ordinator and notices are placed on bulletin boards around campus informing students of starting dates, deadlines, etc.

CANADA MANPOWER CENTRE

Specifically to assist students in finding employment a campus office of Canada Manpower is maintained on the 4th floor of the Student Centre.

In addition to professional guidance to both graduate and undergraduate students, the office provides current labor market news, career information, business literature, assistance in preparing resumes and in completing applications.

Personal interviews will also be arranged with representatives of the many companies who visit the campus each year to meet potential employees.

Although notices of job opportunities are posted regularly, students in need of part-time, summer, casual or permanent employment are advised to register early in the year with the Manpower office.

Hours are from 8:30 a.m. to 4:30 p.m., Monday to Friday. Counsellor in charge is John Rodgers. (Phone 422-7361, ext. 122)

STUDENT DISCIPLINE

A. Student Behavior

Saint Mary's University, in accepting students, takes it for granted that they are prepared to engage seriously in the pursuit of learning within an ordered academic institutional environment. Rules and regulations which affect student behavior are intended to ensure that the quality of life of the student and of those associated with him in the work of the University is respected and preserved.

The largest measure of responsibility for maintaining standards of conduct rests with the students themselves, as individuals and through their own organized disciplinary system. The University reserves the right, however, to counsel, admonish, limit the activities of, impose penalties on, or dismiss any student or group of students whose conduct violates normally accepted standards of civilized behavior or is inconflict with the University's objectives, policies, rules or regulations.

STUDENT SERVICES

B. Disciplinary System

In February 1977, Senate approved the Saint Mary's University Disciplinary System. Under the general responsibility and direction of the Director of Student Services, several administrative officers of the University (Directors of Residence, Student Services and University Services) receive complaints and charges, examine the evidence and make decisions with respect to the disposition of cases. If there are appeals against these decisions, they are heard by the three-person Student Disciplinary Appeal Board. Decisions can involve monetary fines, suspensions, or expulsion from the University.

C. Campus Police

The maintenance of order and conduct at student and athletic functions is the responsibility of the Saint Mary's Campus Police. This force is composed of full-time students and is headed by a chief, deputy chief and six team captains. Students wishing to be members of this force must be of sound academic standing, of a general demeanor consistent with the normally accepted standards of conduct required of students at the University. The force is under the general supervision of the Coordinator of Operations of the University. Applications for Campus Police membership are to be directed to that officer.

The Campus Police Force provides students with an opportunity to obtain valuable experience in the field of crowd and citizen management and funds to augment their education costs.

UNIVERSITY RESIDENCES

One of the distinctive features of Saint Mary's University is its residence complex. Approximately one third of the student body resides on its beautiful 30-acre campus. The University does not require students to live in residence; however, it highly recommends residence life and encourages all first year students from outside the metropolitan area to reside in the modern on-campus facilities.

The residence complex includes the 17-storey Edmund Rice Residence, the four-storey Vanier House and the twenty-storey Ignatius Loyola Residence. Constructed during the last four years and awarded a 1971 Canadian Housing Design Council award, these residences are ideally located for Saint Mary's students. The residence complex is linked together and serviced by a student's cafeteria, mini-market, beauty salon, barber shop, a pool, and above-ground as well as underground parking, an art gallery, a branch of the Royal Bank of Canada, and a laundromat. A further attraction of the Ignatius Loyola Building is the Reverend M. W. Burke-Gaffney Observatory, whose facilities are open to students and the public. For further information see the Astronomy section.

For the 1977-78 academic year, female resident students will be accommodated in Vanier House and in the Edmund Rice Residence.

EDMUND RICE RESIDENCE

This 17-storey building consists of 16 floors of furnished apartments, six per floor, accommodating four students each. Each apartment has a living room, bath, two double bedrooms and a kitchen. There are no single rooms available in this structure. Students living in apartments usually prepare their own meals. However, some students choose to eat in the cafeteria and may take advantage of the available meal plans.

VANIER HOUSE

Comprised of four separate four-story houses, Vanier House offers double and single accommodations. On each floor, exclusive of the first which provides under-cover connection with the other houses and with the Edmund Rice and Ignatius Loyola Residences, there are three suites, each with six students occupying two single and two double rooms, and sharing a bathroom. There is a common lounge on each floor, and limited cooking facilities. Therefore, students living in this area of the residence are on a board plan.

IGNATIUS LOYOLA RESIDENCE

This structure consists of 19 floors of residence in two separate wings. The south wing is assigned to married students and consists of 105 apartments of three sizes — one bedroom, two bedrooms and a larger two bedroom. Application for accommodation should be made to the Director of University Residences. Occupancy of married students' apartments is on an annual lease basis. The north wing consists of suites for six single male students who live in four single rooms and one double and share a bathroom. These six share responsibility for general tidiness of the suite between weekly cleanings by University staff. There is a common lounge on each floor for the occupants of the four suites on that floor and their guests. Students in the Ignatius Loyola Residence are on a board plan.

Fees for accommodation in each of these residences and for various meal plans are specified in the Financial Information Section of this Calendar.

SECTION 8

Activities
and
Facilities

STUDENT ORGANIZATIONS

The extracurricular organizations listed below are officially recognized by the University. Students who represent the University in any public activity — dramatics, debating, oratorical contests, or athletic competition, or who hold office in any student organization, must be in good academic standing at the time of their election or appointment.

STUDENTS' COUNCIL

The Students' Representative Council (SRC) is the official representative body of the Students' Association. Its purpose is to provide extracurricular services for the students and to represent their best interests to both the administration and the faculty. The Council sponsors clubs, societies and social events and maintains a rapport with the rest of the University community. The hope of the Council is to add to the general quality of life at the University so that the students may enjoy a well-rounded experience at Saint Mary's.

THE JOURNAL

The Journal is the official undergraduate newspaper of the Saint Mary's University Students Association, providing coverage of campus news events, as well as events in the community. The Journal is a member of the Canadian University Press.

RADIO SAINT MARY'S

Operating from the 5th floor of the Student Center, Radio Saint Mary's entertains and informs students. The station is staffed entirely by Saint Mary's University students and broadcasts 95 hours a week. Involvement includes news writing, announcing, programming, and engineering.

YEARBOOK

The aim of the Yearbook is to provide an interesting and well-presented documentation of student life on campus. The book is issued once a year and is sponsored by the Students' Representative Council. Student participation and assistance is welcomed.

ANTHROPOLOGICAL SOCIETY

The Anthropological Society, organized by students majoring in anthropology, serves to assist all interested students through a program which includes speakers and films on anthropology or related topics.

The Society also provides information on job opportunities and graduate schools and arranges special social functions.

ASIAN STUDIES CLUB

The Club endeavours to promote an increased cultural awareness of Asian societies. Club activities include seminars in the Chinese culinary art, film exhibitions, and other social functions. Membership is open to any student interested in fostering a better understanding of Asia.

BAHA'IS CLUB

This club is open to all students and faculty. Its purpose is to acquaint people with the Baha'i Faith, to co-operate fully with all other religious groups in inter-faith activities designed to promote unity, and to provide, in an amicable exchange of viewpoint, a forum in which the basic tenets of all religions may be discussed.

BIOLOGICAL SOCIETY

The Society was formed to stimulate student interest in the natural sciences. The aims are realized through field trips, movies, and visits to local scientific institutions.

BLACK STUDENTS' ORGANIZATION

Black Students' Organization was started in September 1971 at Saint Mary's University. One of its main functions is the appreciation and dissemination of knowledge relating to Black history, culture and experience. It is a forum for the expression of Black Student opinion. It is also active in developing community programs that are of relevance to the Black community in Nova Scotia.

STUDENT ORGANIZATIONS

BUSINESS ADMINISTRATION SOCIETY

The Business Administration Society is open to any student in Business Administration or Accounting. The elected representatives have the responsibility for submitting student views in the Commerce Faculty and organizing various social functions.

The activities carried out by this society help to establish a rapport between students and faculty. The goal of the society is to allow the students to gain a better understanding and appreciation of the academic and business environments.

CHESS CLUB

The Chess Club provides an opportunity for students who play chess to have games with fellow students. Aside from the enjoyment of the game, the club also presents an excellent way to improve one's skills. There is an annual tournament as well as matches with other universities.

THE CARIBBEAN STUDENT SOCIETY

The Caribbean Student Society was founded in recognition of the West Indian community of students who have traditionally been active in the social structure of the University. Its constitution calls for the Society to encourage cooperation among Caribbean students in this and other Canadian universities, and among West Indians and Canadians generally. The Society assists students in any way possible, keeps informed on West Indian affairs and fosters the culture of the Caribbean. Students keep in touch through an occasional fete or special exhibition, but mainly by trying to be what we are, without getting *"bowled behind we back"*.

CHINESE STUDENTS ASSOCIATION

This Association is open to all students. The aim of the Association is to promote knowledge of Chinese culture and to provide social and recreational activities oriented to the interests of all students.

THE CHEMICAL INSTITUTE OF CANADA

(CIC) Student Chapter is open to chemistry and chemical engineering students. Through affiliation with the national organization, an educational and social program is provided together with opportunities for closer contact with the faculty.

SMU DEBATING SOCIETY

All students are invited to join this society which strives through the art of debate, to promote interaction among young people at the university level. Members gain valuable experience and confidence in public speaking and improve self-expression through the use of logical argument. Members participate in annual debating tournaments with other universities.

THE DRAMATIC SOCIETY

The Dramatic Society, one of the most active societies on campus, is unique in being both academically sponsored and at the same time a student organization. With the help of competent professionals, University faculty, and a large number of students, the Society each year presents a number of workshops, one-act and full length plays. In offering extracurricular education in all phases of drama, it hopes as well to provide enjoyable and instructive experience in the form of acting, scene design and building, lighting, painting, make-up, costume design and making, properties, and promotion and publicity. Membership is open to anyone in the University Community.

The Dramatic Society also cooperates in the entertainment programs offered by other student organizations and is responsible for management of the stage and its equipment wherever used.

THE ECONOMICS STUDENTS ASSOCIATION

The Economics Students Association was revived in 1973-74. Membership is open to anyone taking a course in economics. However, a strong nucleus of economics majors is required for the purpose of electing representatives to the Economics Department and to boards and committees on which students take an active role.

The Association has established a tutorial program for sophomore students, actively participated in Open House and sponsored a successful panel on the Energy Crisis.

Social activities conducted this year included a tour of Oland's Breweries and a party which is expected to become an annual affair.

STUDENT ORGANIZATIONS

THE ENGINEERING SOCIETY

The Engineering Society undertakes various activities such as student-faculty smokers and tours of local industrial establishments with the aim of helping students become better acquainted with one another and with matters of interest to engineers. The Society also sponsors the annual Engineering Student Talent Show.

W. A. BELL GEOLOGY CLUB

The W. A. Bell Geology Club was organized in 1968 to promote the Geological Sciences at Saint Mary's University, and to provide an opportunity for members to meet the Geology Community of Halifax and area. Activities include field trips, fund-raising, conferences, social evenings, and sports. With the Department of Geology, the Club sponsors a continuous seminar series with speakers on various relevant topics. Membership is automatic for all students majoring in Geology but is open also to any interested persons. (Club Phone 422-7951). The Geology Club is a member of the Atlantic GeoScience Society, Atlantic and Maine Universities Geological Conference and New England Intercollegiate Geological Conference.

GEOGRAPHICAL CLUB

With its founding in 1975, the aim of this Club has become the development of a general interest in the field of geography, to create an awareness within the student body that there are others interested in geography. This aim is achieved with biweekly meetings in which guest lecturers are presented, and films and discussions invite participation. Activities include smokers and field trips. The Club is open to any student. Same space, one distance for all!

AIESEC — INTERNATIONAL ASSOCIATION FOR STUDENTS OF ECONOMICS AND COMMERCE

AIESEC is a non-profit, apolitical organization of university students working with managers of the business community to increase international understanding and to bridge the gap between theoretical university education and the practical business world. There are twenty branches in Canada. Exchange programs arrange for students to go to assured jobs in foreign countries each year. Activities include seminars, meetings, career sessions, luncheons and receptions.

M.B.A. SOCIETY

This Society is composed of all full and part-time students in the Master of Business Administration program and elects those who will officially represent this group of students on appropriate University, Faculty and Departmental committees. The Society sponsors several social events designed to enhance the morale and esprite of its members and to establish rapport between graduate students and faculty. Talks by guest speakers, workshops, seminars and activities which involve members of the business community are also part of the Society's program.

THE NEWMAN SOCIETY

The Society was formed to encourage the growth of a community on campus united by Christian ideals and by a desire to contribute to the community life on campus. The Society organizes Search retreat weekends for students, participation in inter-university Newman meetings, University Masses, orientation week and University projects such as Third World Awareness.

POLITICAL SCIENCE ASSOCIATION

The organization has an elected executive, non-executive posts, and committees at large. Its aim is to promote the social consciousness of our members to enable them to utilize their full potential as students and as citizens.

PSYCHOLOGY CLUB

The aim of this club is to promote general interest and education in the field of psychology and to provide a liaison between the psychology department and psychology students. Informal in structure, the club serves both an academic and social function. Membership is open to any full-time student.

AMATEUR RADIO AND ELECTRONICS CLUB

The Amateur Radio and Electronics Club includes both student and faculty members. It is currently involved with three major projects:

STUDENT ORGANIZATIONS

Operation of VEISMU, an amateur radio station with communications capabilities of 80, 40, 20, and 10 meters;

Construction of a system for receiving and producing weather photographs from weather satellites;

An amateur radio telescope, including a system on 262MHz which has successfully detected 262MHz radiation from the sun.

Although the Club does not normally hold formal meetings, interested students and faculty members have been active on an informal basis. The Club welcomes new members who wish to participate in the development of projects underway. Previous electronic experience is not necessary.

For further information, please contact Fr. Lonc at 425-3210, or drop into his Lab, North Wing, Lower Floor, McNally Building.

RESIDENCE SOCIETY

The Residence Society is the largest society on campus, having a membership of 1,100 students. Its purpose is to represent residence students in the University community. The elected representatives are responsible for arranging dances, forums, trips, etc. for the residence students as well as participating in all campus activities. The goal is for a more unified residence community.

SAINT MARY'S FOLK CLUB

The Club is designed for student musicians who are interested in performing and for students who enjoy just listening. Through weekly meetings members can improve their presentations and learn new and unique performing styles. The major project of the Club is a weekly 'Coffee-House' which highlights local entertainers as well as some club members.

S.M.U. KAMP

In operation since December 1969 this organization works solely for the benefit of the underprivileged children in the Halifax-Dartmouth metro area. The club's intention is to bring these children into contact with many entertaining and educational activities not otherwise open to them. Working from the Edmund Rice Residence, the organization carries on an extensive list of projects, including everything from swimming instruction and creative arts to field trips to many of Nova Scotia's historical and vacation parks. During the months of July and August, the club conducts a series of "camps" for children between the ages of seven and eleven.

CULTURAL ACTIVITIES

PERFORMING ARTS

The performing arts program at Saint Mary's University brings a cross-section of excellent musicians and entertainers to the campus each season. From chamber orchestras to modern jazz, concerts provide musical adventure for every preference. The program presents professional artists in recitals and readings, and includes a variety of films covering academic interests, art and current movies.

Musician-in-Residence

Musician-in-residence at Saint Mary's University during the 175th Anniversary Year is Warren Chiasson of New York, who has established a reputation as one of the best jazz vibraphonists in North America.

Mr. Chiasson toured with the George Shearing Quintet for several years before forming his own group, and has since appeared with some of the finest jazz groups on the Continent, including the Chet Baker Quartet, the Tal Farlow Trio, and Roberta Flack.

A native of Sydney, Nova Scotia, he graduated from Saint Francis Xavier University where as a student, he conducted his own orchestra. He is a versatile musician and plays the violin, trombone, and piano in addition to the vibraphone. He has recorded for Capital, R.C.A. Victor, Mercury, Trident and Van-Los records.

At Saint Mary's, Mr. Chiasson is involved in instructional sessions with the University's music program, workshops for musicians and the local school music program, and various performing sessions including public concerts.

FACILITIES

LIBRARY

A new $3,000,000 library was officially opened on campus in June 1976 and named in honor of the late Patrick Power, a generous benefactor of Saint Mary's since its early years as a college.

In 78,000 square feet of space, the three storey structure provides seating capacity for 25% of the current student body and accommodation for 300,000 volumes. In addition, it houses the periodical collection, rare books, journals, newspapers, the reference collection and microforms. Annual reports of major corporations are also available, as well as telephone directories, academic calendars of universities in Canada, the United States and abroad, texts of important speeches, and various press releases and brochures.

The library subscribes to national and international computer information systems: CAN/OLE (Canadian On-Line Enquiry) which has references to articles on biology, chemistry, physics and engineering; WAT/DOC which has data bases on water, pollution, the environment, metallurgy, business and law; DIALOG which has information on biology, government research, social sciences, engineering, education, agriculture, psychology, physics, electronics and computers, mechanical engineering and business markets.

The Multi-Media Centre provides playback facilities for non-book media, audio and video cassettes, slides, films, filmstrips and film loops, a classical music collection, facilities for student productions and film previewing service.

To assist students in making the most efficient use of library facilities, instruction at beginner and advanced levels is offered to groups and individuals. Students are informed of optional use of other libraries in the Halifax area and, through inter-library borrowing, those in other parts of Canada.

Conference rooms, and discussion rooms are available for groups of varying sizes, and typewriters and photocopying services are also provided.

COMPUTING SERVICES

Faculty and students may use the in-house computer (a P.D.P. 11/70 running under the I.A.S. operating system). Authorized faculty and students may also use outside computers (C.D.C. 6400 at Dalhousie University and Maritime Computer Limited) by remote job entry (R.J.E.) through the P.D.P. 11/70 or by means of several slow speed terminals located on the Saint Mary's University campus.

The Computing Center staff conducts seminars on topics in computing and provides a variety of services to computer users. Program advisors are on duty during normal working hours and will give demonstrations on request. They provide assistance in such areas as statistics, numerical methods and the use of various program packages (I.B.M., scientific, commercial, engineering and statistical packages). Computer program and reference library facilities are maintained, and research groups may either program their own work or avail themselves of the programming services provided by the Computer Center.

THE OBSERVATORY

The Rev. Michael W. Burke-Gaffney Observatory at Saint Mary's University was opened in 1972.

Resembling a beehive, the revolving, aluminum dome measures twenty feet in diameter and rests upon an elevated pad atop the 23-storey academic-residence building. The Observatory's sixteen-inch reflecting telescope, the most powerful in Eastern Canada, is used for student instruction and astronomical research.

The Observatory is open to the general public for regular viewing sessions every Saturday evening.

An enclosed corridor connects the Observatory to the night office and instrument room.

The Observatory is named for Professor Emeritus, Rev. Michael W. Burke-Gaffney, astronomer, engineer, and educator who has been at Saint Mary's University since 1940.