SAINT MARY'S UNIVERSITY

**Halifax
Nova Scotia**

**1972|73
Academic Calendar**

Saint Mary's University

**General Calendar
for the academic year
1972-73**

Contents

Academic Calendar Year
1972—1973

MAY

8	Monday	Spring Convocation.
15	Monday	Registration for first summer school.
16	Tuesday	First summer session begins.

JUNE

29	Thursday	Examinations for first summer session.

JULY

4	Tuesday	Registration for second summer session.
5	Wednesday	Second summer session begins.
14	Friday	Last day for receiving applications for supplemental examinations for courses taken in regular academic year and in first summer session.

AUGUST

18	Friday	Second summer session examinations.

SEPTEMBER

5	Tuesday	Supplemental examinations begin for regular year and first summer session.
11-14	Monday-Thursday	Registration for Evening Division students: 7:00 p.m. - 8:30 p.m.
11	Monday	Registration for all senior students and Bachelor of Education students. 8:00a.m. - 12:00 noon, 1:00 p.m. - 5:00 p.m.
12	Tuesday	Registration for all junior students: 8:00 a.m. - 12:00 noon, 1:00 p.m. - 5:00 p.m.
12	Tuesday	Registration for Master's students 7:00 p.m. - 8:30 p.m.

SEPTEMBER

13	Wednesday	Registration for all sophomore students: 8:00 a.m. - 12:00 noon, 1:00 p.m. - 5:00 p.m.
14	Thursday	Registration for all new students with sophomore standing: 8:00 a.m. - 12:00 noon, 1:00 p.m. - 5:00 p.m.
15	Friday	Registration for all new students with sophomore standing: 8:00 a.m. - 12:00 noon.
15	Friday	Registration for new students with freshman standing: 1:00 p.m. - 5:00 p.m.
16	Saturday	Registration for new students with freshman standing: 8:00 a.m. - 5:00 p.m.
18	Monday	Instruction begins for all classes. Late registration fee of $25.00 with an additional fee of $10.00 for each day after this date.
22	Friday	Last date for change of registration.
22	Friday	Final date for late registration.

OCTOBER

| 9 | Monday | Thanksgiving Day. No classes. |
| 13 | Friday | Last date for application for degrees to be awarded in May 1973. |

NOVEMBER

| 11 | Saturday | Remembrance Day — No classes. |

DECEMBER

8	Friday	Patronal Feast of the University. No classes.
15	Friday	Final date for classes.
16-20	Saturday-Wednesday	Final examinations in first semester courses.
20	Wednesday	Closing date of the University for the first term.

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JANUARY 1973

| 3 | Wednesday | Classes resume 8:30 a.m. |
| 4-12 | Thursday-Friday | Confirmation of registration for second semester courses. |

FEBRUARY

| 23-24 | Friday-Saturday | Supplementals for second summer session and first semester courses. |
| 26-March 4 | Monday-Sunday | Mid-Term study week. |

MARCH

| 5-30 | | Pre-Registration of all students for next academic year. |

APRIL

6	Friday	Last day of classes.
9	Monday	Final Examinations begin.
19	Thursday	Holy Thursday. No Examinations
20	Friday	Good Friday. No examinations.
27	Friday	Survey Camp begins.

MAY

7	Monday	Spring Convocation.
14	Monday	Registration for first summer session.
15	Tuesday	First summer session begins.

JUNE

| 28 | Thursday | First summer session examinations. |

JULY

3	Tuesday	Registration for second summer session.
4	Wednesday	Second summer session begins.
13	Friday	Last day for receiving applications for supplemental examinations for courses taken in regular academic year and in first summer session.

AUGUST

| 17 | Friday | Second summer session examinations. |

Art Gallery

CALENDAR - - - 1972

JANUARY	FEBRUARY	MARCH	APRIL
S M T W T F S	**S M T W T F S**	**S M T W T F S**	**S M T W T F S**
1	1 2 3 4 5	1 2 3 4	1
2 3 4 5 6 7 8	6 7 8 9 10 11 12	5 6 7 8 9 10 11	2 3 4 5 6 7 8
9 10 11 12 13 14 15	13 14 15 16 17 18 19	12 13 14 15 16 17 18	9 10 11 12 13 14 15
16 17 18 19 20 21 22	20 21 22 23 24 25 26	19 20 21 22 23 24 25	16 17 18 19 20 21 22
23 24 25 26 27 28 29	27 28 29	26 27 28 29 30 31	23 24 25 26 27 28 29
30 31			30

MAY	JUNE	JULY	AUGUST
S M T W T F S	**S M T W T F S**	**S M T W T F S**	**S M T W T F S**
1 2 3 4 5 6	1 2 3	1	1 2 3 4 5
7 8 9 10 11 12 13	4 5 6 7 8 9 10	2 3 4 5 6 7 8	6 7 8 9 10 11 12
14 15 16 17 18 19 20	11 12 13 14 15 16 17	9 10 11 12 13 14 15	13 14 15 16 17 18 19
21 22 23 24 25 26 27	18 19 20 21 22 23 24	16 17 18 19 20 21 22	20 21 22 23 24 25 26
28 29 30 31	25 26 27 28 29 30	23 24 25 26 27 28 29	27 28,29 30 31
		30 31	

SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
S M T W T F S	**S M T W T F S**	**S M T W T F S**	**S M T W T F S**
1 2	1 2 3 4 5 6 7	1 2 3 4	1 2
3 4 5 6 7 8 9	8 9 10 11 12 13 14	5 6 7 8 9 10 11	3 4 5 6 7 8 9
10 11 12 13 14 15 16	15 16 17 18 19 20 21	12 13 14 15 16 17 18	10 11 12 13 14 15 16
17 18 19 20 21 22 23	22 23 24 25 26 27 28	19 20 21 22 23 24 25	17 18 19 20 21 22 23
24 25 26 27 28 29 30	29 30 31	26 27 28 29 30	24 25 26 27 28 29 30
			31

CALENDAR - - - 1973

JANUARY	FEBRUARY	MARCH	APRIL
S M T W T F S	**S M T W T F S**	**S M T W T F S**	**S M T W T F S**
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7 8 9 10 11 12 13	4 5 6 7 8 9 10	4 5 6 7 8 9 10	8 9 10 11 12 13 14
14 15 16 17 18 19 20	11 12 13 14 15 16 17	11 12 13 14 15 16 17	15 16 17 18 19 20 21
21 22 23 24 25 26 27	18 19 20 21 22 23 24	18 19 20 21 22 23 24	22 23 24 25 26 27 28
28 29 30 31	25 26 27 28	25 26 27 28 29 30 31	29 30

MAY	JUNE	JULY	AUGUST
S M T W T F S	**S M T W T F S**	**S M T W T F S**	**S M T W T F S**
1 2 3 4 5	1 2	1 2 3 4 5 6 7	1 2 3 4
6 7 8 9 10 11 12	3 4 5 6 7 8 9	8 9 10 11 12 13 14	5 6 7 8 9 10 11
13 14 15 16 17 18 19	10 11 12 13 14 15 16	15 16 17 18 19 20 21	12 13 14 15 16 17 18
20 21 22 23 24 25 26	17 18 19 20 21 22 23	22 23 24 25 26 27 28	19 20 21 22 23 24 25
27 28 29 30 31	24 25 26 27 28 29 30	29 30 31	26 27 28 29 30 31

SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
S M T W T F S	**S M T W T F S**	**S M T W T F S**	**S M T W T F S**
1	1 2 3 4 5 6	1 2 3	1
2 3 4 5 6 7 8	7 8 9 10 11 12 13	4 5 6 7 8 9 10	2 3 4 5 6 7 8
9 10 11 12 13 14 15	14 15 16 17 18 19 20	11 12 13 14 15 16 17	9 10 11 12 13 14 15
16 17 18 19 20 21 22	21 22 23 24 25 26 27	18 19 20 21 22 23 24	16 17 18 19 20 21 22
23 24 25 26 27 28 29	28 29 30 31	25 26 27 28 29 30	23 24 25 26 27 28 29
30			30 31

General Information

Saint Mary's University had its beginnings as a small college founded in Halifax in 1802 by Reverend, later Bishop, Edmund Burke. The site of the first building was just west of the present Saint Mary's Basilica on Spring Garden Road.

Official recognition came in 1841 when "An Act Incorporating the trustees of Saint Mary's College at Halifax" was enacted by the Nova Scotia House of Assembly. Eleven years later the privileges granted in the Act of 1841 were made permanent.

In 1903, the College was re-established on a new campus at Quinpool Road and Windsor Street in Halifax. Ten years later the Christian Brothers of Ireland assumed direction and added to the building.

In 1918, the Nova Scotia Legislature in the preamble to an Act to amend the law respecting Saint Mary's, declared that Saint Mary's, "originally incorporated by Chapter 39 of the Acts of 1841, shall continue to be deemed and taken to be a University, with all the necessary and usual powers ... including the power of conferring Degrees in Arts and in all the other faculties."

The Jesuit Fathers assumed direction of Saint Mary's in 1940. In 1951, the University moved to a new 30 acre campus on the historic Collins estate and former Gorsebrook Golf Course in south Halifax. In 1968 Saint Mary's University became a co-educational university.

In July, 1970, Saint Mary's became a fully autonomous university, ending 168 years of ownership by the Roman Catholic Archdiocese of Halifax. The power and authority to govern the university, as stated in the Saint Mary's University Act, 1970, is now that of its board of governors.

Its independence will not, however, spell an end to the university's Christian tenor and traditions: Saint Mary's will continue under its charter to emphasize Christian and humanistic values and principles.

A full-fledged university with more than 5,500 students in attendance each year, Saint Mary's is today a high-rise university still characterized by a rapport among students, faculty and administration.

ASSOCIATIONS

Saint Mary's University is a member of the Association of Common-wealth Universities, of the Association of Universities and Colleges of

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Canada, of the Association of Atlantic Universities, of the Jesuit Educational Association, International Association of Universities and an associate member of the Huntsman Marine Laboratory, St. Andrews-by-the-Sea, N.B.

Saint Mary's 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, Industrial and Geological Engineering. Since 1953, Saint Mary's has been one of the institutions sponsoring the Atlantic Summer School for Advanced Business Administration. In 1955, it entered upon an agreement of affiliation with the Maritime School of Social Work. And in 1957, it affiliated Ignatius College in Guelph, Ontario, and Regis College in Toronto, Ontario, for courses leading to degrees in Arts and Sacred Theology. Also in 1957, Saint Mary's became one of the six Maritime Universities co-operating with the Nova Scotia Department of Education in the professional training of teachers.

STATEMENT OF OBJECTIVES

This University believes that its objective is to induce, in the individual student, that kind of critical thinking that will build and refine his constructive, judgemental powers towards his own free formation of a system of Christian and humanistic values and principles that can face and answer the cultural and technological challenges of the present day. This University consequently believes that traditional humanism, confirmed by the teachings of Jesus Christ, and supplemented by the scientific and professional awareness required in our time, is the best educational instrument for the making of modern Canadians.

CHRISTIAN LIFE

Saint Mary's University is a Christian University, and as such endeavours to create a specifically Christian atmosphere. This atmosphere is one in which concerned Christians are able to search for and spell out a concretization of their convictions.

One source of this desirable atmosphere stems from the opportunities offered Students, Faculty and Administration to participate in Liturgical functions and other religious programs.

Chaplains: Saint Mary's University offers faculty and students the services of chaplains, Catholic and non-Catholic. They are available through their campus office and elsewhere throughout the campus for

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personal and religious counselling. They plan and co-ordinate the religious activities on campus: liturgy, retreats, guest speakers, discussion groups. The chaplains publish the times and locations of all religious activities.

Religious Services: Weekday and Sunday liturgies are offered on campus in the Liturgical Centre, located in the Student Centre, and in the Residence.

University Religious Events: The academic year is especially marked by inviting the University Community to participate in religious services, on dates to be announced, during:

September: as a part of the University Day celebrations.

November: to commemorate the deceased of the University.

December: to celebrate the traditional Patronal Feast of the University, the Feast of the Immaculate Conception, December 8.

May: Baccalaureate Service, as part of the Graduation Ceremonies.

THE PERFORMING ARTS

Saint Mary's University has a presidential committee on the performing arts which meets regularly to arrange various concerts and recitals by well-known artists for each college season. Informal recitals are also scheduled as part of the expanding cultural program.

During 1972 Saint Mary's appointed its first musician-in-residence, internationally known composer Shulamit Ran. The university has a modern art gallery located on the ground floor of the new academic residence complex. Long before this addition to the university Saint Mary's had its own artist-in-residence and a small art gallery located in the library.

Halifax painter Anthony Law, (RCA, NSA), has been artist-in-residence since 1967 and conducts seminars and workshops for faculty and students. The works of local, national and international artists are exhibited in the new gallery.

In keeping with the university's expanded cultural program Saint Mary's maintains an extension gallery at the Miners Museum, Glace Bay, N.S. and promotes travelling exhibitions to various parts of the province.

The university's Drama Society is comprised of faculty and students. The Society presents at least two major productions each year.

The Saint Mary's University Chorale provides an excellent opportunity for the university community to participate in an extensive musical programme. Several public concerts are presented each year.

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COMPUTING CENTER

The University Computing Center, located on the third floor of the Chemistry-Biology building, houses the I.B.M. 1130 computing system which is used by faculty, students and the administration. The system is adaptable to scientific, business and non-numeric applications.

Computing Center staff conduct seminars on topics in computing and provide 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 limited keypunching and related services are available. Research groups may either program their own work or avail themselves of the programming services provided by the Computer Center. A high speed counter-sorter is also available for use in conjunction with the installation or for small data-processing operations.

STUDENT AFFAIRS

Student Affairs comprise student activities of a non-academic nature and student personnel services.

This sector of the University includes the Offices of the Dean of Students, Dean of Residence (Men), Dean of Residence (Women), Student Health Services, University Counselling Service, Chaplains' Office, and Financial Aid, Officer.

The Deans of Residences also cooperate with the Students Representative Council in compiling a list of off-campus housing which is made available to those students desiring accommodations of this nature.

The Dean of Students serves as liaison officer for the University to the Canada Manpower Centre.

The Dean of Students serves as liaison officer and University Representative to student government and student organizations.

The overall responsibility for student affairs is delegated by the President to the Dean of Students.

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The Dean of Students main tasks are:

a) to promote the educational role of the University in non-academic student activities;
b) to further the physical, intellectual and moral well-being of the student body;
c) to co-ordinate the activities of the various student personnel services and to supervise their development.

STUDENT BEHAVIOUR

It is assumed that students come to the University for a serious purpose and will conform to duly established customs, policies, and rules. Students as adults must accept full responsibility for their actions. On the other hand the University cannot remain completely unconcerned about their actions. The University cannot be expected to prepare students for leadership without attempting to influence their spirit as well as their mind.

The University accepts the responsibility of creating on campus an atmosphere where students observe the elementary rules of good manners and show both self-respect and respect for others. It looks to them to display good taste in their dress, speech and general behaviour.

The University sees little need however to issue detailed regulations governing discipline since self-discipline should be the aim of each individual student. The University's few basic regulations are designed to create a favorable climate so that any individual may acquire personal self-control and build within himself a strong human spirit to guide his actions now and later as a member of society.

The University reserves the right to take appropriate action to prevent any individual or group from interfering with the learning process or to censure or penalize students who are guilty of breaches of school discipline. The registration of the student is considered an acceptance of regulations. It should be understood that the University reserves the right, not only to suspend or dismiss students, but also to name conditions under which they may remain in the University.

MEDICAL AND HEALTH SERVICES

The Nova Scotia Medical Services Insurance Plan came into effect on April 1, 1969. The details of this plan may be obtained through the Department of Health, Province of Nova Scotia. The plan covers all residents of Nova Scotia.

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All other provinces have Medical Services Insurance plans similar to the one in effect in Nova Scotia and it is the responsibility of each student to insure himself in his home province.

All foreign students who are not eligible for coverage under the Nova Scotia Medical Services Insurance plan (e.g., those students who do not intend to remain in Nova Scotia for the duration of their univeristy education) are covered by the University under a private Insurance Company.

The University has retained a medical doctor as Director of Medical Services. The doctor's office is located on campus, and his services will be available to all students.

The University accepts no responsibility for injuries or loss of time incurred by students while taking part in student activities.

All students are responsible for their own hospitalization expenses.

COUNSELLING SERVICES

The counselling service offers guidance and counselling, without charge, to any regularly enrolled student. Counsellors with professional training are available to assist all students with matters of personal, social, educational or vocational adjustment.

Types of Service — Counselling on an individual basis; testing as required; referral to other staff members and professors; referral through University Department of Health Services for psychotherapy or medical advice and assistance where required. Occupational information is also available and close liaison is maintained with the Canada Manpower Centre on Campus.

Location — The offices of the counselling staff are located on the fourth floor of the Student Centre building. Office hours are from 9:00 a.m. to 5:00 p.m. Provision will be made for emergency calls beyond these hours.

Appointments can be made by phoning 422-7361, Local 181 or by visiting the office of the secretary in Room 411.

Staff: L.W. Smith, Head of Counselling Services — Room 410, Local 181.
Rev. F. Whelan, S.J., Counsellor — Room 409, Local 157.
Rev. J.J. Hennessey, S.J., Counsellor — Residence 1701, Local 141.
Miss B. Hubley, Secretary —Room 411, Local 221

UNIVERSITY RESIDENCES

Although Saint Mary's University is not regarded as a residence university, one of its distinctive features is its modern new residence complex. Approximately one third of its students reside on the beautiful south end campus. At the moment the university does not insist on its students living in residence, although it highly recommends residence life and encourages all first year students from outside the metropolitan area to reside in the modern facilities.

The residence complex comprises three divisions — High Rise I, High Rise II, and the Low Rise. Constructed during the last four years, these residence are reserved entirely for Saint Mary's students. The residence complexes are linked together and are serviced by a students' cafeteria, private dining room, mini-market, beauty salon, barber shop, Branch of the Royal Bank, laundromat, art gallery, swimming pool, above ground as well as underground parking, and an astronomical observatory.

For the 1972-1973 academic term, it is contemplated to have coeds living in the Low Rise and the first three floors of High Rise I.

LOW RISE:

Comprised of four separate four story Houses, the Low Rise offers double and single accommodations to the students. On each floor (exclusive of the first) there are three suites each with six students arranged in two single and two double rooms, who share a bathroom. There is a common lounge on each floor but no cooking facilities of any kind. Therefore students living in this area of the residence are on a board plan, which in the 1971-72 term, provided for either 21 meals or any 15 meals per week with unlimited seconds. The 1971-72 fee schedule for the Low Rise was:-

Single room with 21 meals per week. $1030.00
Single room with 15 meals per week. . . . . $ 955.00
Double room with 21 meals per week. . . . . $ 975.00
Double room with 15 meals per week. . . . . $ 900.00

HIGH RISE I:

This 17 storey building consists of 16 floors of furnished apartments, six per floor, and accommodating 4 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 in this area usually prepare their own meals; sometimes eating in the Cafeteria on either a 9 meal per week board plan or on an a la carte basis. The fee structure of High Rise I (room only), for the 1971-1972 term was $540.00 per student.

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HIGH RISE II:

Consisting of 2 floors of academic space and 20 of residence, this 22 storey tower has two separate wings. The south of these is assigned to married students and consists of apartments of three sizes - one bedroom, two bedrooms, and a larger two bedroom. Application for these accommodations is made to the Residence Manager and occupancy is on a regular landlord - tenant lease basis. The north tower consists of responsibility units for six single male students who live in four single rooms and one double. Sharing a bathroom, these six also share a common lounge with the occupants of the two other units on the floor. As in the Low Rise, cooking facilities are not available so that students in High Rise II are on a board plan which consisted of either any 15 or 21 meals per week. The fee schedule for High Rise II during the 1971-1972 academic term was:

Single room with 21 meals per week. $1030.00
Single room with 15 meals per week. . . . . $ 955.00
Double room with 21 meals per week. . . . . $ 975.00
Double room with 15 meals per week. . . . . $ 900.00

Fees are subject to change in 1972-1973 academic year.

Parking Fee:

Residence fees do not include on campus parking for which a separate fee is charged.

General Parking (outside). . . . . $10.00 September - May
Underground Parking (High Rise II). . . . . $10.00 per month

Additional information about residence may be obtained by writing to the Deans of Residence Office.

Notices

Bulletin-Board announcements intended for students must be in good taste. They must be placed on the bulletin boards provided. They must, in addition, be approved by the Students Representative Council.

Use of Grounds and Buildings

The use of University grounds and buildings by students is regulated by administration of the University upon the recommendation of the Dean of Students. Requests must be made through the office of the Secretary to the Dean of Students.

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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 hold office in any student organization, must be in good standing at the time of their election or appointment.

Students' Council
It aims at promoting the best interests of the students by sharing with the Faculty the responsibilities of University government in all non-academic matters and in accordance with the powers conferred by the President.

Movement for Christian Action
Formerly the Sodality of the Blessed Virgin Mary; this organization is for those students who wish to express their Christianity through social action, and who believe that for this action to be effective it should be united with prayer and a life centered around the Eucharist.

S.M.U. Kamp
Operative since December, 1969, this organization operates solely for the benefit of underprivileged children of the metro area. During the months of July and August, a series of "camps" for children between 7 and 11 years of age are held.

Based from the High Rise residence, the extensive list of activities includes everything from swimming and creative art to field trips covering much of Nova Scotia's historical and vacation parks. The purpose is to give those children an exposure to many entertaining and educational activities, otherwise not open to them.

Alpha Sigma Nu
International Jesuit Honour Society. Membership is based on both high academic achievement and contribution to serious discussion on fundamental human questions.

Tau-Gamma-Sigma Society
Is restricted to students in the Faculty of Arts. Besides social and recreational activities the Society undertakes service projects for the welfare of the University and civic communities.

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Sigma-Gamma-Phi Society
Is restricted to Science and Pre-medical students. Its functions are, in general, similar to those of the Tau-Gamma-Sigma Society.

Delta-Lambda-Kappa Society
Is open to students in the Faculty of Commerce. The aim of the Society is to formulate and implement a programme of an educational, social, and recreational nature for the benefit of the members.

The Engineering Society
Is restricted to Engineering students. Its activities correspond, in general, to those of the above societies of Arts, Science, and Commerce.

The Dramatic Society
Presents each year a major dramatic production. It cooperates in the entertainment programmes offered by other student organizations.

The Debating Society
Is open to all students. Its activities include Intercollegiate and Interfaculty Debates, Radio Debates and Forums, etc.

Band
Open to all full-time and part-time students and faculty. Both Marches and Popular music will be played.

Amateur Radio and Electronics Club
Open to all students and faculty.

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 the psychology students. Informal in structure, this club serves both an academic and social function. Membership is open to any full-time student.

Political Science Association
The organization has an elected executive, nonexecutive posts, and committees at large. It is our aim to promote a social consciousness among our members to enable them to utilize their full potential as students and as citizens.

The Chemical Institute of Canada

(CIC) Student Chapter is open to all Chemistry and Chemical Engineering Students. Through affiliation with the National organization, an educational and social programme is provided together with opportunities for closer contact with the faculty.

Saint Mary's University Biological Society

The Society was formed to stimulate student interest in the natural sciences. The aims have been realized by field trips, movies, and visits to local scientific institutions.

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 and is also a subscriber to Liberation News Service.

Chinese Students Association

This Association is opened to all students. The aim of the Association is to promote Chinese Culture and to provide social and recreational activities oriented to the interests of all students.

W.A. Bell Geology Club

A member of the Atlantic Universities Geological Conference, its main purpose is to foster interest in all aspects of Geology. Field trips, guest lectures, and social functions all help to promote an awareness of the geological sciences in relation to the community.

Radio Saint Mary's

Operating from the 5th floor of the Student Centre, Radio Saint Mary's entertains and informs students. This station is staffed totally by Saint Mary's University students and broadcasts 95 hrs. per week. Involvement ranges from news writing, announcing, programming, and engineering.

Yearbook

The Yearbook is the treasury of Students and their lives on Campus for each academic year. The book's main aim is to provide an interesting and a well presented documentation of the students life on Campus. The book is issued once per year and is sponsored by the Students Representative Council. Students' participation and assistance are welcomed.

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"The Saint Mary's Caribbean Student Society"

The Saint Mary's Caribbean Student Society was founded with the recognition of West Indian Students as a unique element in the social structure of this university. There are just thirty students from the "English-speaking" Caribbean. According to its constitution, the society intends to encourage cooperation among Caribbean students in this, and all Canadian Universities; and between ourselves and Canadians, as well as other foreigners. This is done with an eye at helping out our students in anyway possible, keeping in touch with West Indian Affairs, and fostering the cultures of the Caribbean. These aims are pursued with an occasional fete or exhibition; but mainly by trying to be what we are, without getting "bowled behind we back".

Chess Club

The Chess Club in recent years has been suffering from a small membership, however, it is ever increasing and we look forward to having a very active year in 1972 − 73. There will be a continuation of the annual tournament and hopefully involvement with other Universities. So if you are wondering what happens after Pawn and King 4 give us a try.

Black Students Organization

Black Students Organization started in September 1971 at S.M.U. 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 Students. It is also active in developing community programmes that are of relevance to Black Residents of Nova Scotia.

The Department of Manpower and Immigration

Canada Manpower Division − in co-operation with Saint Mary's University, maintains a full-time Student Placement Office on the campus on a year-round basis. The purpose of this office is to assist graduates and undergraduates to obtain permanent, summer or part-time employment, and to assist local and national employers who wish to recruit at Saint Mary's University.

Financial Aid

Scholarships and Bursaries

Financial assistance is available to students at Saint Mary's University from three main sources: scholarships, bursaries, and Canada Student Loans. The scholarships and bursaries are administered directly by either the donor or the Director of Financial Aid at Saint Mary's University (Rooms 405 and 406 Student Center). Loans are administered by the student's provincial government in accordance with the Canada Student Loans Plan.

All financial aid is dependent on a student's satisfactory academic achievement when entering and while studying at the university. The award of scholarships, and in some instances of bursaries, as well as the renewal of such awards, is dependent on excellence in academic achievement.

FUNDS ADMINISTERED BY SAINT MARY'S UNIVERSITY

I. Scholarships

Scholarships are awarded annually to students of outstanding academic achievement when entering or while studying at the university.

Awards of up to $1,000 are offered to students of excellent academic achievement when entering the university. Such students who wish to make application for scholarships must have an average of 80 per cent or over in their high school work. In addition, special awards are made annually to leading students in the graduating classes at Saint Patrick's High School, Halifax, Nova Scotia, Saint Malachy's High School, Saint John, New Brunswick, Gonzaga High School, St. John's, Newfoundland, and Brother Rice High School, St. John's, Newfoundland.

Students who have completed one or more years in a university are also eligible for scholarships even though they were not given an award at entry. All students who have an average of at least B in their university work are eligible to apply for these awards.

Each scholarship is awarded on merit for one year only. However, scholarships will be renewed each year provided academic achievement is maintained. Applications for awards or renewal of awards must be made by June 30th each year to the Director of Financial Aid.

Included in the scholarships administered by Saint Mary's University are the following endowed gifts:

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Brother Stirling Scholarship ($600):
Donated by Mr. John H. Dickey. Open annually to an entering student.

Ashwood Scholarship ($200):
Open annually to all students.

Flinn Scholarships (Two awards of $250):
Open annually to all students.

Mary C. Daley Scholarship ($100):
Awarded in alternate years. Open to all students.

Eleanor M. Florian Scholarship ($300):
Open annually to all students.

Duncan W. Lynch Memorial Scholarship ($400):
Open annually to a Catholic student from Dartmouth.

John Glenister Memorial Scholarship ($150):
Open annually to all students.

Nova Scotia Light and Power Company Scholarship ($300):
Open annually to a Science or Engineering student.

James E. Donohue Memorial Scholarship ($100):
Open to students in Engineering and awarded in alternate years.

Nova Scotia Teachers' College Scholarship ($500):
Open annually to graduates of the Nova Scotia Teachers' College.

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 at Saint Mary's.

Errol Davison Memorial Award ($500)
A scholarship to be held by a student in Commerce in either the third or fourth year. High academic standing 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.

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 are open to competing students from the following universities, and who are residents of the province of Nova Scotia: Acadia, Dalhousie, Mount Allison, Saint Francis Xavier, Saint Mary's. Valued at $850 per year and applicable to electrical, mechanical, civil and industrial disciplines. Applications should be made in writing to the Dean of Engineering of

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applicant's university by February 28 each year. Further information available from the Director of Financial Aid.

II. Bursaries

Students giving satisfaction in academic work, though not of scholarship standing, are given financial aid through bursaries and assistantships. In these cases the criterion for an award is financial need. In addition, a number of positions as course readers and laboratory demonstrators are open annually to Junior and Senior students; remuneration is based on hours of employment. All inquiries concerning bursaries and assistantships should be made to the Director of Financial Aid, (student Center Rooms 426 and 426A).

Included in the bursaries administered by Saint Mary's University are the following endowed gifts:

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 a student in the Commerce Faculty.

Lord Nelson Hotel Ltd. Bursary ($250):
Preference will be given to applicants from the Atlantic Provinces. Open annually to students in either their Freshmen or Sophomore year.

The Institute of Chartered Accountants of Nova Scotia Centennial Bursary:
A bursary to be held by a student in any faculty, under the following conditions: the student must be a resident of Nova Scotia wishing to further his postgraduate education by entering the accounting profession with the intention of becoming a Chartered Accountant in Nova Scotia; the student must be in either of the last two years of his course; ability and financial need are taken into consideration in making the award.

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. The bursaries are available to all full-time students recommended by the university. The numbers and amounts of such awards may vary annually, depending upon the funds available from the Foundation for the purpose.

The IBM – Thomas J. Watson Memorial Bursary

IBM makes available $1000 annually to Saint Mary's University to provided for above-named undergraduate bursaries. The university has full discretion in the manner in which this $1000 is dispensed both as to academic standing and financial need. This award or parts thereof may be held concurrently with other awards provided the university is satisfied that such a need exists.

FUNDS ADMINISTERED BY THE DONOR

I. Scholarships

Scholarships are offered in varying amounts up to full coverage of tuition fees. They include:

School of Education Scholarships:

The province of Nova Scotia, through arrangement with the University, offers a number of scholarships to university graduates taking the degree of Bachelor of Education. Application for these scholarships should be made in writing to the Dean of the School of Education, Saint Mary's University.

The Canadian Mathematical Congress Scholarships:

The Canadian Mathematical Congress offers a number of scholarships for students of Grade XII in the Nova Scotia schools on the basis of a competitive examination usually held early in May of each year. The amount of each award is determined by consideration of financial need based upon applications from the leading candidates. These are tenable at any university in Canada. Further information is available from the guidance departments of the various high schools.

Imperial Oil Ltd. Scholarships:

Imperial Oil Ltd. offers payment of tuition and other compulsory fees to all children or wards of employees and annuitants who proceed to higher education courses. The courses must be taken at any Canadian university or other approved institution of higher learning. Each award is tenable for a maximum of four years. To be eligible a student must attain an average mark of 70 per cent in the appropriate secondary school examinations in the subjects required for admittance to the approved 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.

General Foods Scholarships:
General Foods Limited has established two scholarships in the sums of $2,000 (over a four year period). These awards were first presented in 1965 and 1966, and thus are again being made in 1969 and 1970. For further information contact the Director of Financial Assistance at Saint Mary's University.

Royal Canadian Engineer Memorial Trust Scholarship:
This scholarship is available to applicants throughout Canada to the sons and daughters of parents who have served with the R.C.E. or its equivalent organization. For further information and application forms see the Director of Financial Aid at the Student Centre.

Joe Gannon Memorial Scholarship:
Valued at $500, and awarded to the son, daughter or legal ward of a trade unionist who is a member of a union affiliated to the Nova Scotia Federation of Labour. Applications should be addressed to Selection Committee, c/o Nova Scotia Federation of Labour, 530 Roy Building, 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. Restricted to residents of Halifax County. Further information may be obtained from Municipal School Board, P.O. Box 90, Armdale, Nova Scotia.

Hockey Canada Scholarships (2,000 annually):
Hockey Canada was established in 1969, as a result of the recommendations of the Task Force on Sports. This scholarship programme is intended to encourage young men in two equally important fronts – the pursuit of 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 who have held landed immigrant status for at least one year and who have graduated or are about to graduate from a secondary school with an average of at least 65% 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 the Director of Awards, AUCC, 151 Slater Street, Ottawa 4, Ontario.

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Canadian University Students' Scholarships:
Annual awards by Canadian University Students enable specially selected students to take one year of their course at a university in a different part of Canada.

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 ($100).

Saint Joseph's Parish Scholarships:
Two awards, one of $100 and one of $150.

Saint Mary's Basilica Parish:
The Monsignor Carroll Memorial Scholarship ($300).

Saint Peter's Parish Holy Name Society Scholarships:
These awards vary in number and value.

Saint Rose of Lima Parish Holy Name Society Scholarship ($100).

Saint Stephen's Parish Scholarships:
Four awards of $100.

Saint Stephen's Educational Association Scholarships:
Three awards of $100.

The Home and School Association 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 ($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 inquiries to the council in their area. These awards include:

Knights of Columbus Council 1097 (Halifax) Scholarships:
Seven awards of $150.

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Knight's of Columbus Council 2181 (Yarmouth) Scholarship ($200).

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 young men 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 attendance at university throughout academic year and military training each summer.

HOW TO APPLY. Interested students are requested to contact one of the following:

Commanding Officer	or University Liaison Officer
Canadian Forces Recruiting Centre	Canadian Forces Base Halifax
Sir John Thompson Building	FMO
1256 Barrington Street	Halifax NS
Halifax NS	

for ROUTP — Commanding Officer of your local reserve unit.

II. Bursaries

Assistance for students in financial need is available from various sources, including the following:

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 enroll his son or daughter in a university of his choice in the ensuing year. In the case of a student who wishes to continue his studies on a Birks grant, notification should be given to either

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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. Established to assist dependents of veterans to further their education. Applications 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 veterans whose death was attributable to military service. Inquiries should be directed to the nearest District Office of the Department of Veterans Affairs.

I.O.D.E. Second War Memorial Entrance Bursaries:
One for each Province, $400 a year for four years. Awarded to children of deceased or permanently and 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, 301 Spring Garden Road, 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., 301 Spring Garden Road, Halifax, Nova Scotia.

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 to the University, they will be given a letter with which to support their application to the Department of Veterans' Affairs.

FUNDS ADMINISTERED BY THE PROVINCIAL GOVERNMENT

The University cooperates fully with both the Canada Student Loans Plan and the Nova Scotia Bursary — Canada Students Loans Programme.

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Canada Students Loans Plan .

The Canada Student Loans Plan was introduced by the Federal Government as a broad programme 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. Canada Student Loans, available only on the basis of Certificates of Eligibility issued by the appropriate authority (Issuing Agency) for 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 Eligiblity must be made to provinces participating in the plan, and decisions on individual applications are made by the provincial appropriate 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 so that a guaranteed loan is needed. In no case will a loan for an academic year exceed a maximum of $1,000, or total loans exceed $5,000 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 principal and pay interest, but no payments are required as long as they are full-time students at a specified post-secondary educational institution and 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 re-payment of principal and interest on the outstanding balance at the rate that is in effect for student loans at the time that the student takes his loan out. 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 should apply for a loan under this plan only for the funds needed to enable him to continue his studies and in doing so he should give responsible consideration to the repayment obligations he is assuming; a student who actually borrowed the maximum of $5,000 would, for instance, be obligating himself to pay, after the expiry of his interest-free period, about $58 each month until ten years after he leaves the university.

Any student needing a Loan should apply to the appropriate authority in the province in which he officially resides both for full information

and application form. Enquiry should be directed to one of the following addresses:

Nova Scotia	Canada Student Loans Committee, Department of Education, Box 578, Halifax, Nova Scotia.
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 Ave. & 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 Student Loans Programme

This programme combines loan assistance, available through the Canada Student Loans 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 Student 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 Student Loans Plan is $1,000, in any one year, and the total indebtedness permitted is $5,000. With the addition of free grants and loans from the Province of Nova Scotia, the maximum assistance a student receives in any year may exceed $1,000, depending on the formula in effect in the year of application.

Assistance under the Nova Scotia Bursary — Canada Student Loans Programme 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 intend to attend.) 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.

Education Fund for Black Students

This fund was established in April,1965, for the purpose of assisting promising students to continue their education in high schools, vocational schools, technological institutes, nursing schools, and universities.

Students who register at a recognized university or college are eligible for assistance under the terms of the Fund. Inquiries should be directed to Mr. Harlan Cox, Chairman, Education Fund for Negros, Box 578, Halifax, Nova Scotia. Mr. Cox's office will also advise students of other sources offering assistance in meeting university expenses.

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.

United States Students

All students proceeding to Saint Mary's from the United States of America requiring 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.

Financial Information

The schedule of fees for the 1972-1973 academic year, together with regulations respecting the payment of fees and withdrawal and refunds, is set out in the booklet entitled:

<div align="center">

Saint Mary's University
Financial Information
1972-1973

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This booklet is to be read in conjunction with, and is to be considered a part of, the 1972-1973 Academic Calendar.

Admission Information

Application, Admission Requirements, Admission To Advanced Standing. Registration.

For information on admission to Graduate Studies see page

APPLICATION

All correspondence concerning admissions should be addressed to:
The Director of Admissions, Saint Mary's University, Halifax, Nova Scotia.

Application forms may be obtained by writing to the Director of Admissions. Applications should be forwarded to the Admissions Office not later than August 15th. The application form must be accompanied by the following:

a) Provincial or Accredited School Certificates showing all matriculation credits. Senior Matriculation Certificates should be sent as soon as they are available.

b) The completed Principal's Confidential Report Form must be mailed directly to the Director of Admissions by the Principal or Guidance Officer.

c) Students who have attended any University or College must request that institution to send an official transcript directly to the Director of Admissions, Saint Mary's University. (See Admission of Transfer Students).

d) A $5.00 fee must accompany this application. Your application will not be processed until your fee is received.

e) All overseas students whose mother tongue is not English are required to take the English Language Test admininistered by the University of Michigan. The English Language Test is the responsibility of the student who must apply directly to:

   The English Language Institute
   Testing and Certificates
   The University of Michigan,
   Ann Arbor, Michigan,
   U.S.A.

ADMISSION REQUIREMENTS

For admission to Saint Mary's as an undergraduate, a candidate must have Junior Matriculation, which is Nova Scotia Grade XI or its equivalent. The student must have an overall average of at least 60%,

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with no mark below 50% in these subjects:

English, Mathematics, and any three of Biology, Chemistry, Economics, Geology, Geography, History, Physics, Music, Home Economics, or a language other than English.

Candidates for Science and Engineering should have Chemistry, Physics and Trigonometry. Marks in Science and Mathematics should be above average.

S.A.C.U. scores are normally required for entrance.

MATURE STUDENTS:

Saint Mary's University has approved the establishment of a mature applicant's admission program to provide for the following;

1. a) the admission of acceptable students who may not possess Senior Matriculation requirements and who are 25 years of age or older on or before December of the year in which they first register, or who are not less than 5 years out of school;
   b) who have not been previously registered in any academic post-secondary institution, i.e. Community College, Junior College, or University.
2. Students who qualify under 1. would be permitted to enroll in one full university course.
3. A student who meets a satisfactory standard in such course would then be eligible for admission to a three-year general B.A. program, which he would pursue either on a part-time or a full-time basis. The requirements of the program would be the same as the requirements existing at any given time for the regular three year B.A. program offered by the University.
4. Students applying for admission under this program must have a personal interview with the director of Summer School and Extension Division.

TRANSFER STUDENTS

Application for admission from students wishing to transfer from another University or College will be considered only for the year and session in which they are eligible to register in their former University.

Students who have been away from University studies for a number of years may be considered for admission.

A transfer student completing his first degree must complete at least ten courses at Saint Mary's to be eligible for a Saint Mary's degree.

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ACCEPTABLE CERTIFICATES

Satisfactory marks will be accepted towards the entrance requirements if such marks are granted by any one of these examining bodies:

1) A Nova Scotia Department of Education Grade XI university preparatory program certificate;
2) A Nova Scotia Department of Education Grade XII Provincial Examination in the university preparatory program;
3) A Nova Scotia Grade XII High School Certificate in the university preparatory program;
4) A combination of final High School and Provincial Examinations;
5) A Provincial Certificate from the provinces of New Brunswick, Newfoundland, or from a province that offers Provincial Examinations; or
6) Equivalent certificates issued by Education Departments of other provinces.

EQUIVALENT CERTIFICATES

New Brunswick;

New Brunswick students will be required to present 6 Departmental exams taken over a period of 2 years that is, Grade XI and Grade XII with English, and Mathematics being required subjects and 4 optional subjects from the following: History, French, Chemistry, Physics, Economics, Biology, Latin, Geography, or a second Mathematics.

United States:

High School graduation with 16 points, (4 in English, 2 in History, 2 in Algebra, 1 in Geometry and one each in 7 other academic subjects). The student must provide a High School Transcript and the test results of the C.E.E.B's or SAT.

United Kingdom, West Indies and West Africa:

For admission at the Junior Matriculation level the G.C.E. with passes at the Ordinary Level in 5 subjects. English and Mathematics are required subjects. The grade of marks obtained must average less than four.

Hong Kong:

General Certificate of Education (as above) or University of Hong Kong Matriculation Certificate (on the same basis as the G.C.E.) The grade of marks obtained must average less than four.

ADMISSION TO ADVANCED STANDING

1.   Arts.

A full year's credit (five courses) will be given to a student registering in Arts who presents a Senior Matriculation Certificate, Nova Scotia Grade XII or equivalent, with an overall average of at least 60%, and no mark below 50% in these subjects:

English, and four of the following: Mathematics, Physics, Chemistry, Biology, Geology, History, Geography, Music, a language other than English, one social science.

Effective the academic year 1972-73, one social science will be allowed from Grade XII. This may be Modern World Problems, Political Science, Economics, or a comparable course accepted by the Department of Education.

2.   Science and Commerce

A full year's credit (five courses) will be given to a student registering in Commerce or Science who presents a Senior Matriculation Certificate, Nova Scotia Grade XII or equivalent, with an overall average of at least 60%, and no mark below 50% in these subjects:

i   English
ii   Mathematics
iii   Three from: Biology, Chemistry, Geology, Geography, History, Physics, a langauage other than English, one social science.

This advanced standing makes graduation with a general degree possible in three years.

3.   Engineering

A student registering in Engineering who presents a Senior Matriculation Certificate, Nova Scotia Grade XII or equivalent, with an overall average of 65% and no mark below 50% in the following subjects, will be able to complete the Engineering Diploma requirements in three years, and receive the Bachelor of Science degree:

English, Mathematics, Physics, Chemistry, and one other from the following: Biology, Geology, History, Geography, a social science, a language other than English.

The Diploma in Engineering admits the student without examination into any of the departments of the Nova Scotia Technical College for the final two years of a five-year program leading to the degree of Bachelor of Engineering.

4. New Brunswick Students:

A student who has a 75% average or above will be granted advanced standing, that is one year's credit (5 courses). If a student has enrolled in any enriched programs he must present a 65% average or above in these programmes.

5. Overseas Students:

United Kingdom, West Indies, West Africa and Hong Kong students may be granted advanced standing on the presentation of G.C.E. Certificates in five subjects at the Ordinary Level of which two are English and Mathematics and in addition at least three subjects at the Advanced Level. The grade of marks obtained must average less than four.

6. Transfer Students

Advanced standing for work done at other Universities will be considered on the basis of individual courses. (see page 36).

7. Second Degree

Students who possess one undergraduate degree and who wish to take a further undergraduate degree shall be required to take at least five additional courses to fulfill the degree requirements for the second degree. Requirements for Commerce as a second degree, (see page 40)

8. Partial Credit (Fewer than five courses): All Faculties

Partial credit (fewer than five courses) may be granted on the basis of Senior Matriculation standing under the following conditions:

a) These credits must be obtained before courses at the University are begun;

b) The student must have a mark of 60% in each subject for which he is seeking advanced standing, except that a student in Science wishing to take further courses in Mathematics or Science must have a mark of 75% in that subject in Nova Scotia Provincial Examinations or equivalent.

c) Courses taken at other institutions after first registration at Saint Mary's will not be credited by the University unless the student has obtained prior, written approval of the Registrar.

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Requirements for Bachelor of Commerce as Second Undergraduate Degree:

A person holding an undergraduate degree recognized by the University and wishing to obtain a general Bachelor of Commerce degree shall be required to satisfy the following:

1. A MAJOR concentration in one of the areas of: Accounting, Business Administration, or Economics. Selection of the MAJOR concentration must be made by the student at the time he is admitted to the Faculty of Commerce; and,

2. one of the programs below. Credit may be allowed for the undernoted courses, but such credits shall not reduce the number of courses for the Commerce degree to less than six: Mathematics, Philosophy, and two credits from Business Administration 240.0, Economics 202.0, Business Administration 280.0, Commercial Law, a second course in the MAJOR concentration.

ACCOUNTING

First Year

Mathematics 113.0 — Mathematics for Commerce Students
Economics 202.0 — Principles of Economics
Business Administration 203.1* or 203.2* — Introductory Quantitative Methods for Commerce
Business Administration 204.1* or 204.2* — Introductory Statistics for Commerce
Business Administration 240.0 — Principles of Financial and Managerial Accounting
Business Administration 280.0 — Principles of Management

Second Year

Commercial Law 300.0
Philosophy 201.0/209.0
Business Administration 341.1* — Intermediate Financial Accounting — Part I
Business Administration 342.2* — Intermediate Financial Accounting — Part II
Business Administration 346.1* — Introductory Cost Accounting
Business Administration 348.2* — Planning and Control
Equivalent of one full course from: Business Administration 321*, 323*, 324*, 443*, 444*, 450.0, 453*, 455*.

*(Half-Course)

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BUSINESS ADMINISTRATION

First Year

Mathematics 113.0 — Mathematics for Commerce Students
Economics 202.0 — Principles of Economics
Business Administration 203.1* or 203.2* — Introductory Quantitative Methods for Commerce
Business Administration 204.1* or 204.2* — Introductory Statistics for Commerce
Business Administration 240.0 — Principles of Financial and Managerial Accounting
Business Administration 280.0 — Principles of Management

Second Year

Legal Aspects of Business, Part 1, 301.1*
Philosophy 201.0/209.0
Business Administration 317.1* or 317.2* — Introduction to Production
Business Administration 321.1* or 321.2* — Introduction to Computers
Business Administration 360.1* — Business Finance — Part I
Business Administration 361.2* — Business Finance — Part II
Business Administration 370.1* or 370.2* — Introduction to Marketing
Business Administration 382.0 — Organizational Behavior
Business Administration 489.2* — Business Policy

ECONOMICS

First Year

Mathematics 113.0 — Mathematics for Commerce Students
Business Administration 240.0 — Principles of Financial and Managerial Accounting
Business Administration 280.0 — Principles of Management
Economics 202.0 — Principles of Economics
Economics 203.1* — Introductory Mathematics for Economists
Economics 204.2* — Introductory Statistics for Economists

Second Year

Economics 300.1* — Intermediate Microeconomic Theory
Economics 301.2* — Intermediate Macroeconomic Theory
Legal Aspects of Business, Part 1, 301.1*
Philosophy 201.0/209.0
Equivalent of two and a half full Economics courses at the 300 level or above.

*Half-Course)

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Registration

Registration will take place on the dates and times set forth in the Academic Calendar. Students should follow exactly the directions for Registration Procedure supplied by the Office of the Registrar. No credit will be allowed for a course for which the student is not regularly registered.

Should registration prove insufficient, the University reserves the right to cancel any listed course.

It is part of registration to meet initial obligations with the Office of the Bursar.

At the time of registration, all students not registered at Saint Mary's during the past academic year are required to present a certificate of medical fitness. Students participating in major sports may also be asked to produce a similar certificate.

Late Registration

Students registering on any other date than that designated in the Academic Calendar are required to pay a late registration fee.

Changes in Registration

Changes in registration are permitted only with departmental approval and only within the period indicated in the Academic Calendar.

No change of registration is permitted after the first week of instruction. This applies to full courses and half courses that begin in September and to half courses that begin in January.

Dropping of Courses

Students who drop a course without authorization of the Dean of Faculty will be given a grade of WF (withdrawal failure) on the university records. (see page 44 "Failures").

WITHDRAWAL

When a student withdraws from the University he must at once notify the Registrar, in which event this notification will be taken as the official date of withdrawal from the University.

Academic Information

Examinations and Grades Evening Division Adult Study
Series The Atlantic Summer School For Advanced Business
Administration

Examination and Grades

The University's policy in respect of the evaluation of a student's
performance is designed to provide flexibility in the methods employed
in evaluation, and as far as possible to provide for continuing evaluation
of a student's progress throughout all stages of a course.

Accordingly, the method of evaluation in any course is determined by
the member of faculty responsible for that course, subject to the
approval of the appropriate department and faculty dean.

All professors must make known in writing to their students no later
than one week after the beginning of any course the precise procedures
for determining and measuring a student's progress in that course,
including a statement of the number and form of examinations and
assignments, and other criteria of evaluation.

The following letter-grade system is employed to evaluate progress in a
course:

	Quality Points
A – excellent, superior	4 points
B – very good, above average	3 points
C – good, average	2 points
D – fair, below average but passing	1 point
P – passed by supplemental examination	1 point
F – unsatisfactory progress, credit not given	0 points
FS – (failed supplemental examination)	0 points
Aegrotat	Aegrotat standing, credit given
W – permitted withdrawal	
WF – course withdrawal with evaluation of unsatisfactory progress.	

Attendance at all lectures, seminars, and laboratory periods of any
course in which a student is registered is mandatory. A student whose
attendance has been reported as unsatisfactory by the professor may be
debarred from tests and examinations, or required to withdraw from a
course or degree programme by the appropriate Faculty Dean.

A candidate for a degree must be of good moral character and must
have given general satisfaction throughout his course.

Supplemental and Special Examinations

1. A student is eligible to take a supplemental examination covering the same course materials as that contained in any given course on the written recommendation of the professor responsible for the course.

2. Such a recommendation must be submitted to the Registrar's office in conjunction with the final grade established at the end of a course; and supplemental examinations are taken at the time prescribed in the university calendar.

3. To be eligible to write any supplemental examination for which he is recommended, a student must have no more than two final course grades of unsatisfactory (F) during the academic year for which the supplemental examination is to be taken.

4. Supplemental examinations are graded either P (satisfactory) or F (unsatisfactory).

5. Only one supplemental examination is permissible in any course.

6. No more than three full courses passed by supplemental examinations will be credited towards any degree or diploma.

7. Applications for supplemental or entrance examinations must be made to the Registrar's office no later than the date set down in the Academic Calendar.

Special examinations are written outside the time assigned for regular and supplemental examinations, and are granted rarely and only for extraordinary reasons by the Committee on Academic Standing.

COURSES TAKEN AT OTHER INSTITUTIONS

Courses taken at other institutions after first registration at Saint Mary's will not be credited by the University unless the student has obtained prior, written approval of the Registrar.

Failures:

A student who defaults any final process of evaluation – examination, assignment, etc. – is considered to have failed the course and receives a WF (withdrawal failure) notation on his record for that course. To receive credit in such course the student must repeat the course.

A student who obtains an evaluation in any course deemed by the professor offering the course to be so unsatisfactory as to preclude any

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reasonable prospect of achieving success in the course can with the approval of the departmental chairman and faculty dean be asked to withdraw from the course, and will receive a grade of WF.

No course may be taken more than twice.

A student who withdraws voluntarily from any course at a point in the course where his formal evaluation is unsatisfactory (F) will receive a notation of WF on his record for that course. (See page 38 dropping of courses).

A student receiving a final evaluation of unsatisfactory (F) in a course which involves both lectures and laboratory work must repeat both parts of the course or an equivalent approved by the department concerned to receive a credit in the course.

A full-time student who, in his first year, fails to pass at least two courses, must withdraw from the University for one year. Such a student may be re-admitted on academic probation following this one-year suspension.

A student who fails in more than 40% of the year's work fails the year.

Any student who fails in two years of his work is automatically subject to dismissal.

Default of any formal process of evaluation in a course for medical reasons must be certified medically in written form with the Registrar's Office within one week of the default.

Aegrotat Standing

Aegrotat standing provides for a student receiving credit in a course in circumstances where the student has been unable, for medical reasons or compassionate grounds, to complete a final formal process of evaluation. A professor may award aegrotat standing after satisfactory evidence has been supplied to cover the absence. Such evidence must be submitted to the Registrar's office no later than one week after the absence.

Academic Probation

Any student who receives an evaluation of unsatisfacoty (F) in more than two courses at either mid-year or year-end is placed on academic probation.

Any student whose academic record or progress is judged to be unsatisfactory because of poor attendance, assignments, or other reasons may be placed on academic probation. If the record continues

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to be unsatisfactory, the student may be dismissed from the University by the Dean of Faculty. A person who is on academic probation is subject to dismissal at any time at the discretion of the Dean of Faculty.

Appeals

Appeals pertaining to decisions taken on academic regulations may be instituted by writing to the Dean of the faculty concerned, with copies going to the Chairman and professor concerned. The decision will be given later by the Dean after consultation with the faculty member involved. A student shall have the right to request the Senate to consider the decision by making formal application to the Committee on Academic Standing.

SPECIAL PROGRAMMES

SUMMER SCHOOL AND EXTENSION DIVISION

Credit courses in Arts, Science and Commerce, are offered at the University in Evening and Summer Sessions. Students enrolling in these courses must have fulfilled the usual requirements for University entrance (see Admission requirements for undergraduate and graduate students). Students must follow, as closely as possible, the normal sequence of courses as required for students in the Day Division. They must maintain the same standards in their studies, as students in the Day Division. Their programmes are subject to approval by the Department of the student's major concentration.

Evening Division courses begin in September, at the time the Day Division commences classes, and end with the April examinations. Two Summer Sessions of six weeks each are held, the First Session beginning in mid-May and the Second Session early in July. Brochures describing the courses offered in the Evening Division and Summer Sessions are available from the Director's Office, the former by August 1st and the latter by January 31st.

Students registered for degrees at Saint Mary's may take two courses each year in the Evening Division and one course per Summer Session. Students wishing to take courses at Saint Mary's for credit at another university must submit written permission from the appropriate authority at his or her university along with the application for a course or courses.

Students who expect to commence part-time studies in September or during the Summer Sessions should in the former case contact the

Director not later than August 15th and in the latter case not later than
April 1st. All inquiries should be addressed to the Director, Evening
Division and Summer Sessions, Saint Mary's University, Halifax, Nova
Scotia.

MATURE STUDENTS (see page 36)

Adult Studies Series

In 1951, Saint Mary's University Adult Studies were instituted as a
cultural service to the Halifax community. Lectures, academic in
subject and treatment, are offered regularly to the general public on a
variety of topics. Their purpose is to extend familiarity with humanistic
learning, awaken critical attitudes, and stimulate a deeper sense of
values consistent with our western heritage.

Usually lectures are given in series, ten lectures devoted in one semester
to a particular topic.

Inquiries for information should be addressed to The Director, Adult
Studies.

Faculties and Courses

Arts Science Commerce Engineering Courses Honours Pre-Professional Courses Education

Course Numbering System

The course numbering system appearing in the calendar will be in effect commencing September 1971. (see page 74 for comparison of old and new numbers).

It is as follows:

1. A number of **four** (4) digits is used to designate each course. (A letter following the course number indicates a section of the same course, but this letter will be used at registration time and will **not** appear in the Calendar.)

2. The **first** digit indicates the **year** in which the course is normally taken:

    > 100 - 199 Freshman
    > 200 - 299 Sophomore
    > 300 - 399 Junior
    > 400 - 499 Senior
    > 500 - 599 Fifth year
    > 600 - 699 Graduate (sixth) year

3. The **second** and **third** digits indicate the departmental course number.

4. The **fourth** digit, which will follow a decimal point after the first three numbers, indicates a course of either one or two semesters:

    > .0 a full course of two semesters (e.g., English 101.0)
    > .1 a half course offered in the first semester (e.g. Business Administration 203.1)
    > .2 a half course offered in the second semester (e.g. Engineering 112.2)

N.B.: Where a first semester course is repeated in the second semester, both numbers are listed after the course title. Thus, for example: **GRAPHIC STATICS 203.1 or (203.2).**

ARTS

Degree of Bachelor of Arts — The General Program

1. Subject to the regulations set forth in this calendar, the student must complete the equivalent of 20 full courses following junior matriculation, or 15 full courses following senior matriculation.

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2. During the regular academic year, the student will normally take five full courses. The department of the student's major concentration will normally govern his registration beyond the Freshman Year.

3. **A.** Major concentrations for the Arts degree may be taken in Anthropology, Classics, Economics, English, French, German, History, Latin, Mathematics, Philosophy, Political Science, Psychology, Sociology, Spanish, Religious studies,

   B. Interdisciplinary Concentration — Asian Studies

4. Each candidate for the B.A. must receive credit for:
   (a) one university course in English
   (b) one course in History (Senior matriculation credit will suffice)
   (c) one course in Philosophy
   (d) one course in a Social Science (Economics, Political Science, Psychology, Sociology)

5. A student who chooses a major concentration must complete no fewer than five courses in one subject. Courses numbered below 200 will not count. His program will be supervised and approved by his department.

6. A student who does not choose a major concentration must have his program supervised and approved by a member of Faculty. A copy of such a program must be filed in the office of the Dean at the beginning of each academic year and will be subject to his approval. At least 50% of a non-major student's elective work must be done at the 300 level or above.

7. West European Programme: This programme will enable students to become thoroughly acquainted with West European affairs while working in their various disciplines.

Additional Information:

See page 40 for requirements for Bachelor of Commerce — as **second** undergraduate degree.

SCIENCE

The requirements for the general degree of Bachelor of Science applicable to students who registered in September, 1966, or later, are as follows:

1. Subject to the regulations set forth in this calendar, the student

must complete a total of 20 full courses following junior matriculation, or 15 full courses following senior matriculation.

2. During the regular academic year, the student will normally take five full courses. The department of concentration will normally govern registration for the Sophomore and subsequent years.

3. Concentrations for the science degree may be taken in Biology, Chemistry, Geology, Mathematics, Physics, Psychology.

4. The Freshman Year:

. The student must complete five courses from those numbered 100-199 as follows:

 (a)   Three required courses: one English, one Mathematics, and one History, or Economic History.

 (b)   Two elective courses to be chosen from the courses open to Freshman in the following subjects: Biology, Chemistry, French, Geology, German, Latin, Physics, Spanish, Religious Studies.

5. The Sophomore Year

 (a)   The student must choose his subject of concentration and seek registration advice from the department of that subject.

 (b)   The student must complete:

 (i)   one course in Philosophy
 (ii)   one course each (at the 200 level and above) in two of the following: Biology, Chemistry, Geology, Mathematics, Physics, Psychology.
 (iii) one course in Mathematics other than in (ii).
 (iv)   one elective from the Humanities, preferably English.

6. The Junior and Senior Years:

 To satisfy requirement no. 1, the student must complete:

 (a)   five or six courses beyond the sophomore level in two subjects from the following: Biology, Chemistry, Geology, Mathematics, Physics, Psychology or Engineering in the case of students following Schedule B under Engineering, see page 59. Students who wish to offer a subject begun only in the junior year may, by exception, offer the introductory course in that subject as one of the four courses required in (b).

(b) Four or three courses in the Humanities or Social Sciences, contingent on choice in 6 (a). At least one of these courses must be a second course in the subject and beyond the sophomore level.

(c) one course from the Social Sciences (Economics, Political Science, Psychology, Sociology, Anthropology).

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 a further year of study.

The program of this additional (fourth) year will include: a course in Mathematics, an elective from the Humanities,* and any three from Physics, Chemistry, or Mathematics, or three courses in Geology.

All programs must have the approval of the Dean of Science.
*This must be a course in Philosophy unless the student has already a credit in Philosophy.

BACHELOR OF SCIENCE WITH MAJOR

The requirements for the degree of Bachelor of Science with Major applicable to students who registered in September, 1970, or later, are as follows:

1. Subject to the regulations set forth in this calendar, the student must complete a total of 20 full courses following junior matriculation, or 15 full courses following senior matriculation.

2. During the regular academic year, the student will normally take five full courses. The department of concentration will normally govern registration for the Sophomore and subsequent years.

3. A major for the science degree may be taken in Biology, Chemistry, Geology, Mathematics, Physics, Psychology.

4. A student in the Major Program must obtain a grade of not less than "C" in every course in the major subject as described in item 7 (a). A student receiving a mark of less than "C" in any course in the area of his major will be permitted to continue in the major area only with the approval of the Dean of Science.

5. The Freshman Year:

The student must complete five courses from those numbered 100-199 as follows:

  (a) Three required courses: one English, one Mathematics, and one History, or Economic History.

  (b) Two elective courses to be chosen from the courses open to Freshmen in the following subjects: Biology, Chemistry, French, Geology, German, Latin, Physics, Spanish, Religious Studies.

6. The Sophomore Year

(a) The student must choose his major subject and seek registration advice from the department of that subject.

(b) The student must complete:

  (i) one course in English
  (ii) one course each, normally at the 200 level and above, in two of the following: Biology, Chemistry, Geology, Mathematics, Physics, Psychology.
  (iii) one course in Mathematics other than in (ii)
  *(iv) one elective from the Humanities or a Science course.

7. The Junior and Senior Years:

To satisfy requirement no. 1, the student must complete:

  (a) five or six courses beyond the sophomore level in the major subject from the following: Biology, Chemistry, Geology, Mathematics, Physics, Psychology.

  (b) one course beyond the sophomore level in related science other than the major subject.

  (c) two or one courses in subjects other than the major subject and from the following: Biology, Chemistry, Geology, Physics, Psychology contingent on choice in 7(a).

  (d) one course in Philosophy.

  *(e) one elective from the Humanities or a science course.

*Either 6b (iv) or 7(e) must be an elective from the Humanities excluding Mathematics.

COMMERCE

General Information

The program of study leading to the degree of Bachelor of Commerce is offered to students who desire the advantage of higher education and wish, at the same time, to prepare themselves for graduate study, a place in the business community, the public service, and professional life. The purpose of the program is to provide a broad background in the humanities and social sciences together with a development of the conceptual foundations of accounting, business administration and economics.

The Faculty offers two programs of study — Bachelor of Commerce (General) and Bachelor of Commerce (Honours). The Major concentrations in the General Degree Program are in Accounting, Business Administration and Economics. The programs available in the Honours degree are in Business Administration and Economics.

The requirements for the General Degree are described below and the requirements for the Honours Degree appear on pages 61, 62.

Degree of Bachelor of Commerce — The General Program
Requirements:

1. Subject to the regulations set forth in this calendar, the student must complete a total of the equivalent of 20 full courses following junior matriculation, or the equivalent of 15 full courses following senior matriculation;

2. During the regular academic year, the student will normally take the equivalent of 5 full courses. The five courses to be taken will be decided upon by the student in consultation with a member of the Commerce Faculty. The five courses to be taken in the junior and senior years will be decided upon by the student in consultation with the department of his major. A major must be selected not later than the end of the sophomore year;

3. Completion of a major concentration in Accounting, or Business Administration or Economics;

4. **The Freshman Year**

    The student must complete 5 courses as follows:

    (a) two required courses: English 110.0 or 130.0 or 201.0. and Mathematics 113.0

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(b)   three elective courses to be chosen from the following: Anthropology 100 level, Biology 103.0, Classics 100 level, Economics 100 level, French 100 level, German 100 level, History 100 level, Latin 102.0, Physics 111.0, Political Science 201.0, Psychology 201.0, Spanish 101.0, and a course in Religious Studies;

5.   The Sophomore, Junior and Senior Years:

(a)   the student will take 15 courses at the 200 level and above

(b)   the student must complete the following courses:

(1) English 130.0 or 201.0 or 300.0/310.0
(2) Philosophy 201.0/209.0
(3) Business Administration 240.0
(4) Business Administration 280.0
(5) Commercial Law 300.0 or Legal Aspects of Business, Part I, 301.1*
(6) Economics 202.0

(c)   the student must complete a major concentration in one of the following subjects as listed:

(i)   **Accounting** – Business Administration 203.1* or 203.2*, 204.1* or 204.2*, 240.0, 341.1*, 342.2*, 346.1* or 346.2*, 348.1* or 348.2*, and the equivalent of one full course to be chosen from: 321*, 323*, 324*, 443*, 444*, 450.0, 453*, 455*

(ii)   **Business Administration** – Business Administration 203.1* or 203.2*, 204.1* or 204.2*, 280.0, 317.1* or 317.2*, 321.1* or 321.2*, 360.1*, 361.2*, 370.1* or 370.2*, 382.0, 489.2*

(iii)   **Economics** – five full-year course equivalents to include: Economics 202.0, 203.1*, 204.2*, 300.1* or 300.2*, 301.1* or 301.2*, and the equivalent of two full Economics courses at the 300 level or above

(d)   in addition to the courses listed under (b) and (c) above, the student must complete the equivalent of two full approved courses to be chosen from the subject areas of the languages, humanities, social sciences (including Economics), natural sciences, and business administration

(e)   the remaining courses required under section (a) will be chosen by the student in consultation with his department.

*(Half Course)

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The following programs show the courses and course sequence for each major concentration in the general degree:

Accounting

First Year

English 110.0 or 130.0 or 201.0	Critical Reading and Writing
Mathematics 113.0	Mathematics for Commerce Students
Elective)	
Elective)	See Requirement 4 (b)
Elective)	The General Program

Second Year

Business Administration 203.1* or 203.2*	Introductory Quantitative Methods for Commerce
Business Administration 204.1* or 204.2*	Introductory Statistics for Commerce
Business Administration 240.0	Principles of Financial and Managerial Accounting
Business Administration 280.0	Principles of Management
Economics 202.0	Principles of Economics
English 130.0 or 201.0 or 300.0/310.0	

Third Year

Business Administration 341.1*	Intermediate Financial Accounting – Part I
Business Administration 342.2*	Intermediate Financial Accounting – Part II
Business Administration 346.1* or 346.2*	Introductory Cost Accounting
Business Administration 348.1* or 348.2*	Planning and Control
Commercial Law 300.0	Commercial Law
Philosophy 201.0/209.0	Introduction to Philosophy
Elective	(Business 321* and 323* or Business 321* and 324* recommended)

Fourth Year

Elective	
Elective	
Elective	
Elective	(Business 443.1* or 443.2*, Business 444.1* or 444.2*, Business 450.0 recommended)
Elective	

*(Half-Course)

Business Administration

First Year

English 110.0 or 130.0 or 201.0
Mathematics 113.0   Mathematics for Commerce Students
Elective)
Elective)   See Requirement 4 (b) The General
Elective)   Program

Second Year

Business Administration   Introductory Quantitative Methods for
203.1* or 203.2*   Commerce
Business Administration 204.1* Introductory Statistics for Commerce
or 204.2*
Businesss Administration 240.0 Principles of Financial and Managerial
                                      Accounting
Business Administration 280.0   Principles of Management
Economics 202.0   Principles of Economics
English 130.0 or 201.0 or
300.0/ 310.0

Third Year

Business Administration   Introduction to Marketing
370.1* or 370.2*
Business Administration 360.1* Business Finance – Part I
Business Administration 361.2* Business Finance – Part II
Business Administration   Introduction to Production
317.1* or 317.2*
Business Administration   Introduction to Computers
321.1* or 321.2*
Business Administration 382.0   Organizational Behavior
Legal Aspects of Business,   Commercial Law
Part I, 301.1*
Philosophy 201.0/209.0   Introduction to Philosophy

Fourth Year

Business Administration 489.2* Business Policy
Elective*
Elective
Elective
Elective
Elective

*(Half-Course)

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Economics

First Year

English 110.0 or 130.0 or 201.0
Mathematics 113.0   Mathematics for Commerce Students
(Elective)
(Elective)   See requirement 4(b)
(Elective)   The General Program

Second Year

Business Administration 240.0   Principles of Financial and Managerial
                                Accounting
Business Administration 280.0   Principles of Management
Economics 202.0   Principles of Economics
Economics 203.1*   Introductory Quantitative Methods for
                                Economists
Economics 204.2*   Introductory Statistics for Commerce
English 130.0 or 201.0 or
300.0/310.0

Third Year

Legal Aspects of Business,   Commercial Law
Part I, 301.1*
Economics 300.1*   Intermediate Microeconomic Theory
Economics 301.2*   Intermediate Macroeconomic Theory
Economics Elective+
Philosophy 201.0/209.0   Introduction to Philosophy
Elective

Fourth Year

Economics Elective+
Elective
Elective
Elective
Elective

+If the student intends to pursue graduate studies he is advised to take
both Economics 302.0 and 303.0

*(Half-Course)

ENGINEERING

For the Diploma in Engineering, the syllabus of studies is that prescribed by Nova Scotia Technical College for the first three years of its five-year course. The first three years are given only at the associated universities, of which Saint Mary's is one, together with Acadia University, Dalhousie University, Memorial University, Mount Allison University, Saint Francis Xavier University, and the University of Prince Edward Island.

With a Diploma in Engineering a student may enter without examination any of the departments at the Nova Scotia Technical College and obtain the degree of Bachelor of Engineering (Civil, Electrical, Mechanical, Chemical, Metallurgical, Mining, Industrial, or Geological) on the successful completion of the last two years of a five-year course.

DIPLOMA IN ENGINEERING

Students entering with Senior Matriculation or equivalent, as defined below, will be required to follow the curriculum given below and designated as Schedule "A". On successful completion of this program the student will receive the Diploma in Engineering and a degree in Science.

Students entering with Junior Matriculation or equivalent, as defined in this calendar, will follow the curriculum given below and designated as Schedule "B". On successful completion of this program the students will be awarded the Diploma in Engineering.

SENIOR MATRICULATION REQUIREMENTS

The following entrance qualifications are necessary for those who, if they wish, plan to follow the program outlined in Schedule "A". A pass standing of 50% in each course is required with a general average of 65%.

i   English
ii   Mathematics
iii Physics
iv Chemistry
v   One from History, Geology, Geography, Ancient and Modern Languages.

Schedule "A"	Schedule "B"

First Year

Engineering 106.1
Engineering 107.2
Engineering 108.1 or 113.1
Engineering 212.2
Mathematics 210.1
Mathematics 211.2
Physics 221.0
Chemistry 201.0
English 201.0

First Year

Engineering 106.1
Engineering 107.2
Engineering 108.1 or 113.1
Mathematics 116.2
Mathematics 110.1
Mathematics 111.2
Physics 111.0
Chemistry 101.0
English 130.0 or 201.0

Second Year

Engineering 203.1 (203.2)
Engineering 204.1 (204.2)
Mathematics 311.0
Chemistry Elective
Modern Physics 320.1
Physics 322.2
Geology 111.0 or Elective
Elective

Second Year

Engineering 203.1 (203.2)
Engineering (204.1 (204.2)
Mathematics 210.1
Mathematics 211.2
Chemistry 201.0
Physics 221.0
Geology 111.0 or Elective
Elective (one semester)
Engineering 212.2

Third Year

Engineering 302.0
Engineering 314.1
Engineering 304.2
Engineering 303.1
Engineering 306.2
Engineering 308.0
Mathematics 300.0
Elective

Third Year

Engineering 302.0
Engineering 314.1
Engineering 304.2
Engineering 303.1
Engineering 306.2
Engineering 308.0
Mathematics 311.0
Elective

Note:

1. Students who plan to enter Civil, Mining, Metallurgical or Geological Engineering at the Nova Scotia Technical College must substitute Geology 111.0 for the second year elective.

2. Engineering 113.1 (Surveying) is required only of students proceeding to the Nova Scotia Technical College in Civil, Mining, or Geological Engineering.

3. The selection of courses from the Humanities, where not specifically designated, is subject to the approval of the registration advisor.

4. 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. This will be at the discretion of the Dean of Engineering.

BACHELOR OF SCIENCE IN ENGINEERING MANAGEMENT

The purpose of this Degree is to provide students with sufficient Engineering background and managerial skills to enable them to be employed in positions in management now held in many instances by people whose background has been purely Engineering.

The scope of the program is to give students a balanced program of courses from Engineering, Business Administration, Physical Sciences and the Humanities. The program is designed principally for admission from Grade XII, but provision is also made to enable a student to enter from Grade XI and complete the program in the normal time.

The first year of the program is such that a student on the completion of that year will be able to transfer to Commerce or to any Faculty with minimum dislocation and loss of credits.

The program conforms closely with the requirements for the Diploma in Engineering and is structured to permit the student to complete the requirements for the Diploma in Engineering by replacing the election in the fourth year with Engineering 303.1 (Fluid Mechanics) and Engineering 314.2 (Materials Science).

Year One

Math 210.0/211.2
Chemistry 101.0
Engr. 106.1, 107.2
Soc. Sci-Humanity
English

Year Two

Mathematics 311.0
Physics 221.0
Engr. 108.1 or 113.1
Engr. 212.2
Bus. Adm. 240.0
Bus. Adm. 280.0

Year Three

Mathematics 314.0
Engr. 203.1 (203.2)
Engr. 204.1 (204.2)
Engr. 302.0
Economics 202.0
Bus. Adm. 370.1/2
Bus. Adm. 317.1/2

Year Four

Elective
Engr. 308.0
Engr. 314.1, 306.2
Bus. Adm. 489.2
Bus. Adm. 360.1/2
Bus. Adm. 385.1/2

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Students entering from Grade XI would take Math 110 in the first year followed by Physics 111.0 and Math 210.1/211.2 during the following summer, at the end of which they would have the same status as students who entered from Grade XII. The last three years of both streams would be identical.

ENGINEERING AND SCIENCE

Students who have obtained the Diploma of Engineering under Schedule "B" may proceed to the degree of Bachelor of Science if they fulfill the requirements noted under Engineering and Science Course.

HONOURS DEGREES

The general requirements for Honours Degrees are as follows:

1. Students of above-average ability are urged to make application to follow an Honours program before the end of their Sophomore year. Formal application for admission to an Honours program must be made on a form available in the Registrar's office. The form must be submitted by the student applicant to the Chairman of the Department concerned, and must receive the approval of the appropriate Dean of Faculty.

2. All Honours programs must consist of twenty full courses or equivalents beyond the Freshman year, and must satisfy the requirements for the General Bachelor's degree. A student must have the approval of the Committee on Academic Standing to transfer from an Honour's program to the General program.

ARTS AND SCIENCE

Honours Programmes

Arts: English, History, Mathematics, Philosophy,
Science: Chemistry, Physics

1. A student must obtain a grade of not less than B in every Honours course as described in item 2(a) or 3(a) below. A student receiving a mark of less than B in any Honours course in item 2(a) or 3(a) will be permitted to continue in an Honours program only with the approval of the Committee on Academic Standing.

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2. In an Honours program with a major, the fifteen full courses or equivalents taken beyond the sophomore level must include:
   (a) nine full courses or equivalents beyond the sophomore level in a major subject;
   (b) two full supporting courses or equivalents to be determined by the department of the major;
   (c) four full courses or equivalents in the Humanities or Social Sciences.

3. In an Honours program with a combined major, the fifteen full courses or equivalents taken beyond the sophomore level must include:
   (a) eleven full courses or equivalents beyond the sophomore level in two allied subjects. Not more than seven full courses or equivalents being in either of them.
   (b) four full courses or equivalents in the Humanities or Social Sciences.

COMMERCE

The Faculty of Commerce offers Honours Programs in Business Administration and Economics. Students who wish to enter one of these programs must make application for admission on a form available in the Registrar's office. Applicants must meet the admission requirements of the particular program (Business Administration or Economics) and all applications must receive the approval of the department concerned and the Dean of Commerce.

The student is required to complete twenty (20) full courses, or equivalent, beyond the freshman year, and meet the requirements of the particular program.

A student must have the approval of the Committee on Academic Standing to transfer from an honours program to a general program.

Honours Program in Business Administration:

1. Admission requirements:
an overall cumulative average of 2.6 at the end of the junior year. Students are advised to apply before the junior year so that academic counselling may be given; conditional admission may be granted at this time.

2. Requirements for Honours Degree:
   a) completion of 20 full courses (or equivalent) beyond the freshman year
   b) the student must meet the requirements for a concentration in business administration in the general program
   c) maintenance of a 2.6 overall average
   d) i) at least ten full courses (or equivalent) in the Business Administration Department
       ii) a student may substitute a course from another department (to be included in the ten courses) with the permission of the Department of Business Administration

   e) completion of the following courses:
       i) Statistical Analysis for Business (Bus 307.1 or .2)
       ii) Intermediate Microeconomic Theory (Eco 300.1 or .2)
       iii) Intermediate Macroeconomic Theory (Eco 301.1 or .2)
       iv) Business Research (Bus 591.1 or .2)
   f) i) a student must complete "functional specialization" in two of the following areas: Accounting, Economics, Finance, Management, Management Science, Marketing
       ii) functional specialization in an area means two and one-half courses (or equivalent) at the 300 or 400 level in that area
       iii) courses from other departments can be included (in the two and one-half courses) with the permission of the Department of Business Administration
       iv) a listing of courses which satisfy a functional specialization in each of the six areas will be prepared annually by the Department of Business Administration.

Honours Program in Economics:

1. Admission requirements:
   a) a 2.6 average in Economics
   b) Junior year or higher standing

2. Requirements for Honours Degree:
   a) ten full-year courses or equivalents in Economics
   b) no grade below C (2.0) in these ten courses (a student may

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receive a grade lower than C but it cannot be counted in the ten required courses)

c) a minimum average of 2.6 in the ten Economics courses presented for Honours

d) the student must meet the requirements for a major in Economics

e) eight of the ten courses must be on or above the 300.0 level
   i) a student may substitute a course from another department which is below or above the 300.0 level with the permission of the Department of Economics
   ii) these substitutes will normally be in the Mathematics Department

f) the eight courses on or above the 300.0 level (or equivalent thereof) must contain at least one of the following:
   i) Mathematical Economics (Economics 302.0)
   ii) Economic Statistics (Economics 303.0)
   iii) Advanced Microeconomics (Economics 440.1)
        Advanced Macroeconomics (Economics 441.2)

g) the student will be expected to complete university requirements for graduation

h) twenty full courses, or equivalents, beyond the freshman year are required.

EDUCATION

Bachelor of Education Program

This program of studies, which is designed to form a professional preparation for university graduates intending to enter the teaching profession, is a full-time one of six courses lasting one academic year (September to May), dealing 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 in students the development of those ideas which will allow them to 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 these aims, students are required, in addition to class attendance, to undertake a considerable amount of reading and writing with the object of developing their own personal understanding and philosophy of education.

The six courses in the program are:

Philosophy of Education; Psychology of Education; History of Education; General Methods of Teaching; Special Methods of Teaching; Practice Teaching. In the case of Special Methods, students attend those two half classes dealing with the subjects they wish to teach in school. All students, unless previously trained as teachers and having a permanent licence, take the teaching practice.

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: teaching competence and the development of a personal understanding and philosophy of education. 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 licence. Students are entirely responsible for any negotiations with the Department of Education respecting their licence status.

Candidates should note that the pass mark for the entire program is C average, while for individual subjects the pass mark is D. No supplemental examinations are provided. Failure in one subject constitutes failure of the program.

Admission Requirements

Candidates must hold a Bachelor's Degree of Saint Mary's University or of 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 of the program, to be selected in consultation with the Dean of Education or his representative. The School 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 Degree,

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may obtain the Degree of Bachelor of Education by undertaking a program of study as may be approved by Senate regulation.

Financial Aid

Bachelor of Education students are eligible for loans and bursaries under the Canada student loan plan. See page (23).

To Apply for Admission

1. Complete the form of application and make sure that all the 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 Admission does **not** undertake to send for transcripts or references.

3. Applications should be made as soon as possible, but in any case applications received after August 15th may not be processed in time for registration in September.

4. The admission of any candidates to the program is probationary and the status of all candidates is reviewed in December each year.

PRE-PROFESSIONAL COURSES

Students who plan to enter the professions of theology, law, medicine, dentistry, etc., should see that their plan of studies includes courses prerequisite to entrance into the professional school of their choice. Calendars of professional schools may be consulted in the Office of the Registrar. If Saint Mary's University's program does not meet the entrance requirements to the school of his choice, the student is responsible to make it known to the appropriate Dean at registration. Appropriate adjustments will be made at that time.

The sequence of pre-professional courses may, if necessary, replace the concentration or major requirements for the Bachelor's degree. Though not strictly required by some professional schools, Saint Mary's recommends complete matriculation in Arts, Science, or Commerce and does not guarantee that the timetable will allow the completion of minimum pre-professional requirements in less than the full time required for the Bachelor's degree. Prerequisite requirements of courses apply to pre-professional students.

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Theology

Students who may wish to enter a theological seminary are advised to do major concentration work in Philosophy and/or Latin, supported by additional courses in languages and Social Sciences.

Law

Students planning to enter Law School should contact the Dean of their Faculty as soon as possible. In this way an appropriate program of study can be worked out and agreed upon by the student and the Dean of his faculty.

Medicine

Students who wish to apply for admission to medical schools in Canada or the United States are generally required to have complete matriculation in Arts or Science.

"College training in preparation for the study of medicine should provide the opportunity for a good general education including the attainment of competence in English. It should include theoretical and laboratory courses in Physics, Biology, and Inorganic and Organic Chemistry. At the present time the minimum requirement for admission to approved medical schools is three years of college training for the average student. For most students, four years is recommended in order to provide an opportunity to gain a broad educational experience." (Statement of the American Medical Association, December, 1951.)

Pre-medical students entering with Nova Scotia Grade XI or equivalent should complete fifteen university courses.

Credits should include Biology 111.1 & 112.2, Chemistry 101.0, 201.0, 343.0; Freshman English, Sophomore English, Mathematics 110.1 and 111.2; Philosophy and Physics 111.0. Of the six remaining credits, two or more advanced courses should be taken in a definite field of learning in the humanities, sciences, or social sciences.

Senior matriculation biology, general chemistry and physics will not necessarily be accepted as equivalent to these required classes.

Students wishing to complete the requirements for a Bachelor of Science or Bachelor of Arts Degree must take five additional courses to be determined by the department of concentration so as to fulfill the requirements on pages (48) and (49) respectively.

Dentistry

Students who wish to apply for admission to dental schools and who enter with Nova Scotia Grade XI or equivalent must complete minimum of fifteen university courses which should include Biology 111.1 & 112.2; Freshman English, Sophomore English; Mathematics 110.1 and 111.2, Physics 111.0. The remaining courses should include at least three courses chosen from the humanities and social sciences.

Senior matriculation biology, general chemistry and physics will not ordinarily be accepted as equivalent to these required classes.

Students wishing to complete the requirements for a Bachelor of Science or Bachelor of Arts Degree must take 5 additional courses so as to fulfill the requirements on pages (48) and (49) respectively.

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. Students who complete two years of satisfactory University study, the courses studied being in any faculty, and who have been recommended by their appropriate Dean are admitted without further examination to the third year at the School of Architecture, Nova Scotia Technical College, Halifax, where they complete the four year professional phase of the curriculum.

Candidates should, preferably, complete at least one University course in Mathematics, alternatively, they may be required to take an entrance examination in this subject at Nova Scotia Technical College.

Graduate Studies

Degree of Master of Arts

GENERAL REQUIREMENTS FOR ADMISSION

Candidates for admission to the Master's program must:

Hold a Bachelor's degree from a University of recognized standing, and have completed an undergraduate program in the subject area chosen for his graduate study comparable to an Honours degree from Saint Mary's University in that subject area.

Note.
A Bachelor of Education degree comparable to that granted by Saint Mary's University with second class standing will be considered the equivalent of an Honours degree for candidates seeking admission to graduate study in Education.

Candidates whose native tongue is other than English may be required to take a proficiency test in English under the auspices of

The English Language Institute
Testing and Certification
The University of Michigan
Ann Arbor, Michigan, U.S.A.

Have the approval of the Committee on Graduate Studies, and of the department concerned.

Candidates who have not completed the requirements for admission may, on recommendation of the department concerned, be admitted by the Committee on Graduate Studies to a program of preliminary study.

Certain departments may have special requirements for admission in addition to the general requirements.

Application for admission must be made on a form obtainable from Director of Admissions. The application form calls for an official transcript of the student's academic record, and also for letters of recommendation from two persons in a position to judge the applicant's personal and intellectual capacities for graduate study. The form and all supporting documents must ordinarily be on hand by May 31st.

GENERAL REQUIREMENTS FOR THE MASTER'S DEGREE

1. Candidates normally must spend at least one academic year in residence. This period is additional to any time needed to meet the normal admission requirements.

2. Candidates must complete a program of 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 level or the 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.

3. A Department may accept two advanced courses in the chosen subject area completed at other universities as part of the requirements provided they have not been applied previously towards another degree

4. A mark of B is required in all courses.

5. Two failures will require withdrawal from the program. There will be no supplemental examinations.

6. Candidates must complete all degree requirements within five calendar years of being accepted as Master's degree candidates.

FEES, FINANCIAL AID

The schedule of fees found on page (34) of this calendar applies to the graduate studies program.

A number of fellowships up to a maximum of $2,750 for the calendar year are available for full-time students. Further information on these may be obtained from the Director of Admissions. There is the possibility of supplementing fellowships through renumeration for departmental duties.

DEPARTMENTS OF INSTRUCTION

EDUCATION

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

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

The candidate is encouraged to have completed at least one year of successful teaching before embarking on the M.A. (in Education) program.

Course offerings include courses in the following fields: Philosophy of education, psychology of education, comparative education, and educational administration/supervision. The complete inventory of courses is found on page (129).

In conjunction with the writing of his thesis a candidate must enroll in Education 510.0 (Graduate Research Seminar). This course does not count as one of the eight half courses normally required for the degree.

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 are as follows:

1. The candidate will be required to demonstrate a reading knowledge of at least one foreign language by passing a test carried out in cooperation with the language department concerned. French is specified for candidates intending to write a thesis in the history of Canada.

2. A thesis can be written only in the following three fields: Canadian; Canadian-American Relations; and Tudor and Stuart England.

3. Before proceeding to the thesis, the student following the course-and-thesis approach must pass an oral examination in which he will be expected to demonstrate knowledge in (a) his fields of study and (b) the ideas of the leading historians. A similar examination will be required of candidates in the course programme.

4. Two months prior to the termination of his courses, the candidate will be invited to select from among the members of the History Department, the chairman and committee members of his examination board. While the Department will make every effort to meet his requests, it cannot guarantee that his selection of an examination board will be complied with fully.

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PHILOSOPHY

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

1. Admission
Candidates are normally required to have an honours degree in philosophy with at least second class standing, or its equivalent. Some acquaintance with modern logic and the various sections of the history of philosophy is desirable.

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

3 Courses
Candidates normally take four full courses in an academic year. Those enrolling in a two-year programme may be asked to attend certain medium-level undergraduate courses in their first year. The decision as to what courses a candidate should take varies from case to case depending on circumstances.

4. Thesis
Every candidate is required to write an M.A. thesis which shows critical acumen as well as philosophical originality. His work is closely supervised by one or two members of the Department. Areas from which the topic of the thesis can be chosen include: Ancient, Mediaeval and Modern Philosophy; Logic; Ethics; Epistemology; Metaphysics; Philosophy of Mind; Philosophy of History; Philosophy of Science; Phenomenology; and Existentialism.

Courses of Instruction

Accounting (see Business Administration)
Anthropology
Asian Studies
Astronomy
Biology
Business Administration
Chemistry
Classics
Commercial Law
Economics
Education
Engineering
English

French
Geology
German
History
Latin
Mathematics
Philosophy
Physics
Political Science
Psychology
Religious Studies
Sociology
Spanish

Should registration prove insufficient, the University reserves the right to cancel any listed course.

Re-numbering of Courses

I. Note: 1971-72 courses whose numbers have not been changed for the 1972-73 academic year do not appear in the 1972-73 column.

II. For re-numbering of **Accounting-Business Administration courses,** see page 96.

ANTHROPOLOGY

1972-73	1971-72
	110.0
	207.0
	208.0
	209.0
	210.0
	220.0
	230.0
	303.0
	310.0
	340.0
	345.0
	351.0

ASTRONOMY

1972-73	1971-72
	201.0
	301.0

BIOLOGY

1972-73	1971-72
103.2	NC
	111.1
	112.2
	204.2
	205.0
	209.2
210.1	210.1
249.1	N.C.
302.0	201.1
305.0	202.2
310.0	207.1
317.0	211.2
401.1	315.2
403.1	N.C.
405.0	325.1
406.0	306.0
408.2	314.2
412.1	312.2
420.0	320.0

CHEMISTRY

1972-73	1971-72
	101.0
	201.0
202.0	N.C.
203.0	N.C.
209.0	N.C.
	311.0
	341.0
	343.0
	411.0
	431.0
	441.0
	500.0
	511.0
	513.0
	531.0
	541.0

N.C. — New Cou[...]

1972-73	1971-72		1972-73	1971-72		1972-73	1971-72

CLASSICS   **ECONOMICS (Con't)**   **ENGINEERING**

1972-73	1971-72	1972-73	1971-72	1972-73	1971-72
CLASSICS		**ECONOMICS (Con't)**		**ENGINEERING**	
	120.0		317.0		106.1
	301.0	318.1	N.C.		107.2
	303.0		319.0		108.1
	304.0	320.1	N.C.		112.2
	305.0	321.1	N.C.		113.1
300.0	N.C.		323.0	120.0	N.C.
304.0	N.C.		301.1		203.1
		419.1	N.C.		203.2
GREEK			440.1		204.1
			441.2		204.2
	101.0		444.2	212.1	N.C.
	201.0		447.0	220.0	N.C.
				302.0	N.C.
COMMERCIAL					303.1
LAW		**EDUCATION**			304.1
300.0	201.0				304.2
301.1	N.C.	660.1	519.0		306.2
302.2	N.C.	661.1	519.0		307.0
		662.1	NC	308.0	N.C.
ECONOMICS		663.1	N.C.	314.2	N.C.
		620.1	560.0		
	101.1	621.1	560.0		
	102.0	630.1	542.0	**ENGLISH**	
	202.0	631.1	542.0		
	203.1	632.1	552.0	110.0	N.C.
	204.2	633.1	552.0	130.0	101.0
	300.1	639.0	562.0	201.0	200.0
301.1	N.C.	640.1	530.0		250.0
	302.0	641.1	530.0		300.0
	303.0	642.1	N.C.		301.0
	304.1	643.1	N.C.		302.0
305.0	N.C.	644.1	N.C.		303.0
	307.0	645.1	N.C.		304.0
	309.0	646.1	531.0		305.0
	310.0	647.1	533.0		306.0
	311.0	648.1	533.0		307.0
	312.0	650.1	N.C.		350.0
313.1	N.C.	651.1	N.C.		
304.1	N.C.	652.1	N.C.	N.C. — New Course	
	315.0	653.1	516.0		
	316.0	654.1	526.0		

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1972-73	1971-72		1972-73	1971-72		1972-73	1971-72
HISTORY (Con't)			**MATHS (Con't)**			**PHILOSOPHY (Con't)**	
	504.0			327.0			351.0
	505.0			349.0			352.0
	506.0			410.0			353.0
	508.0		413.0	N.C.			354.0
	509.0			414.0			355.0
	510.0		420.0	N.C.			402.0
	511.0			425.0			449.0
	512.0			435.0			452.0
	513.0			445.0			453.0
	514.0		449.0	N.C.			455.0
				515.0			456.0
				516.0			457.0
LATIN				517.0			
				525.0			
	100.0			535.0			
	101.0		549	N.C.		**PHYSICS**	
	201.0			556.0			
	301.0			557.0		101.0	N.C.
	401.0						111.0
	402.0		**PHILOSOPHY**				221.0
	403.0					320.1	N.C.
	404.0			120.0			321.1
			201.0	121.0			322.2
			202.0	122.0		331.1	334.0
MATHEMATICS			203.0	123.0		332.2	334.0
			204.0	124.0		431.1	433.0
	110.1		205.0	125.0		432.2	433.0
	111.1		206.0	126.0		434.1	436.0
	112.0		207.0	127.0		435.2	436.0
	113.0		208.0	128.0		438.1	437.0
115.0	N.C.		209.0	129.0		439.2	437.0
116.2	116.0		215.0	150.0		441.1	439.0
127.0	N.C.		407.0	200.0		442.2	439.0
	210.1		205.0	208.0		455.1	450:0
	211.1		220.0	209.0		456.2	450.0
	226.1		300.0	211.0		461.1	451.0
	227.1			250.0		462.2	451.0
	310.0			300.0			452.1
	311.0			306.0			453.2
	312.0			308.0			
	314.0			350.0		N. C. — New Course	

1972-73	1971-72
PHYSICS (Con't)	
	550.0
	551.0
	552.0
	553.0
	554.1
	555.2
	556.1
ASTRONOMY	
	201.0
	301.0
POLITICAL SCIENCE	
200.0	121.0
301.0	201.0
302.0	202.0
303.0	203.0
304.0	204.0
305.0	205.0
306.0	206.0
312.0	212.0
407.0	N.C.
417.0	317.0
418.0	318.0
419.0	319.0
430.0	330.0
435.0	335.0
436.0	336.0
440.0	340.0
441.0	341.0
445.0	345.0
550.0	450.0
551.0	451.0
552.0	452.0
553.0	453.0
555.0	455.0

1972-73	1971-72
PSYCHOLOGY	
	201.0
	301.0
	302.0
	305.0
	306.0
402.0	N.C.
	403.0
	404.0
	410.0
	411.0
	412.0
	413.0
	421.0
	431.0
	432.0
	433.0
	440.0
	449.0
RELIGIOUS STUDIES	
	100.0
	201.0
	202.0
210.0	N.C.
	304.0
	305.0
	306.0
	308.0
313.0	N.C.
	220.0
	321.0
	322.0
	323.0
	324.0
	325.0
	230.0
238.0	N.C.
240.0	N.C.

1972-73	1971-72
RELIGIOUS STUDIES (Con't)	
	337.0
	340.0
	342.0
345.0	N.C.
346.0	N.C.
	400.0
SOCIOLOGY	
	200.0
	300.0
	301.0
	302.0
	303.0
	304.0
	305.0
	306.0
	307.0
	308.0
	309.0
	310.0
	311.0
	313.0
	316.0
317.0	N.C.
	318.0
	319.0
	320.0
	321.0
	322.0
	323.0
	324.0
	325.0
326.0	N.C.
327.0	N.C.
328.0	N.C.
329.0	N.C.
330.0	N.C.

N. C. — New Course

1972-73	1971-72	1972-73	1972-71
SOCIOLOGY (Con't)		**SPANISH**	
331.0	N.C.	101.0	
332.0	N.C.	201.0	
	430.0	301.0	
	433.0	302.0	
		303.0	
		304.0	
		305.0	

N.C. — New Course

ANTHROPOLOGY

John Loewenstein   Professor, Chairman
Alejandro Estrada   Lecturer
Brian Robinson   Lecturer

Departmental Policy

1. To obtain a major concentration in Anthropology a student is
    required to have FIVE university course credits in Anthropology
    beyond the 120 level.

2. At least 50% of a student's elective work must be done at the 300
    level or above. Suggested supporting courses for Anthropology
    majors include: Biology, Geology, History, Psychology, Religious
    Studies and Sociology, as well as French, German or (and)
    Spanish.

3. The programme for a major in Anthropology must be approved
    by the Chairman of the Department.

NOTE: The Department will allow some other courses, to be counted
in a student's Anthropology concentration. Students must seek the
Department's permission in such cases.

110.0: SOCIO-CULTURAL ANTHROPOLOGY

Prerequisite: None

An introduction to the nature of culture, society, primitive economics,
social organization, law and government, as well as cultural change. A
cross-cultural study, contrasting primitive cultural systems with con-
temporary industrial society.

Texts and selected references to be announced.

Lectures: Three Hours a week, two semesters.

140.0: PRINCIPLES OF PHYSICAL ANTHROPOLOGY

Prerequisite: None.

A course designed to examine:

The antecedents of Man. Biological Evolution. Man's place in nature.
The 'Races' of Man. Evolutionary change. Blood typing. Culture and
human breeding patterns, as well as other problems.

Texts and selected references to be announced.

Lectures: Two hours a week, two semesters.

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152.0: INTRODUCTION TO HUMAN AND PHYSICAL GEOGRAPHY

Prerequisite: None.

The course establishes the general physical characteristics of the world's natural environments and then goes on to examine simple human relationships with these enviroments.

Texts and selected references to be announced.

Lectures: Three hours a week, two semesters.

153.0: ETHNOLOGY I

Prerequisite: None.

A non-technical introduction to the science of peoples, their cultures and life histories as groups, with special reference to the New World.

Texts and selected references to be announced.

Lectures: Three hours a week, two semesters.

155.0: INTRODUCTION TO ARCHAEOLOGY

Prerequisite: None.

'Archaeology is a science that must be lived.
Dead Archaeology is the driest dust that blows.'
Sir Mortimer Wheeler

The scope of archaeology. Dating the past. The layout of an excavation. On digging town-sites. On digging burials.

Texts and selected references to be announced.

Lectures: Three hours a week, two semesters.

210.0: PALAEOANTHROPOLOGY

Prerequisite: Sophomore/Junior standing.

A technical and more intensive treatment of the subject-matter of Course No. 140.0. Not open to students who had this course or are taking it now.

Texts and selected references to be announced.

Lectures: Two hours a week, two semesters.

ANTHROPOLOGY

220.0: INTRODUCTION TO CULTURAL GEOGRAPHY

Prerequisite: One course in Anthropology.

A study of the cultural imprint of man on the world's landscapes. The course ranges from primitive societies to modern urban systems and includes brief introductions to mapping techniques, map interpretation and simple statistical procedures.

Text to be announced.

Lectures: Three hours a week, two semesters.

230.0: ETHNOLOGY II

Prerequisite: None.

The Aborigines of North America.

Texts and selected references to be announced.

Lectures: Three hours a week, two semesters.

240.0: SOCIO-CULTURAL ANTHROPOLOGY II.

Prerequisite: To be left to the discretion of the professor.

A technical and more intensive study of the topics discussed in course No. 110.0.

Texts: To be announced.

Lectures: Two hours a week, two semesters.

250.0: HUMAN ETHOLOGY

Prerequisite: Course open only to majors in anthropology, sociology, psychology.

Evolution of human behaviour. Origin of sociability, aggression, co-operation, violence, love. Primate behaviour (monkeys and apes). Field work in human ethology with the aid of audio-visual equipment.

Texts to be announced.

Lectures: three hours a week, two semesters.

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▮▮.0: METHODOLOGY AND FIELDWORK IN SOCIAL ▮▮ROPOLOGY

Prerequisite: Two courses in Anthropology.

The course is designed to apply basic concepts, already familiar to the student, to actual fieldwork within the Province of Nova Scotia, as far as circumstances permit. The program includes Museum visits and informant interviewing.

Texts to be announced.

Lectures and Lab: Three hours a week, two semesters.

▮▮.0: CULTURAL GEOGRAPHY: REGIONAL STUDIES

Prerequisite: Preference will be given to students who attended geography courses on lower levels.

The detailed cultural geography of one particular area: China.

Texts and selected references to be announced.

Lectures: Three hours a week, two semesters.

▮▮5.0: ETHNOLOGY III

Prerequisite: Junior/Senior standing. Background in Anthropology and/or Sociology.

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

Texts and selected references to be announced.

Lectures: Two hours a week, two semesters.

▮▮1.0: THE DAWN OF CIVILIZATION

Prerequisite: Junior/Senior standing. Background in Anthropology and History.

A study of Man's earliest civilizations in the light of recent archaeological research: Southeast Asia, The Far East, The Near East, The New World. Open to history students.

Texts and selected references to be announced.

Lectures (illustrated by slides): Two hours a week, two semesters.

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ASIAN STUDIES

Students intending to complete a major concentration in Asian studies are required to obtain at least five full course credits from among the following courses (aside from the normal university requirements for the Bachelor of Arts Degree,) 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 programmes of study.

FACULTY

R.G. Boyd	(Political Science)
I. Mirza	(Economics)
T. Rigelhof	(Religious Studies)
B.S. Robinson	(Anthropology)
S. Swianiewicz	(Economics)
M. Sun	(History)
M. Waida	(Religious Studies)

COURSES

Anthropology 340.0
    Cultural Geography, Regional Studies
Economics 315.0
    Comparative Economic Systems
Economics 323.0
    Soviet-type Economies
Economics 310.0
    Development Economics
History 209.0
    Modern East Asia
History 323.0
    China 618-1911
History 324.0
    Japan 710-1868
History 511.0
    Seminar on modernization in East Asia
Political Science 340.0
    Politics of the Developing Areas

Political Science 341.0
    Government and Politics
    in East Asia
Political Science 453.0
    International Studies
    Seminar
Religious Studies 323.0
    Religions of India
Religious Studies 321.0
    Primitive Religions in Asia
Religious Studies 324.0
    The Religions of China
Religious Studies 326.0
    Buddhism

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The Burke-Gaffney Observatory.

ASTRONOMY

▓▓.0: THE ASTRONOMICAL UNIVERSE

Prerequisites: Sophomore standing or permission of the professor.

This course is designed in particular for the non-science student. The subject matter will include the solar system, the life-cycles of stars, the structure of our Galaxy, the nature of external galaxies, and the exploding universe. Recent discoveries and unsolved problems, such as quasars, pulsars, exploding galaxies, and "black holes" will be discussed to illustrate the open and evolving nature of scientific investigation.

Text: To be announced.

Lectures: Three hours per week, two semesters.
There will be evening observing sessions about twice a month by arrangement. Students will have access to the Burke-Gaffney Observatory.

▓▓.0: INTRODUCTION TO ASTRONOMY

(For details see Physics)

BIOLOGY

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

Commencing September 1970, the Biology Department adopted courses which are either of one or two semesters duration and organized around a "core" program. Each single semester unit is worth one half credit and units are normally taken in pairs to provide whole numbers of credits. Courses of two semesters duration are also offered and are valued at one full credit.

The Biology core program is normally included in the scheme followed by students doing either a **concentration** or a **major** in Biology. It is thus intended to provide all Biology students with a balanced and comprehensive knowledge in modern biological science. Such an approach is necessary because of the very wide spectrum of knowledge which is today included in biological science. Students completing the "core" program and going on to finish a **concentration** in biology should 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 understanding graduate level work in Biology after a further year of honors work or after a qualifying year in a graduate program.

It should also be emphasized that the Biology **concentration** at Saint Mary's is part of a General Science degree which aims as much at educating the whole man as providing specialized training in science. Moreover, a **concentration** in Biology is also useful as a first qualification for students intending to enter industry, or commercial organizations requiring technical representatives, supervisors or trainees. In the **major** program, on the other hand, more emphasis is placed on the scientific aspects of the students' education and training.

Following are the schemes devised and recommended by the Department for Biology students doing either the General Science degree or a B.Sc. with a **major**. The schemes fulfil the appropriate degree requirements, provide the core program in Biology, and follow a logical progression in development of knowledge of the subject areas covered.

Scheme A: General Science Degree with a Biology Concentration

Freshman Year
1. English (130.0)
2. Math (110.0^3 & 111.2^3)
3. History (100.0)
4. Principles of General Biology (Science) (111.1^1 & 111.2^1)
5. Geology (111.0^2)
Physics (111.0^2)

Sophomore Year
1. English (201.0)
2. Math (210.1^3 & 211.2^3)
3. Chemistry (101.0^2 or 201.0^2)
4. Cytology (302.0^1) or
General Physiology (305.0^1)
5. Botany (204.0^1) or
Zoology (205.0^1)

Junior Year
1. Social Science Elective (200.0)
2. Humanity Elective (200.0)
or Social Science Elective (200.0)
3. Chemistry (343.0^2)
4. Cytology (302.0^1) or
General Physiology (305.0^1) or
Zoology (205.0^1)
or Botany (204.0^1)
5. Ecology (310.0^1)
or Genetics (210.1^1)
and Biostatistics (209.2^1)

Senior Year
1. Philosophy (121.0/129.0)
2. Humanity elective (300.0)
or Social Science Elective (300.0)
3. Social Science Elective
(200.0 or 300.0)
4. Ecology (310.0^1)
or Genetics (210.1^1) and
Biostatistics (209.2^1)
5. One elective from the following:
(a) Evolution (317.0)
(b) Microbiology (406.0)
(c) Comparative Chordate
Anatomy (420.0)
(d) Biology of fishes (405.0)
(e) Morphology of Vascular
Plants (401.1) or Plant
Taxonomy (403.1) and
Vertebrate Embryology (408.2)
or Human Genetics (412.2)

Scheme B: Science Degree with a major in Biology

Freshman Year
1. English (130.0)
2. Math (110.1^3 & 111.2^3)
3. History (100.0)
4. Principles of General Biology (Science) (111.1^1 & 111.2^1)
5. Chemistry (101.0^2 or 201.0^1)

Sophomore Year
1. English (201.0)
2. Math (210.1^3 & 211.2^3)
3. Chemistry (343.0^2)
4. Cytology (302.0^1) or
General Physiology (305.0^1)
5. Botany (204.0^1) or
Zoology (205.0^1)

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BIOLOGY

Junior Year
1. Humanity Elective (200.0)
2. A related Science elective not in the major field (Junior or Senior Level)
3. Physics (111.0^2) or Geology (111.0^2)
4. Cytology (302.0^1) or General Physiology (305.0^1)
5. One course from the following: Botany (204.0^1) or Zoology (205.0^1) or Genetics (210.1^1) and Biostatistics (209.2^1)

Senior Year
1. Philosophy (121.0/129.0)
2. Psychology (200.0) or Anthropology (200.0)
3. Ecology (310.0^1) or Evolution (317.0^1)
4. Geology (200.0 or 301.0 or 302.0 etc.) or a Biology elective from the following: Microbiology (406.0) or Human Genetics (412.2) and Vertebrate Embryology (408.2)
5. One elective from the following:
(a) Comparative Chordate Anatomy (420.0)
(b) Biology of Fishes (405.0)

In schemes A and B.

1. course in core program
2. required supporting science course
3. required Math course

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

The following courses will be offered in 1972-73

103.0: BIOLOGY, ENVIRONMENT AND MAN (FOR NON–SCIENCE STUDENTS)

M. Wiles

Prerequisites: None.

Outline: An introduction to the scope and principles of modern biological science. Wherever possible examples explaining these principles will be drawn from familar, everday 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 human ecology. Entry into course normally restricted to non-science students for whom this course should be regarded as a Science elective whilever the student remains in a Faculty other than Science. Students wishing to change to a Science degree after taking the course would receive credit for the course as an Arts, elective unless they achieve

of **A.** Students obtaining an A and changing to Science would be with the course as a Science elective. This would then be as equivalent to Biology 111.1 and 112.2 and so allow the entry to other Biology courses in the normal way. This course not include laboratory work, but rather two lecture hours per and discussion sessions averaging two hours per week where trations will sometimes be presented.

tion: Lectures and discussion periods four hours per week, two ers.

To be announced.

PRINCIPLES OF GENERAL BIOLOGY 1 (SCIENCE)

Thomas

sites: None

Class designed for Science students. A study of the physical, and biological bases of the activities of living organisms. will be on the modern approaches to biological sciences a consideration of the following disciplines of biology: physiology, cytology, genetics, molecular biology, evolution viour.

To be announced.

tion: lectures and/or seminars-discussion periods, three hours week, one semester.

ory, three hours per week, one semester.

PRINCIPLES OF GENERAL BIOLOGY 2 (SCIENCE)

Kapoor

site: Biology 111.1.

As for Biology 111.1. This unit is a continuation of studies taken in Biology 111.1.

To be announced.

tion: As for Biology 111.1

the following courses * indicates a course within the core program.

BIOLOGY

204.0*: BOTANY

H. Bobr-Tylingo

Prerequisites: Biology 111.1 and 112.2

Outline: A study of different plant groups (Viruses, Bacteria, Fung
Algae, Bryophytes, Ferns, Gymnosperms and Angiosperms). Intro
duction to physiological processes in plants, including photosynthes
transpiration, absorption, nutrition, enzymes and hormonal action an
growth.

Text: To be announced.

Instruction: lectures, three hours per week, two semesters.

Laboratory: three hours per week, two semesters.

205.0*: ZOOLOGY

E. Rojo

Prerequisites: Biology 111.1 and 112.2

Outline: A systematic survey of the Animal Kingdom with emphasis on
gross morphology and its relation to function. Phylogenetic relati
ships, the influence of physiological adaptation through the
mechanisms of heredity, and the involvement of the evolution
processes in the phenomenon of the diversity of modern animal life.

Instruction: lectures, three hours per week, two semesters.

Laboratory, three hours per week, two semesters.

209.2*: BIOSTATISTICS

M. Wiles

Prerequisites: Biology 111.1 and 112.2; 204.0 or 205.0 concurren
Math 110.0 and 111.2.

Outline: Introduction to the principles and methods used for analy
and using quantitative data in the biological sciences. The emphasis
be on practical applications of statistics in biology rather than statis
theory. Material covered includes graphical presentation of d
transformation of data, handling of data. Descriptive statistics, dist
tions, regressions, correlation, probability theory, comparisons of s
of data and sampling methods will be studied. Calculator usage
computer programming will be undertaken, the latter if time permit

Text: Statistics for the Biological Sciences — W. Schefler (Addison—Wesley), 1969.

Instruction: lectures, three hours per week, one semester.

Calculator or computer time, three hours per week, one semester.

211*: GENETICS

E. Rojo

Prerequisites: Biology 111.1 and 112.2, 204.0 or 205.0, or concurrently; Chemistry 101.0 or 201.0.

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

Text: To be announced.

Instruction: lectures, three hours per week, one semester.

Laboratory, three hours per week, one semester.

BIOLOGY 249.1: INTRODUCTION TO MARINE BIOLOGY

Instructors will be announced.

Prerequisite: Freshman level University Biology or its equivalent (Bio. 111.1 & 112.2).

Outline: 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. This course is worth one half credit.

Text: To be announced.

Instruction: lectures and seminars, eighteen days of instruction. Laboratory or field work, eighteen days of instruction.

BIOLOGY

302.0*: CYTOLOGY

B.M. Kapoor

Prerequisites: Biology 204.0 and 205.0 or concurrently, or by permission.

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

Text: To be announced.

Instruction: lectures, three hours per week, two semesters.

Laboratory, three hours per week, two semesters.

305.0*: GENERAL PHYSIOLOGY

K.K. Thomas

Prerequisites: Biology 111.1 and 112.2; Chemistry 101.0 or 201.0.

An introduction to the essential aspects of biochemistry and cellular physiology and a discussion of how they underlie the basic processes carried on by organisms.

Text: To be announced.

Instruction: lectures, three hours per week, two semesters.

Laboratory, three hours per week, two semesters.

310.0*: ECOLOGY

M. Wiles

Prerequisites: Biology 204.0 and 205.0 or concurrently.

Outline: 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 non-renewable natural resources. The earth's biosphere as a dynamic, balanced system.

Ecology — E. P. Odum (Saunders) — 3rd Edition, 1971.

Instruction: lectures, three hours per week, two semesters.

Laboratory, three hours per week, two semesters.

0. EVOLUTION

A. Rojo

Prerequisites: Biology 204.0, 205.0; 210.1 and 209.2 (or concurrently); Chemistry 101.0 or 201.0.

A study of the history of the concept of evolution, the process whereby the present species came into being; the mechanisms operating in nature; the factors affecting evolution and the final result as we witness it.

Main areas of study are population genetics, history of the earth and fossil record and the evolution of man.

Instruction: lectures and seminars, three hours per week, two semesters.
Laboratory, three hours per week, two semesters.

401.1: MORPHOLOGY OF VASCULAR PLANTS†
(Alternate to 403.1)

R.M. Kapoor

Prerequisites: Completed core.

Outline: Structure, development and evolution of major taxa of vascular plants — Pteridophytes, gymnosperms and flowering plants, both extinct and extanct.

Text: To be announced.

Instruction: lectures, three hours per week, one semester.

Laboratory, three hours per week, one semester.

403.1: PLANT TAXONOMY†
(Alternate to 401.1)

R.M. Kapoor

Prerequisites: Completed core.

BIOLOGY

Outline: 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.

Text: To be annouced.

Instruction: lectures, three hours per week, one semester.

Laboratory, three hours per week, one semester.

405.0: BIOLOGY OF FISHES†
(Alternate to 420.0)

A. Rojo

Prerequisites: Completed core.

Outline: 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 freshwater fishes of Nova Scotia.

Text: To be announced.

Instruction: lectures, three hours per week, two semesters.

Laboratory, three hours per week, two semesters.

406.0: MICROBIOLOGY

H. Bobr-Tylingo

Prerequisites: Biology 302.0, 305.0; Chemistry 101.0 or 201.0

Outline: Morphology, biochemical activity and classification of micro organisms, (Viruses, Bacteria, Molds, Yeasts, and other microscopic life forms).

Text: To be announced.

Instruction: lectures, three hours per week, two semesters.

Laboratory, three hours per week, two semesters.

408.2: VERTEBRATE EMBRYOLOGY

K.K. Thomas

Prerequisites: Biology 305.0.

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

Text: To be announced.

Instruction: lectures, three hours per week, one semester.

Laboratory, three hours per week, one semester.

412.1: HUMAN GENETICS

E. Rojo

Prerequisites: Biology 209.2, 210.2.

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

Text: Human genetics and its foundation — Whittinghill (Van Nostrand-Reinhold), 1965

Instruction: lectures, three hours per week, one semester.

Laboratory, three hours per week, one semester.

400.0: COMPARATIVE CHORDATE ANATOMY†
(Alternate to 405.0)

E. Rojo

Prerequisites: Completed core.

Outline: A comprehensive study of gross anatomy of the different systems of representatives of each major class, beginning with Amphioxus and culminating with the mammals.

Text: The Vertebrate body — A.J. Romer (4th edition) (W.B. Saunders), 1970

Laboratory manual: Atlas and dissection guide for Comparative Anatomy — S. Wischnitzer (Freeman), 1967.

Instruction: lectures, three hours per week, two semesters.

Laboratory, three hours per week, two semesters.

Which of these courses will be offered will be determined by student demand.

BUSINESS ADMINISTRATION

D. A. Hope	Assistant Professor, Chairman
G. A. Badawi	Assistant Professor
V. Baydar	Assistant Professor
H. G. Beazley	Professor
D. J. Brean	Lecturer
R. D. Connell	Associate Professor
D. Connelly	Associate Professor
O. P. Cormier	Associate Professor
C. A. Dixon	Lecturer
R. A. Isnor	Instructor
H. C. Knight	Assistant Professor
D. R. Landry	Lecturer
C. J. McManus	Instructor
R. L. O'Rourke	Lecturer
S. Pendse	Assistant Professor
Z. H. Qureshi	Assistant Professor
J. H. Radford	Lecturer
V. V. Raghavan	Lecturer
D. J. Sampson	Instructor
E. L. Sceles	Instructor
H. J. Schroeder	Assistant Professor
D. Tobin	Instructor

Programs Offered in the Department of Business Administration

Outlines of the three undergraduate programs offered by the depart-
ment are displayed below. For full details, of these programs, **Bachelor of Commerce - General** (p.53) and **Bachelor of Commerce Honours (p. 62)**.

Course prefixes used in the outlines are as follows:

Bus	Business Administration
Cml	Commercial Law
Eco	Economics
Egl	English
Mat	Mathematics
Phi	Philosophy

Credit value of each course is in parenthesis after the course number.

1. General Program in Business Administration

First Year
(Freshman)
Egl 110.0 or 130.0 or 201.0 (1) *

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Mat 113.0 (1) Mathematics for Commerce Students
Elective (1)
Elective (1)
Elective (1)

Second Year
(Sophomore)
Bus 203.1 or 203.2 (½) Introductory Quantitative Methods for Commerce
Bus 204.1 or 204.2 (½) Introductory Statistics for Commerce
Bus 240.0 (1) Principles of Financial and Managerial Accounting
Bus 280.0 (1) Principles of Management
Eco 202.0 (1) Principles of Economics
Egl 130.0 or 201.0 or 300.0/310.0

Third Year
(Junior)
Bus 370.1 or 370.2 (½) Introduction to Marketing
Bus 360.1 (½) Business Finance – Part I
Bus 361.2 (½) Business Finance – Part II
Bus 317.1 or 317.2 (½) Introduction to Production
Bus 321.1 or 321.2 (½) Introduction to Computers
Bus 382.0 (1) Organizational Behavior
Legal Aspects of Business, Part 1. 301.1 Commercial Law
Phi 201.0/209.0 (1) Introduction to Philosophy

Fourth Year
(Senior)
Bus 489.2 (½) Business Policy
Elective (½)
Elective (1)
Elective (1)
Elective (1)
Elective (1)

General Program in Accounting

First Year
(Freshman)
Egl 110.0 or 130.0 or 201.0 (1)
Mat 113.0 (1) Mathematics for Commerce Students
Elective (1)
Elective (1)
Elective (1)

Second Year
(Sophomore)
Bus 203.1 or 203.2 (½) Introductory Quantitative Methods for Commerce

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BUSINESS ADMINISTRATION

Bus 204.1 or 204.2 (½) Introductory Statistics for Commerce
Bus 240.0 (1) Principles of Financial and Managerial Accounting
Bus 280.0 (1) Principles of Management
Eco 202.0 (1) Principles of Economics
Egl 130.0 or 201.0 or 300.0/310.0 (1)

Third Year
(Junior)
Bus 341.1 (½) Intermediate Financial Accounting – Part I
Bus 342.2 (½) Intermediate Financial Accounting – Part II
Bus 346.1 or 346.2 (½) Introductory Cost Accounting
Bus 348.1 or 348.2 (½) Planning and Control
Cml 300.0 Commercial Law
Phi 201.0 – 209.0 (1) Introduction to Philosophy
Elective (1) (Bus 321 & 323 or Bus 321 & 324 recommended)

Fourth Year
(Senior)
Elective (1)
Elective (1)
Elective (1)
Elective (1)
Elective (1)
(Bus 309.1 or 309.2, Bus 310.1 or 310.2, Bus 450.0 recommended)

A Commerce graduate who has followed the accounting concentration and obtained the required grades normally is in a position to sit for final chartered accountancy examinations two years after receiving commerce degree.

Commerce graduates may receive exemption from many of the courses and examinations conducted by the Atlantic Provinces Association 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 Business Administration.

Arrangements also exist with the Institutes of other Provinces.

Exemptions are also granted by the Society of Industrial Accountants of Nova Scotia to Commerce graduates who register in the industrial accounting course sponsored by the Society.

Honours Program in Business Administration

This program requires 20 full course credits beyond the first (Freshman) year.

After the Commerce freshman year, the program outline is as follows:

Sophomore
Bus 203.1 or 203.2 (½) Introductory Quantitative Methods for Commerce
Bus 204.1 or 204.2 (½) Introductory Statistics for Commerce
Bus 240.0 (1) Principles of Financial and Managerial Accounting
Bus 280.0 (1) Principles of Management
Eco 202.0 Principles of Economics
Egl 130.0 or 201.0 or 300.0/310.0

Junior
Bus 370.1 or 370.2 (½) Introduction to Marketing
Bus 360.1 (½) Business Finance – Part I
Bus 361.2 (½) Business Finance – Part II
Bus 317.1 or 317.2 (½) Introduction to Production
Bus 321.1 or 321.2 (½) Introduction to Computers
Bus 382.0 (I) Organizational Behavior
Legal Aspects of Business, Part I, 301.1 (½) Commercial Law
Phi 201.0/209.0 (1) Introduction to Philosophy

Senior
Bus 307.2 (½) Statistical Analysis for Business
Eco 300.1 (½) Intermediate Microeconomic Theory
Eco 301.2 (½) Intermediate Macroeconomic Theory
Elective (½)
Elective (1)
Elective (1)
Elective (1) (non-business)

Honours
Bus 489.2 (½) Business Policy
Bus 591.1 or 591.2 (½) Business Research
Elective (1)
Elective (1)
Elective (1)
Elective (1) (non-business)

Note: Electives must be chosen so as to complete "functional specialization" in two of the following areas: Accounting, Economics, Finance, General Management, Management Science, Marketing. Functional specialization in an area means two and one-half (2½) courses (or equivalent) at the 300 or 400 level in that area. A listing of courses

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which will satisfy the specialization requirements in each of the six areas is prepared annually by the Department of Business Administration.

Course Descriptions

Courses have been renumbered as a result of a reorganization of the department. All courses offered by the Department have the prefix "Bus"

Quantitative Methods	1972-73	1971-72
	Bus 203	Bus 203, Acc 203
	Bus 204	Bus 204, Acc 204
	Bus 302	Bus 302
	Bus 307	Bus 336
Production	Bus 317	Bus 317
	Bus 318	Bus 320
Computers	Bus 321	Bus 321, Acc 321
	Bus 322	Bus 322, Acc 322
	Bus 323	Bus 323, Acc 323
	Bus 324	New
Accounting	Bus 240	Acc 201
	Bus 341	Acc 301
	Bus 342	NEW
	Bus 443	Acc 309
	Bus 444	Acc 310
	Bus 346	Acc 331
	Bus 348	Bus 333, Acc 333
	Bus 450	Acc 405
	Bus 453	Acc 308
	Bus 455	Acc 307
Finance	Bus 360	Bus 332
	Bus 361	NEW
	Bus 463	Bus 334
	Bus 464	Bus 416
	Bus 466	Bus 335
	Bus 467	Bus 417
Marketing	Bus 370	Bus 325
	Bus 371	Bus 326
	Bus 372	Bus 328
	Bus 373	New
	Bus 374	Bus 330
	Bus 375	Bus 329
	Bus 378	Bus 327

▓▓▓ement	Bus 280	Bus 20†
	Bus 382	Bus 306
	Bus 385	Bus 308
	Bus 386	Bus 309
	Bus 388	Bus 319
	Bus 489	Bus 410
▓▓er	Bus 591	New

▓▓ANTITATIVE METHODS (00 – 09)

▓▓.1 and 203.2: Introductory Quantitative Methods for Commerce

▓▓quisite: Mathematics 113.0 or Grade XII Mathematics

▓▓ purpose of this course is to provide an overview of calculus with an ▓▓asis on application, an upgrading of algebraic techniques and an ▓▓duction to various other quantitative techniques for Commerce.

▓▓res: Three hours a week, one semester – half course.

▓▓.1 and 204.2: Introductory Statistics for Commerce

▓▓quisite: Mathematics 113.0 or Grade XII Mathematics

▓▓troduction to probability and statistics with emphasis on business ▓▓ economic applications.

▓▓res: Three hours a week, one semester – half course.

▓▓te: This is the same course as Economics 204.2.

▓▓.1: Principles of Linear, Integer, and Parametric Programming

▓▓quisite: Business Administration 203.1 or 203.2

▓▓ear programming, integer programming, certain features of para-▓▓tric programming, input-output analysis, and game theory; applica-▓▓s to such areas as production planning, product mixing, material ▓▓portation, job and salary evaluation, advertising expenditures, and ▓▓ment of salesmen; the role of these techniques in planning and ▓▓izing an efficient and profitable business system is stressed.

▓▓ures: Three hours a week, one semester – half course.

▓▓.2: Statistical Analysis for Business

▓▓quisite: Business Administration 204.1 or 204.2

▓▓ further study of statistics and its application to the solution of ▓▓ness problems; analysis of variance, sampling, correlation, index

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numbers, time service analysis, seasonal index forecasting, and Baysian statistics will form the foundation of the course.

Lectures: Three hours a week, one semester — half course.

PRODUCTION (10 — 19)
317.1: Introduction to Production Management

Prerequisite: Business Administration 280.0, Mathematics 113.0 or equivalent

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.

Lectures: Three hours a week, one semester — half course.

318.2: Techniques of Production Management

Prerequisite: Business Administration 203.1 or 203.2, 317.1 and 321.1 or 321.2

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.

Lectures: Three hours a week, one semester — half course.

COMPUTERS (20 — 29)

321.1 and 321.2: Introduction to Computers

Prerequisite: Business Administration 240.0, Mathematics 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.

Lectures: Three hours a week, one semester — half course.

322.2: Computer Applications for Management

Prerequisite: Business Administration 204.1 or 204.2 and 321.1 or 321.2

Further study of computer-based management information system; models and simulation; selected topics from computer-dependent management techniques.

Lectures: Three hours a week, one semester — half course.

323.2: Information Systems

Prerequisite: Business Administration 321.1 or 321.2

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

Lectures: Three hours a week, one semester — half course.

324.2: The Use of COBOL in Data Processing

Prerequisites: Business Administration 321.1 or 321.2

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

Lectures: Three hours a week, one semester — half course.

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.

Lectures: Four hours a week, two semesters — full course

341.1: Intermediate Financial Accounting — Part I

Prerequisite: Business Administration 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.

Lectures: Three hours a week, one semester — half course.

342.2: Intermediate Financial Accounting — Part II

Prerequisite: Business Administration 341.1

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

Lectures: Three hours a week, one semester — half course

BUSINESS ADMINISTRATION

443.1: Advanced Financial Accounting I – Corporate   Accounting

Prerequisite: Business Administration 342.2

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

Lectures: Three hours a week, one semester – half course

444.2: Advanced Financial Accounting II – Special Topics

Prerequisite: Business Administration 342.2

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

Lectures: Three hours a week, one semester – half course

346.1: Introductory Cost Accounting

Prerequisite: Business Administration 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.

Lectures: Three hours a week, one semester – half course

348.2: Planning and Control

Prerequisites: Business Administration 240.0 and 280.00.

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

Lectures: Three hours a week, one semester – half course

450.0: Auditing

Prerequisite: Business Administration 342.2.

An introduction to the function of the "auditor" in the financial community. A study of accounting systems, their design and evolution within the framework of auditing concepts and procedures provides the advanced accounting student with an opportunity to combine his previous theoretical knowledge with the practical aspects of evaluating financial statements.

Lectures: Three hours a week, two semesters – full course

___ Taxation

Prerequisite: Business Administration 342.2

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

Lectures: Three hours a week, one semester — half course

___ Accounting Seminar

Prerequisite: Business Administration 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.

Lectures: Three or four hours a week, one semester — half course

FINANCE (60 – 69)
360.1: Business Finance — Part I

Prerequisite: Business Administration 240.0, 280.0, 203.1 or 203.2 and 204.1 or 204.2

A basic course in business finance introducing the student to the Canadian financial environment, instruments of finance, external financing, capital budgeting. This course is to be followed by Business Finance — Part II.

Lectures: Three hours a week, one semester — half course

361.2: Business Finance — Part II

Prerequisite: Business Administration 360.1

The second course of a two course series in business finance. The course covers financial analysis, cost of capital, sources of capital, dividend policy, lease financing, management of assets.

Lectures: Three hours a week, one semester — half course

463.1: Financial Management

Prerequisite: Business Administration 361.2

Managerial in emphasis, the course covers problems of capital structure and valuation of firm; the cost of capital in relation to financing

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problems; dividend policies and their relation to retained earnings; mergers and reorganizations.

Lectures: Three hours a week, one semester — half course

464.2: Corporation Finance

Prerequisite: Business Administration 463.1

A study of current literature in corporation finance with emphasis on empirical findings and application of theory to practice with the help of case studies.

Lectures: Three hours a week, one semester — half course

466.1: Investments

Prerequisite: Business Administration 361.2

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.

Lectures: Three hours a week, one semester — half course

467.2: Portfolio Management

Prerequisite: Business Administration 466.1.

A comprehensive analysis of the decision-making process of portfolio 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.

Lectures: Three hours a week, one semester — half course.

MARKETING (70 — 79)
370.1 and 370.2: Introduction to Marketing

Prerequisite: Business Administration 280.0 and Economics 202.0.

A study of principles and fundamental concepts of marketing and marketing management: pricing, promotion, merchandising, distribution structure and marketing research.

Lectures: Three hours a week, one semester — half course.

Marketing Management

Prerequisite: Business Administration 370.1 or 370.2.

Managerial in focus, this course is devoted to analyzing marketing opportunities, a study of marketing activity and its organization, planning the marketing program and controlling the marketing effort.

Lectures: Three hours a week, one semester — half course.

Marketing Communication and Advertising

Prerequisite: Business Administration 370.1 and 370.2.

An introduction to the study of advertising principles and practices, including advertising strategies, media presentation and evaluation of effectiveness.

Lectures: Three hours a week, one semester — half course.

Management of Marketing Channels

Prerequisite: Business Administration 370.1 or 370.2.

A study of the marketing distribution system, retailing and wholesaling, merchandising, and relevant legislation.

Lectures: Three hours a week, one semester — half course.

Sales Management

Prerequisite: Business Administration 370.1 or 370.2.

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 personal selling effort.

Lectures: Three hours a week, one semester — half course.

International Marketing

Prerequisite: Business Administration 370.1 or 370.2.

An introduction to the nature and environment of international marketing including the study of the international consumer, product policy, distribution promotion, research and management.

Lectures: Three hours a week, one semester — half course.

BUSINESS ADMINISTRATION

378.1: Marketing Research

Prerequisite: Business Administration 204.1 or 204.2 and 370.1 or 370.2

An introductory course in the nature, methods, procedures and application of marketing research.

Lectures: Three hours a week, one semester — half course

MANAGEMENT (80 – 89)

280.0: 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.

Lectures: Three hours a week, two semesters — full course.

382.0: Organizational Behavior

Prerequisite: Business Administration 280.0

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 behavioral science concepts through reading a text, classroom sessions, and the application of course concepts to the analysis of cases.

Lectures: Three Hours a week, two semesters — full course.

385.1 and 385.2: Personnel Management

Prerequisite: Business Administration 280.0

Organization and management of personnel; manpower planning, improvement of performance; motivation, communication; supervising the work group; remuneration.

Lectures: Three hours a week, one semester — half course

386.1 and 386.2: Industrial Relations

Prerequisite: Business Administration 280.0

An introduction to the field of industrial relations, a study of union structure and operation, collective bargaining and allied material.

Lectures: Three hours a week, one semester — half course

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███.1: Business and Its Environment

Prerequisite: Business Administration 280.0 and Economics 202.0

Business and its economic and political environment; the social responsibilities of business.

Lectures: Three hours a week, one semester — half course

███.2: Business Policy

Prerequisite: Business Administration 361.2, 370.1 or 370.2 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.

Lectures: Three hours a week, one semester — half course

OTHER (90 — 99)
591.1 and 591.2: Business Research

Prerequisite: Permission of the Department.

The student will undertake an original investigation of a business problem and submit a report on his findings and recommendations —
half course

CHEMISTRY

E.R. Hayes	Associate Professor, Chairman
D.H. Davies	Associate Professor
J. ███anan	Associate Professor
J. ███nsburg	Assistant Professor
J.W. Murphy, S.J.	Professor
A.T. Sabean	Professor
K. Vaughan	Assistant Professor

CHEMISTRY

The program of the Chemistry Department is designed to satisfy two functions:

(1)   to fulfill the requirements for the general degree of Bachelor of Science, the degree of Bachelor of Science with major and the Honours Bachelor of Science degree.
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.

(2)   to introduce students in other disciplines to the ideas of Chemistry and provide them with 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.

NOTE: Students failing to complete a laboratory course prior to the date of examination will not be eligible to write the examination.

101.0: AN INTRODUCTION TO CHEMISTRY

Prerequisite: None.
The fundamental laws and principles of Chemistry are explored and applied in the study of selected nonmetals, metals and their compounds.

Lectures: Three hours a week, two semesters.

Laboratory: Three hours a week, two semesters.

CHEMISTRY 201.0: GENERAL CHEMISTRY FOR PHYSICAL SCIENCES

Prerequisites: Chemistry 101.0 or equivalent; Mathematics 210.1 and 211.2 to be taken concurrently.

An introduction to the chemistry of gases, liquids, solids and solutions

Lectures: three hours a week, two semesters.

Laboratory: Three hours a week, two semesters.

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CHEMISTRY 202.0: GENERAL CHEMISTRY FOR LIFE SCIENCES

Prerequisites: Chemistry 101.0 or equivalent; Mathematics 210.1 and 211.2 to be taken concurrently.

A practical introduction for students in life sciences to the chemical behavior of gases, liquids, solids and solutions.

Lectures: Three hours a week, two semesters.

Laboratory: Three hours a week, two semesters.

CHEMISTRY 203.0: GENERAL CHEMISTRY FOR ENGINEERS

Prerequisites: Chemistry 101.0 or equivalent; Mathematics 210.1 and 211.2 to be taken concurrently.

A practical introduction for engineering students to the chemical behavior of gases, liquids, solids and solutions.

Lectures: Three hours a week, two semesters.

Laboratory: Three hours a week, two semesters.

209.0: THE CHEMISTRY OF LIFE: THE HUMAN ELEMENT

Prerequisite: Sophomore standing or permission of the professor.

A course designed for non-science students. Chemical concepts fundamental to understanding the nature of molecules occurring in living systems will be presented. To gain insight into the process of scientific inquiry and how the scientist as a human being affects the course of scientific development, critical stages in the development of atomic and molecular theory and events leading to the formulation of the structure of DNA will be discussed. The unifying theme is that science is not the advance of a monolithic juggernaut but the gradual accomplishment of human endeavor.

This course will not normally be used as credit towards a science degree.

Lectures/Seminars: Three hours per week, two semesters.

311.0: INTRODUCTORY PHYSICAL CHEMISTRY

Prerequisites: Chemistry 201.0; Mathematics 310.0 (this course may be taken concurrently).

Fundamental thermodynamics, electrochemistry, kinetic theory of matter, surface chemistry and catalysis.

CHEMISTRY

Lectures: Three hours a week, two semesters.

Laboratory: Three hours a week, two semesters.

331.0: GEOCHEMISTRY
See Geology 445.0

341.0: CHEMISTRY OF THE ELEMENTS

Prerequisites: Chemistry 201.0

An integrated course in inorganic and organic chemistry emphasizing structure and bonding. Fundamental concepts of organic chemistry are presented in the second semester.

Lectures: Three hours a week, two semesters.

Laboratory: Three hours a week, two semesters.

343.0: ELEMENTARY ORGANIC CHEMISTRY

Prerequisites: Chemistry 201.0 or Chemistry 101.0 with permission of the Chemistry Department.

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.

Lectures: Three hours a week, two semesters.

Laboratory: Three hours a week, two semesters.

371.0: INTRODUCTION TO ENVIRONMENTAL CHEMISTRY

Prerequisite: Chem. 101 or equivalent

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.

Lectures: Three hours a week, two semesters.

Laboratory: Three hours a week, two semesters.

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▮▮▮: PHYSICAL CHEMISTRY

▮▮quisites: Chemistry 311.0; Mathematics, 310.0.

▮▮▮ quantum theory, statistical thermodynamics, chemical kinetics ▮▮ ▮eaction mechanisms.

▮▮▮ures: Three hours a week, two semesters.

▮▮▮ratory: Three hours a week, two semesters.

▮▮▮: ANALYTICAL CHEMISTRY

▮▮quisites: Chemistry 201.0 and one of Chemistry 311.0, 341.0 or ▮▮0.

▮▮trochemical and spectroscopic methods of instrumental analysis ▮▮ an introduction to the techniques of separation chemistry.

▮▮▮ures: Three hours a week, two semesters.

▮▮▮ratory: Three hours a week, two semesters.

▮▮▮: INTERMEDIATE ORGANIC CHEMISTRY

▮▮quisites: Chemistry 341.0 (or Chemistry 343.0 with permission of ▮▮ ▮hemistry Department.)

▮▮ ▮tudy of aliphatic, aromatic and heterocylclic compounds with ▮▮▮hasis on modern methods and concepts in stereochemistry, reaction ▮▮▮anisms and physical properties.

▮▮▮ures: Three hours a week, two semesters.

▮▮▮ratory: Three hours a week, two semesters.

▮▮▮: RESEARCH THESIS

▮▮▮quisites: Restricted to fourth year students in the Honour's ▮▮gram.

▮▮ ▮tudent will carry out a research project under the direction of one ▮ ▮▮e members of the Department, will prepare a thesis on his work ▮▮ will present it orally.

▮▮▮ratory: A minimum of six hours per week, two semesters.

CHEMISTRY

511.0: ADVANCED TOPICS IN PHYSICAL CHEMISTRY

Prerequisites: Chemistry 411.0

A course on special topics selected from advanced areas of physi chemistry.

Lectures: Three hours a week, two semesters.

Laboratory: None.

513.0: QUANTUM CHEMISTRY

Prerequisites: Chemistry 411.0; Physics 210.1, 211.1 and Mathemati 310.0.

Lecture: Three hours a week, two semesters.

Laboratory:None.

531.0: SELECTED CHAPTERS IN INSTRUMENTAL ANALYSIS

Prerequisites: Chemistry 431.0

A lecture-seminar-laboratory course designed to present topic electronic circuits, radio-chemistry, spectroscopy and electrochemis

Lectures and Laboratory: Five hours per week, two semesters.

541.0: ADVANCED ORGANIC CHEMISTRY

Prerequisites: Chemistry 441.0 and Chemistry 411.0 (the latter may taken concurrently).

Selected topics in stereochemistry, heterocylic compounds, natu products and polymers. In the laboratory the student will perf selected synthesis and characterize structure by spectroscopic meth

Lectures: Three hours a week, two semesters.

Laboratory: Three hours a week, two semesters.

CLASSICS

M.J. O'Donnell, S.J.   Associate Professor
Geraldine T. Thomas   Lecturer
Vincent McB. Tobin   Assistant Professor

LATIN

LATIN 100.0

A course in the essentials of Latin for students who have not completed Matriculation Latin.

Text: Latin Course for Schools, Part 1 and Part II, Ch. 1 — 27. — Wilding.

Lectures: Four hours a week, two semesters.

LATIN 101.0: FIRST YEAR COLLEGE LATIN

Prerequisite: Matriculation Latin.

A thorough study of Latin syntax with selections from various author exemplifying the syntax explained in the given chapter.

Texts: Cicero's Pro Archia. Latin Course For Schools, Part II, Ch. 27 to end and Part III — Wilding.

Lectures: Three hours a week, two semesters.

LATIN 201.0: INTRODUCTION TO LATIN EPIC POETRY

Emphasis is placed on the exact rendering of the thought content into idiomatic English. Prose composition stresses the exact rendering of English into idiomatic Latin.

Texts: Outline of Latin Prose Composition — Vincent and Mountford; Aeneid II, IV — Vergil; Aeneid (complete, in translation).

Lectures: Three hours a week, two semesters.

LATIN 301.0: THE POETRY OF HORACE

A critical analysis and appreciation of Horace's art and ideals. Prose Composition.

Texts: Odes, Satires, Ars Poetica — Horace

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CLASSICS

LATIN 401.0:

A tutorial course on Tacitus, Livy and Juvenal. Roman history from Augustus to the beginning of the middle ages.

LATIN 402.0: CICERO'S RHETORIC

An intensive study of Cicero's Rhetoric.

Prose Composition.

Texts: Pro Lege Manilia, Pro Marcello, Pro Ligario

LATIN 403.0:

A tutorial course on Cicero (De Amicitia, De Senectute) and Lucret (De Rerum Natura).

LATIN 404.0:

A tutorial course, the content of which may be varied according to the needs and interests of the student. Directed readings and research.

GREEK

GREEK 101.0: INTRODUCTORY GREEK

An introductory course covering the major grammatical points of the Greek language. This is a special programmed Greek course, placing emphasis on the oral aspects of language learning.

Lectures: Three hours per week, plus Language Laboratory.

This course will be followed in succeeding years by more advanced courses in the reading and interpretation of Classical authors.

GREEK 201.0 – SECOND YEAR GREEK

Prerequisite: Greek 101.0

An application of the major grammatical points of the Greek Language through the reading of the selected of classical authors:

        i.Homer (Iliad)
        ii. Xenophon (Anabasis)
        iii. the dramatists
        iv. lyric poetry

Lectures: Three hours a week, two semesters.

CLASSICAL LITERATURE

CLASSICS 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 programme, and also to students of ancient history.

Texts: Various selections from the Classical writers of Greece and Rome.

Lectures: Three hours a week (or equivalent).

CLASSICS 250.0: GREEK PHILOSOPHY

See Philosophy 250.0.

CLASSICAL HISTORY

CLASSICS 120.0: THE CLASSICAL CIVILIZATIONS OF GREECE AND ROME

A general survey of the civilizations of ancient Greece and Rome with particular regard to political organization and cultural contribution to modern western society.

Lectures: Three hours a week.

CLASSICS 303.0: HISTORY OF GREECE

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 Classics 304.0, which deals in the same manner with the history of Rome. This course may also be used as a history credit.

Lectures: Three hours a week (or equivalent).

CLASSICS 304.0: HISTORY OF ROME

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 Classics 303.0 which deals in the same manner with the history of Greece. This course may also be used as a history credit.

Lectures: Three hours a week (or equivalent).

CLASSICS 305.0: HELLENISTIC HISTORY

Prerequisite: one course in Classics or history. Other students may be admitted at the discretion of the instructor.

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 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.

Lectures: Three hours a week or equivalent.

CLASSICS 310.0: HISTORY OF ISRAEL

A study of the history of the ancient Hebrew kingdoms of Israel and Judah from the earliest settlements in Palestine until the fall of Jerusalem in 70 A.D.

Lectures: Three hours per week or equivalent.

CLASSICS 334.0: ROMAN HISTORY THROUGH READING

Prerequisite: Classics 120.0 or Classics 304.0 or permission of instructor.

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.

Lectures: Three hours per week or equivalent.

COMMERCIAL LAW

300.0: COMMERCIAL LAW

Meaning of law; contracts; special types of contracts; real property; mortgages; partnerships; corporations; credit transactions; statutes affecting business taxation.

Lectures: Three hours a week, two semesters, full course.

301.1: LEGAL ASPECTS OF BUSINESS, PART I

An introduction to the essential legal aspects of commerce; contracts;

special contracts; corporations; and special areas, such as combines, tax and tariff legislation.

Lectures: Three hours a week, one semester, half course.

302.2: LEGAL ASPECTS OF BUSINESS, PART II

Prerequisite: Legal Aspects of Business, Part I, 301.1

A further examination of some of the legal aspects of commerce. Some of the areas included are impeachment of contract, the requirement of writing, discharge of contracts, assignment of contracts, bailment, insurance, guarantee and landlord and tenancy.

Lectures: Three hours a week, one semester, half course.

ECONOMICS

R.L. Ruth	Associate Professor, Chairman
P.R. Coelho	Assistant Professor
E.J. Doak	Assistant Professor
I.A. Mirza	Assistant Professor
R. Narayanan	Assistant Professor
L.B. Shaw	Assistant Professor
S. Swianiewicz	Professor
J.J. Vorstermans	Professor

Recommended courses leading to a B. Comm. with a major in Economics.

First Year

English* 110.0 or 130.0 or 201.0
Mathematics 113.0*
Economics 101.0 or 102.0
Elective
Elective

Second Year

Business Administration 240.0*
Business Administration 280.0*
Economics 202.0*
Economics 203.1* – 204.2*
English* 130.0 or 201.0
or 300.0/310.0

Third Year

Legal Aspects of Business
Part I, 301.1 or .2*
Economics Elective (s)* +
Economics 300.1* – 301.2*
Philosophy 201.0/209.0
Elective (s)

Fourth Year

Economics Elective (s)* +
Elective (s)
Elective (s)
Elective (s)
Elective (s)

*Required Course

+ Students intending to pursue graduate studies are advised to take both Economics 302.0 and Economics 303.0,

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ECONOMICS

Recommended courses leading to a B.A. with a Major in Economics.

First Year	Second Year
Economics 101.0 or 102.0	Economics 202.0*
English 110.0 or 130.0	Economics 203.1* – 204.2*
Mathematics 113.0	English 130.0 or 201.0
Elective	History 111 (120) or 202
Elective	Philosophy 201.0/209.0

Third Year	Fourth Year
Economics 300.1* – 301.2*	Economics Elective (s)* +
Economics Elective (s)* +	Elective (s)
Elective (s)	Elective (s)
Elective (s)	Elective (s)
Elective (s)	Elective (s)

*Required Course

+Students intending to pursue graduate studies are advised to take both Economics 302.0 and Economics 303.0.

NOTE: Requests for waiving a course pre-requisite should be made to the Department.

101.0: ECONOMIC HISTORY OF EUROPE

The economic history of Europe from the Aegean civilizations to the establishment of the Common Market. Stages of economic growth; birth of European civilization; medieval economic society; mercantilism; the first Industrial Revolution; laissez-faire and industrial capitalism; Europe since 1914.

Lectures: Three hours a week, two semesters, full course.

102.0: ECONOMIC THEORY IN HISTORICAL PERSPECTIVE

A course in the development of modern economic society with particular emphasis on the Canadian and U.S. economies. The presentation of microeconomic and macroeconomic theory, problems and policies is designed for students not planning to major in economics.

Lectures: Three hours a week, two semesters, full course.

202.0: PRINCIPLES OF ECONOMICS

An introduction to economic analysis covering macroeconomic theory; national income determination; national accounting; business fluct

...; money and banking; international economics; economic growth; ...omic policy; general price theory; theory of the firm; market ...ures; production, cost, revenue and profit maximization; theory of ...bution.

...res: Three hours a week, two semesters, full course.

...3.1: INTRODUCTORY MATHEMATICS FOR ECONOMISTS

...quisite: Mathematics 113.0 or Grade XII Mathematics.

...troduction to certain basic mathematical tools of interest to ...mists. The course is designed especially for potential economics ...rs.

...res: Three hours a week, one semester — half course.

...2: INTRODUCTORY STATISTICS FOR COMMERCE

...quisite: Mathematics 113.0 or Grade XII Mathematics.

...troduction to probability and statistics with emphasis on business ...onomic applications.

...res: Three hours a week, one semester; laboratory one hour a ...k — half course.

...TE: This is the same course as Business Administration 204.1 or ...4.2.

...0.1 and 300.2: INTERMEDIATE MICROECONOMIC THEORY

...quisite: Economics 202.0 (also, 203.1 — 1972-73 Academic Year).

...ory of consumer behavior and demand; theory of production and ...; behavior of the firm under different market structures; theory of ...ome distribution; general equilibrium; welfare economics.

...tures: Three hours a week, one semester — half course.

...1.1 and 301.2: INTERMEDIATE MACROECONOMIC THEORY

...quisite: Economics 202.0 (also, 203.1 — 1972-73 Academic Year).

...onal income accounting; models of aggregate demand and income ...rmination; theory of prices, wages and employment; models of ...nomic growth; international aspects.

...tures: Three hours a week one semester — half course.

ECONOMICS

302.0: MATHEMATICAL ECONOMICS

Prerequisites: Mathematics 113.0, Economics 202.0 (Also, Economics 203.1 − 204.2, 1972-73 Academic Year).

An introduction to the mathematical approach to economic analysis. Approximately half of the course will be devoted to topics from microeconomics. The other half will deal with aggregative models of short-run and long-run problems.

Lectures: Three hours a week, two semesters, full course.

303.0: ECONOMIC STATISTICS

Prerequisite: Economics 202.0 (Also, Economics 203.1 − 204.2 1972-73 Academic Year)

Functions of statistical methods; collection; analysis and interpretation of statistical data; frequency distribution; measures of central tendency and dispersion; binomial, normal, and sampling distributions; testing hypotheses and estimations or parameters; index numbers; time series regression and correlation analysis.

Lectures: Three hours a week, two semesters. One hour lab per week, full course.

304.1: ECONOMIC HISTORY OF NORTH AMERICA

Prerequisite: Economics 202.0

This course acquaints students with the leading events and processes in 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, labour organizations, investments and trade patterns.

Lectures: Three hours a week, one semester − half course.

305.0: THE DEVELOPMENT OF THE MODERN EUROPEAN ECONOMY

Prerequisite: Economics 202.0 or permission of the instructor.

A study of the economic history of the rise of Europe from the Middle Ages to the present, with special emphasis on the rise of capitalism and industrial revolutions in Great Britain, France and Germany.

Lectures: Three hours a week, two semesters, full course.

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MONEY AND BANKING

Prerequisite: Economics 202.0

Money, its standards, supply and value; inflation and foreign exchange; Canadian Banking System and other banking systems and public finance; international monetary problems and their solutions; developments in international trade.

Lectures: Three hours a week, two semesters, full course.

DEVELOPMENT ECONOMICS

Prerequisite: Economics 202.0

Alternative theories of growth and development; economic structures of developing and developed countries; economic and non-economic determinants of growth; development policy; role of government, monetary policy, foreign trade and foreign aid; some lessons of experience in growth and change.

Lectures: Three hours a week, two semesters, full course.

DEVELOPMENT OF ECONOMIC IDEAS

Prerequisite: Economics 202.0

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.

Lectures: Three hours a week, two semesters, full course.

313.1 or (313.2): INTERNATIONAL FINANCE

Prerequisite: Economics 202.0

An introduction to the theory, institutions, and history of international finance: balance of payments; foreign exchange rates, instruments, and markets; international banking, adjustment mechanisms; stabilization policy.

Lectures: Three hours a week, one semester, half course.

314.1 or (314.2): INTERNATIONAL TRADE

Prerequisite: Economics 202.0

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.

Lectures: Three hours a week, one semester, half course.

315.0: COMPARATIVE ECONOMIC SYSTEMS

Prerequisite: Economics 202.0

Analysis of the differences in decision-making and in the institutional framework of the three basic types of contemporary economies: (1) those produced by the North Atlantic civilization; (2) those built up as consequence of the imposition of the Communist doctrine; (3) those marked by the underdevelopment prevailing in Asia, the Middle East and the subtropical areas of the world.

Lectures: Three hours a week, two semesters, full course

316.0: INDUSTRIAL ORGANIZATION

Prerequisite: Economics 202.0 and 300.1 or 300.2

The concept of industry; institutional forms of economic units; market structure; policies for promotion of competition; the methods of governmental control of key industries; international aspects of industrial organization.

Lectures: Three hours a week, two semesters, full course.

318.1 or (318.2): INTRODUCTION TO PUBLIC FINANCE

Prerequisite: Economics 202.0

An introduction to the theory of public finance; emphasis is placed on the classical approach of governmental spending and taxing power affecting the distribution of income, the allocation of resources and the stabilization of national income.

Lectures: Three hours a week, one semester, half course.

319.0: LABOUR ECONOMICS

Prerequisite: Economics 202.0 or permission of the instructor.

Factors affecting wages, working conditions and employment in industrial societies; the role of market forces and collective bargaining in wage determination; the development of labour unions and collective bargaining in Canada, the United States and Europe; the effect of

labour unions on the economy; our changing labour force and manpower policies for the future.

Lectures: Three hours a week, two semesters, full course.

320.1 or (320.2): THE CANADIAN FINANCIAL SYSTEM.

Prerequisite: Economics 202.

General nature of the financial system; historical trends in financial institutions and ideas; elements of financial theory; private financial institutions; government financial institutions.

Lectures: Three hours a week, one semester, half course.

321.1 or (321.2): THE CANADIAN ECONOMY SEMINAR

Prerequisite: Economics 202.0

A course on current economic issues in Canada: population and labour force; unemployment; inflation; international trade, balance of payments and foreign exchange rates; regional economic disparities; poverty, the business cycle; monetary and fiscal policy; government lending institutions; income security programs; pollution; housing and urban problems.

Lectures: Three hours a week, one semester, half course.

323.0: SOVIET-TYPE ECONOMIES

Prerequisite: Economics 202.0

This course will cover such topics as the following: 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; the Soviet-Type Economies in Asia.

Philosophy 209 Marxist Philosophy, is an appropriate supporting Humanities elective for this course.

Lectures: Three hours a week, two semesters, full course.

ECONOMICS

330.1 or (330.2): REGIONAL ECONOMICS

Prerequisite: Economics 202.0

An introduction to regional economics. Topics covered will include location theory, the economics of natural resources and urban areas, and problems associated with the development and application of public policies in a regional economy. The course attempts to impart to the student some knowledge of the complexity and breadth of the problems which a regional economy faces.

Lectures: Three hours a week, one semester, half course.

419.1 or (419.2): ISSUES IN PUBLIC FINANCE

Prerequisite: Economics 318.1 or .2. Introduction to Public Finance or Economics 300 and Economics 301.

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 also introduces modern welfare economics.

Lectures: Three hours a week, one semester, half course.

440.1: ADVANCED MICROECONOMICS

Prerequisite: Economics 300.1 or 300.2

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 the decision making models.

Lectures: Three hours a week, one semester – half course.

441.2: ADVANCED MACROECONOMIC THEORY

Prerequisite: Economics 301.1 or 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.

Lectures: Three hours a week, one semester – half course.

2: APPLICATIONS OF CONTEMPORARY ECONOMIC HISTORICAL ANALYSIS

Prerequisites: Economics 300.1 or 300.2 and 301.1 or 301.2 or permission.

Emphasis is given to those issues which relate to the economic growth of the economy of North America. Economic theory is applied in the investigation of these historical problems. The objective of this course is to introduce the student to the methodology and problems of modern economic history, and to develop the student's facility in applying economic theory to the resolution of these problems.

Lectures: Three hours a week, one semester – half course.

0: ADVANCED STUDY IN A SPECIAL SUBJECT: MARKETS AND STABILIZATION POLICY

Prerequisite: Economics 202.0 and permission.

This course is intended to provide members of the department, from time to time, the opportunity of presenting to the students the results of studies the professor has quite recently undertaken.

Lectures: Three hours a week, two semesters, full course.

EDUCATION

D. Weeren	Dean, Associate Professor
Bernard E. Davis	Assistant Professor
F. Phillips	Associate Professor
L. Scobbie	Associate Professor
F. Dockrill	Assistant Professor
P. Keen	Lecturer
B. Hanrahan	Assistant Professor

(B.ED. COURSES)

01.0: PHILOSOPHY OF EDUCATION

A study of fundamental questions about the nature and aims of education.

Sessions: Three hours a week, two semesters.

EDUCATION

502.0: PSYCHOLOGY OF EDUCATION

A study of the nature, equipment, growth, development, evaluation and adjustment of the learner. Psychology 201.0 or equivalent is the normal prerequisite or concurrent requirement but may be waived for students who have completed readings prescribed by the School of Education.

Sessions: Three hours a week, two semesters.

503.0: GENERAL METHODS OF TEACHING

The application of basic principles derivable 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.

Sessions: Three hours a week, two 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.

Sessions: Three hours a week, two 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.

506.0: CONTENTS AND METHODS OF SPECIFIC HIGH SCHOOL SUBJECTS

The seminars comprising this course discuss the concepts and competencies which the junior and senior high school teacher of a given subject should be concerned with developing in his students, and the methods most conducive to that development.

Sessions: Three hours a week, two semesters.

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EDUCATION (M.A. COURSES)

EDUCATION 610.0: RESEARCH TECHNIQUES AND DESIGN OF EXPERIMENTS

This course is an introductory one to educational research, methodology for and the interpretation and use of. 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 theses in progress. Credit for this course will be given on completion of the thesis.

EDUCATION 620.1. or (620.2): CURRICULUM STUDIES

This course will examine the basic assumptions underlying the design of curricula generally and for individual subjects.

This course will normally be taken in conjunction with 631.1, Conceptualisations of psychological development.

EDUCATION 621.1 or (621.2): PROBLEMS IN CURRICULUM

Prerequisite: Education 620.1, or (620.2) Curriculum studies or equivalent (or with permission of the professor).

This course will deal with such questions as the suitability of texts for grade levels, the applicability of curriculum material to grade levels and the aims of the community.

PSYCHOLOGY 630.1 or (630.2): PRINCIPLES OF LEARNING

Prerequisites: Psychology 301.0, Psychology of Learning; Education 320.0, Educational Psychology or the permission of the Professor.

A seminar course which discusses the basic tenets of modern learning theory as developed through the findings of experimental psychology. The following topics are dealt with: development of learning theory, conditioning, reinforcement, stimulus control of behaviour, punishment and memory.

PSYCHOLOGY 631.1 or (631.2): SPECIAL ASPECTS OF LEARNING

Prerequisite: Psychology 630.1, or (630.2). Principles of Learning or equivalent (or permission of the professor).

A seminar course which discusses topics dealt with by current learning theories, 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.

EDUCATION

PSYCHOLOGY 632.1 or (632.2): CONCEPTUALISATIONS OF PSYCHOLOGICAL DEVELOPMENT

Prerequisite: Minimally, Education 502.0, Educational Psychology, or equivalent (or permission of the professor).

A seminar course dealing with the main theoretical orientations in the fields of intellectual, emotional, social and moral development. The application of these conceptualisations in the school and community situations will be carefully examined. This course should be taken conjointly with 620.1 or (620.2). Curriculum studies, and 621.1 or (621.2), Problems in Curriculum.

PSYCHOLOGY 633.1 or (633.2): PSYCHOPATHOLOGY OF DEVELOPMENT

Prerequisites: Education 402.0, Educational Psychology, Psychology 532.1 or (532.2), Conceptualisations of Development, Psychology 630.1 or (630.2), Principles of Learning, or equivalents, (or permission of the professor).

A seminar course studying anomalies in development and learning and examining these as they affect school and social learning.

PSYCHOLOGY 639.0: SOCIAL PSYCHOLOGY

Prerequisite: Education 502.0 (Psychology of Education) and Psychology 410.0 (Social Psychology), or the permission of the professor.

A seminar course which deals with the findings of experimental social psychology and the attempt to explain social behavior in terms of learning theory. The following are examples of the type of topic dealt with: theories of cognitive consistency, perception of persons, attitude development and change, prejudice, communication, game theory. The classroom is a social situation and application of the findings discussed will be encouraged.

PHILOSOPHY 640.1 or (640.2): PHILOSOPHY OF EDUCATION PHILOSOPHICAL CRITIQUE OF MOTIVATION (I)

A lecture and seminar course on 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, et al. on the nature of love, and more precisely, a consideration of the nature of the affective relation between student and teacher.

PHILOSOPHY 641.1 or (641.2): PHILOSOPHY OF EDUCATION: PHILOSOPHICAL CRITIQUE OF MOTIVATION (II)

The course is a problematic approach to the affective features of concrete learning situations. Some works used are *Education and Freedom to Learn,* and *Existential Ecnounters for Teachers.*

PHILOSOPHY 642.1 or (642.2): PROBLEMS OF EDUCATIONAL PHILOSOPHY

An introduction to philosophical thought about education at the graduate level.

PHILOSOPHY 643.1 or (643.2): PHILOSOPHY OF EDUCATIONAL PROBLEMS

A philosophic investigation of problematic issues in contemporary education.

PHILOSOPHY 644.1 or (644.2): DEVELOPMENTS IN THE SCIENCE AND PHILOSOPHY OF LANGUAGE

An introduction to transformational grammar, logic, and logical structures in English, semantics, and some of the results of descriptive linguistics. Developments in philosophy relevant to the scientific investigation of language are stressed.

PHILOSOPHY 645.1 or (645.2): PROBLEMS IN THE PHILOSOPHY OF LANGUAGE

Investigation of selected issues in the philosophic study of language.

PHILOSOPHY 646.1 or (646.2): APPLICATIONS OF THE SCIENCE AND PHILOSOPHY OF LANGUAGE TO THE TEACHING OF ENGLISH

Prerequisite: Philosophy 644.1 or (644.2) Developments in the Science and Philosophy of language, or equivalent (or permission of the professor).

Investigation of the use of the results of the scientific and philosophic investigation of language in the improvement of the English curriculum.

EDUCATION

PHILOSOPHY 647.1 (647.2): 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.*

PHILOSOPHY 648.1 or (648.2): THEORY OF KNOWLEDGE (II)

The course considers 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.*

EDUCATION 650.1 or (650.2): INTRODUCTION TO COMPARATIVE EDUCATION

This course will acquaint the student with the principal characteristics of education in a number of countries and areas outside Nova Scotia, with the methodology and bibliographical tools of Comparative Education, and with the utility of Comparative Education for the practising teacher and administrator.

EDUCATION 651.1 or (651.2): PROBLEMS IN COMPARATIVE EDUCATION

Prerequisite: Education 650.1 or (650.2) Introduction to Comparative Education, or equivalent (or permission of the professor).

This course will pursue selected educational problems with the aid of the discipline of Comparative Education.

EDUCATION 652.1 or (652.2): ADVANCED COMPARATIVE EDUCATION

Prerequisite: Education 650.1 or 650.2 Introduction to Comparative Education or equivalent (or permission of the professor).

An intensive study of the history, methodology and current status of Comparative Education.

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EDUCATION 653.1 or (653.2): COMPARATIVE EDUCATION: ANGLO-AMERICAN

Prerequisite: Education 650.1 or (650.2) Introduction to Comparative Education, or equivalent (or permission of the professor).

A comparative study of the education systems of selected English-speaking countries.

EDUCATION 654.1 or (654.2): COMPARATIVE EDUCATION: CONTINENTAL

Prerequisite: Education 650.1 or 650.2) Introduction to Comparative Education or equivalent (or permission of the professor).

A comparative study of the education systems of selected Continental European countries, including France, and selected societies with related educational roots, including French-Canada.

EDUCATION 660.1 or (660.2): INTRODUCTION TO EDUCATIONAL ADMINISTRATION

This course will deal with the general theory of administration, covering such topics as decision making, planning, role of authority, etc., attempting to develop in students techniques and procedures for analyzing and meeting administrative problems.

EDUCATION 661.1 or (661.2): PROBLEMS IN ADMINISTRATION

This course will consist of the practical application of the principles examined in 660.1 or (660.2), particular consideration being given to administrative problems relating to personnel, pupils, buildings, instructional materials and financing.

EDUCATION 662.1 or (662.2): INTRODUCTION TO SUPERVISION

This course will examine the part played by Supervisors in building up an efficient administrative organization, together with such topics as leadership, changing concepts of supervision, teacher expectations of Supervisors, and problems relating to teachers.

EDUCATION 633.1 or (633.2): PROBLEMS IN SUPERVISION

This course will examine and analyze 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.

ENGINEERING

Ryan, J.L.	Professor
Warner, Donald B.	Associate Professor
Grantham, D.A.	Assistant Professor
Reddy, V.R.	Assistant Professor
Mulrooney, D.L.	Assistant Professor
Bowes, H.G.	Instructor

103.2: SURVEYING FIELD COURSE

Prerequisite: Engineering 113.1

Practical surveying problems; the orderly compilation and recording of survey data. Transit and tape surveys, curve layouts, different levelling. Profile plots and contour mapping. Astronomical observation.

Text: To be announced.

106.1: ENGINEERING DESIGN GRAPHICS

Engineering drawing and sketching with emphasis on sketching, analysis and synthesis of problems by using graphical methods as part of the design process, reading drawings, simple design projects.

Text: Engineering Design Graphics – James H. Earle, (Addison Wesley Publishing Company)
Engineering Graphics and Design Problems – Earle, Cleland, Stark, Mason, Bardell, Vogel, and Guerard (Addison Wesley Publishing Company)

Lectures: Two hours a week, one semester.

Laboratory: Three hours a week, one semester.

107.2: DESIGN AND DESCRIPTIVE GEOMETRY PROBLEMS

Prerequisite: Engineering 106.1.

Basic Descriptive Geometry, plotting graphs and nomographs, graphical analysis and curve fitting, team design, projects with emphasis on creativity.

Text: Engineering Design Graphics as for Engineering 106.1.
Design and Descriptive Geometry Problems – Earle, Cleland, Stark, Mason, Bardell, Vogel, and Guerard (Addison Wesley).

Lectures: Two hours a week, one semester.

Laboratory: Three hours a week, one semester.

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106.1 PRINCIPLES OF ENGINEERING

Prerequisite: None.

A course for freshmen which discusses the philosophy of design and introduces the concepts of energy, economics and human factors and how these concepts are used by engineers in the solution of problems. Solution techniques indicated include an introduction to computer programming.

Lectures: Three hours a week. One semester.

Laboratory: Three hours a week.

131.1: SURVEYING

Prerequisite: None

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, applications of astronomy to engineering.

Lectures: Three hours a week, one semester.

190.0: TECHNOLOGY IN SOCIETY

Prerequisite: None

This course is designed to give non-engineering students a more "Liberal" Education by providing a basis for the student to become functionally literate with respect to Science, Engineering and Technology.

Outline: Energy Resources and Consumption; Engineering and Productivity; Materials in Modern Technology: Pollution; Communications; Computers; Urban Planning; Transportation; Technology and the Maritime Economy.

Lectures: Three hours lectures/week, two semesters.

203.1 (203.2): ENGINEERING MECHANICS (STATICS)

Prerequisites: Engineering 106.1, Engineering 107.2, Mathematics 210.1, 211.2 concurrently.

ENGINEERING

Equilibrium polygon and polygonal frames for all systems of loads; graphical representation of shear and moment for non-continuous beams; roof trusses, bents, including dead and live loads with fixed ends and ends on rollers; simple cantilevers.

Text: Mechanics for Engineers — Beer & Johnson.

Lectures: Three hours a week, one semester.

Laboratory: Three hours a week, one semester.

204.1 (204.2): COMPUTER SCIENCE

Prerequisites: Math 110.1, 111.2.

An introduction to computer methods and the analysis of Engineering problems using the computer, including: introduction, history, philosophy, Number Systems, Computer logic, logic circuits, the physical computer components, machine language and finally Fortran IV Language.

Text: To be announced.

Lectures: Three hours a week, one semester.

Laboratory: Three hours a week, one semester.

212.2: ENGINEERING MEASUREMENTS

Prerequisite: Math 210.1, 211.2 (concurrently)

This course presents the theory of measurements and applications of probability and statistics to measurements. Analysis of experimental data is included. The generalized measurement system is discussed and examples are presented. Lab work emphasizes ingenious use of measurement systems involving creativity, synthesis and analysis.

Lectures: Three hours a week, one semester.

Laboratory: Three hours a week, one semester.

220.0: POLLUTION CONTROL

Prerequisite: Second year standing.

An introduction to the fundamental concepts of pollution control. The problems of water, air, soil pollution and noise are presented and discussed from various points of view: pollutant characteristics and effects on the environment and on public health; the technology of

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▓▓▓ ▓eatment and pollution▴control; legal controls; resource manage-
▓▓▓ ▓ciological considerations. The course is open to students of all
▓▓▓▓es. Pollution control experience in Nova Scotia will be used to
▓▓▓▓te course material where applicable.

▓▓▓▓▓: Two hours lecture, one hour seminar/week. Two semesters.

▓▓▓ ENGINEERING MECHANICS (DYNAMICS)

▓▓▓▓isites: Mathematics 210.1 and 211.2, Mathematics 311.0
▓▓▓rrently).

▓▓▓, friction, determination of centroids and moments of inertia.
▓▓▓near, curvilinear and rotational motion of particles and solid
▓▓▓es; work, energy and power, impulse and momentum.

▓▓▓ Mechanics For Engineers – Beer & Johnson.

▓▓▓res: Three hours a week, two semesters.

▓▓.1: FLUID MECHANICS

▓▓quisite: Mathematics 210.1 and 211.2

▓ study of fundamentals of fluid mechanics based on an engineering
▓▓nce approach to compressible and incompressible fluids. Fluid
▓▓rties and characteristics; fluid statics; conservation of mass and
▓▓gy; Euler's equation of motion and Bernoulli's equation, impulse
▓▓mentum in steady flow and introduction to the boundary layer
▓▓ept.

▓xt: Principles of Fluid Mechanics—Kenyon (Ronald)

▓ctures: Three hours a week, one semester.

▓boratory: Three hours a week, one semester.

▓▓.2: MECHANICS OF DEFORMABLE BODIES

▓▓requisite: Engineering 203.1 or 203.2, Mathematics 210.1 and
211.2.
▓Stress & Strain —Concepts & Definitions
▓Fundamentals of Elasticity
–Torsional Loading
▓Flexural Loading
▓Statically Indeterminate Structures

ENGINEERING

—Columns
—Combined Stresses & Strains
—Connections

Text: "Mechanics of Materials" 2nd Edition — Higdon, Olsen, Stiles & Weese

Lectures: Three hours a week, one semester
Laboratory: Three hours a week, one semester.

306.2: ENGINEERING THERMODYNAMICS

Prerequisites: Physics 321.0, Mathematics 210.1 and 211.2.

The development of the general energy equation and the First Law; the Carnet Cycle and the development of the entropy concepts, steam power plants, refrigeration and gas engine applications.

Text: Thermodynamics — Van Wylen (Wiley)

Lectures: Three hours a week, one semester.

Laboratory: Three hours a week, one semester.

307.0: ENERGY CONVERSION

Prerequisites: Mathematics 210.1, 211.2, Physics 221.0, Engineering 306.2, Engineering 303.1 (may be taken concurrently).

Theoretical heat engine cycles, modification of theoretical cycle in practice. Principles of operation of steam engine; steam nozzles and turbines; gas turbines and elementary jet propulsion. Reciprocating pumps, centrifugal pumps; water turbines; impulse and reaction turbines.

Text: To be announced.

Lectures: Three hours a week, two semesters.

308.0: SYSTEM DYNAMICS

Prerequisites: Physics 111.0, 221.0, Mathematics 310.0 (concurrently)

A unified treatment of electrical and mechanical systems. Circuit elements: single energy-port and two energy-port elements. Generalized continuity and compatibility: Kirchoff's current and voltage laws, conservation of mass, momentum and energy. Formulation of differential equations; loop and node methods. Solution of equations

▒▒▒al and LaPlace transform methods and basic circuit measurement. ▒▒▒ient and frequency analysis of linear systems. Simulation and ▒▒▒ solution of a variety of engineering problems.

▒▒▒: Introduction to System Dynamics — Shearer, Murphy· and ▒▒▒dson (Addison Wesley, 1967).

▒▒▒res: Three hours a week, two semesters.

▒▒▒vised Problem Sessions: Three hours a week, two semesters.

▒▒▒1: ENGINEERING MATERIALS

▒▒▒quisite: Chemistry 201.0, Physics 221.0, Mathematics 210.1 & ▒▒1.2.
—▒▒roductory Principles
—Structure of Solid Phases
—▒▒omic Processes in Solids
—Electrical Processes in Solids
—▒▒ltiphase Materials
—▒▒terials utilization

▒▒▒: "Materials Science for Engineers" — L.W. Van Vlack

▒▒▒res: Three hours a week, one semester

▒▒▒oratory: Three hours a week, one semester.

ENGLISH

▒▒▒er H. Crowther	Associate Professor (Chairman)
▒▒▒t Baker	Assistant Professor
▒▒ril J. Byrne	Assistant Professor
▒▒ian Falk	Assistant Professor
▒▒omas Edward Flynn	Associate Professor
▒▒hn Geoffrey Harrison	Associate Professor
▒▒nis P. Healy	Assistant Professor
▒▒chael Larsen	Lecturer
▒▒ger A. MacDonald	Assistant Professor
▒▒nneth MacKinnon	Assistant Professor
▒▒vid H. Parkin	Assistant Professor
▒▒chard Perkyns	Assistant Professor
▒▒vid Pigot	Assistant Professor

ENGLISH

John Power, S.J.	Assistant Professor
Andrew T. Seaman	Assistant Professor
John K. Snyder	Assistant Professor
Christopher J. Terry	Assistant Professor
Kathleen R. Tudor	Assistant Professor
Terrance A. Whalen	Assistant Professor

NOTE: English 201.0 normally will be prerequisite to all higher English courses.

Only one course at the level 300.0 to 310.0 may be included in a student's minimum requirement for a major.

Students planning to register for higher English courses are requested to enquire at the department office for advance reading lists.

110.0
Students eligible for advance standing in English will be given this number for a course credit.

130.0: CRITICAL READING AND WRITING

Prerequisite: Admission to this course is based on the result of the English Department's Introductory English allocation test.

This course will aim to refine standards of comprehension and expression, and encourage independent evaluation of a wide range of written material.

Texts: To be announced.

Lectures: Three hours a week, two semesters.

201.0: THE EVALUATION OF LITERATURE

Prerequisite: Admission to this course is based on the result of the English Department's Introductory English allocation test or upon successful completion of English 130.0.

This course will provide an introduction to the methods of practical criticism. Through the study of selected works of various periods of literary history, students will be encouraged to recognize the principles upon which those methods can be based.

Text: To be announced.

Lectures: Three hours a week; two semesters.

250.0: LITERATURE SEMINAR FOR MAJORS

Prerequisite: A (B) grade average in English 130.0 or equivalent. This course also requires that: a) the student intend to major in English and b) that he has completed or is concurrently enrolled in English 201.0.

This course is organized in substance as a practical criticism course. The course will include at least four novels, four plays, and an anthology of poetry. All members of the department are involved in the teaching. As a result, students majoring in English will be exposed to the various points of view in the department before doing advanced work.

Text: To be announced.

Lectures: Two hours a week; two semesters.

300.0: COMPARATIVE LITERATURE: EUROPE

Prerequisite: English 201.0.

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.

Text: To be announced.

Lectures: Three hours a week; two semesters.

301.0: THE MODERN NOUVELLE

Prerequisite: English 201.0.

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 characterise the modern imaginative and cultural consciousness of the West.

To examine, within this broader cultural context, the manner in which those literary conventions, elements and emphases characteristic of the novel in general and of the nouvelle in particular lend themselves with peculiar appropriateness to the imaginative illumination of certain important areas of contemporary emotional, moral and social experience.

Text: To be announced.

Lectures: Three hours a week; two semesters.

ENGLISH

302.0: CONTEMPORARY CANADIAN LITERATURE

Prerequisite: English 201.0

Though the whole purpose of this course is to create an exploratory and experimental atmosphere, this purpose would also include 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 might include: Callaghan, MacLennan, Ross, Ringuet, Buckler, Garner, Richler, Moore, M. Atwood, Margaret Laurence, Nowlan, Purdy, Layton, and others.

Text: To be announced.

Lectures: Three hours a week: two semesters.

303.0: SHAKESPEARE

Prerequisite: English 201.0 or equivalent.

Provisionally, intensive study will be required of the following texts: Love's Labour's Lost; The Merchant of Venice; Twelfth Night, As You Like It; Hamlet; Othello; Anthony and Cleopatra; The Winter's Tale. Reference will be made to other Shakespearian plays, and to such literary background material of the Elizabethan period as will enrich the study of the major texts.

Text: To be announced.

Lectures: Three hours a week; two semesters.

304.0: THE DEVELOPMENT OF DRAMA IN THE THEATRE

Prerequisite: English 201.0.

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 origin 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.

Text: To be announced.

Lectures: Three hours a week; two semesters.

305.0: INTRODUCTION TO LINGUISTICS

Prerequisite: English 201.0.

The course surveys past and present approaches to linguistic science with reference to phonetics, phonemics, morphology, syntax, semantics, and classification of languages.

Text: To be announced.

Lectures: Three hours a week; two semesters.

306.0: RELIGION AND DRAMA (See Religious Studies 305.0)

Prerequisite: English 201.0.

307.0: RELIGION IN 20th CENTURY POETRY (See Religious Studies 336.0)

Prerequisite: English 201.0

350.0: HISTORY OF THE ENGLISH LANGUAGE

Prerequisite: English 201.0

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.

Text: To be announced.

Lectures: Three hours a week; two semesters.

351.0: MIDDLE ENGLISH 1100 to 1400

Prerequisite: English 201.0

A course intending to give students the groundwork of Medieval, both English and European, literary conventions, (Courtly Love, for instance) through a study of texts such as Sir Gawain and the Green Knight, Malory's Morte d'Arthur and to look at the social, political, and religious temper of the period through a study of the text of Langland's Piers Plowman, the Miracle and Morality plays, and the religious and secular lyrics of the period. Students should consult with the professor before registering about a possible co-requisite.

Text: To be announced.

Lectures: Three hours a week; two semesters.

352.0: CHAUCER AND HIS CONTEMPORARIES

Prerequisite: English 201.0.

The course studies the poetry of Chaucer in depth, refers to contemporaries of Chaucer such as Wm. Langland, and may extend to consideration of the 'Scottish Chaucerians'.

Text: To be announced.

Lectures: Three hours a week; two semesters.

353.0: TUDOR POETRY AND PROSE

Prerequisite: English 201.0

A study of the poetry and prose mainly of the Tudor era. Major emphasis will be given to the works of Wyatt, Surrey, Sidney, and Spenser.

Text: To be announced.

Lectures: Three hours a week; two semesters.

354.0: SHAKESPEARE: POEMS AND PLAYS

Prerequisite: English 201.0

An extensive study of Shakespeare's comedies, romances, tragedies and sonnets. This course also involves attention to the background of Elizabethan society and theatre.

Text: To be announced.

Lectures: Three hours a week; two semesters.

355.0: ELIZABETHAN AND JACOBEAN DRAMA

Prerequisite: English 201.0.

This course excludes attention to Shakespeare and concentrates mainly on the dramatic works of Marlowe, Jonson, Beaumont, Fletcher, and Webster.

Text: To be announced.

Lectures: Three hours a week; two semesters.

0: 17th CENTURY POETRY AND PROSE: 1600-1660

Prerequisite: English 201.0.

The basic text will be 17th Century Poetry and Prose. An inquiry into the change of civilization in the English seventeenth century with comparative reference to some contemporary French writers. The inquiry will include the questions, is the poetry of this period worth reading, **what** is worth reading in it, and **why** (or why not) is it worth reading?

Text: 17th Century Poetry & Prose, (Witherspoon & Warnke)

Lectures: Three hours a week; two semesters.

0.0: RESTORATION AND EIGHTEENTH-CENTURY POETRY AND PROSE 1666-1780

Prerequisite: English 201.0.

A study of the central works in the Neo-Classic era. Major attention is given to Dryden, Swift, Pope, and Johnson.

Text: To be announced.

Lectures: Three hours a week; two semesters.

1.0: THE NOVEL: DEFOE TO AUSTEN

Prerequisite: English 201.0.

The origin and development of the English novel. Special emphasis is placed on the works of Defoe, Richardson, and Fielding. The study may also include representative works of Sterne, Smollett, Goldsmith, Mary Shelley, Godwin, several Gothic novelists, and Jane Austen.

Text: To be announced.

Lectures: Three hours a week; two semesters.

2.0: THE NINETEENTH CENTURY NOVEL

Prerequisite: English 201.0.

Authors may include Jane Austen, Dickens, Thackeray, The Brontës, George Eliot, Hardy, Meredith, James.

Text: To be announced.

Lectures: Three hours a week; two semesters.

403.0: ROMANTIC POETRY

Prerequisite: English 201.0

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.

Text: To be announced.

Lectures: Three hours a week; two semesters.

404.0: VICTORIAN POETRY AND PROSE

Prerequisite: English 201.0.

The course is designed to acquaint students with the attitudes and ideas of the writers in the Victorian period. Arnold, Browning, and Tennyson are studied in depth.

Text: To be announced.

Lectures: Three hours a week; two semesters.

405.0: NINETEENTH-CENTURY NORTH AMERICAN LITERATURE

Prerequisite: English 201.0.

Major writers of the 19th century. Critical readings of works by Cooper, Hawthorne, Melville, Emerson, Thoreau, Whitman, Emily Dickinson, James.

Text: To be announced.

Lectures: Three hours a week; two semesters.

406.0: TWENTIETH-CENTURY NORTH AMERICAN LITERATURE

Prerequisite: English 201.0.

Representative figures in the modernist tradition. A consideration of the work and place of such writers as Dreiser, Hemingway, Faulkner, Fitzgerald, Mailer, Pynchon; in poetry that of T.S. Eliot, Robert Frost, Hart Crane, and others.

Text: To be announced.

Lectures: Three hours a week; two semesters.

MODERN ENGLISH POETRY

Prerequisite: English 201.0 .

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.

Text: To be announced.

Lectures: Three hours a week; two semesters.

408.0: TWENTIETH CENTURY DRAMA

Prerequisite: English 201.0 .

A study of the major dramatists from the late 19th century to contemporary movements. Dramatists studied include Ibsen, Chekhov, Strindberg, Shaw, Synge, O'Casey, O'Neill, Pirandello, Brecht, Wilder, Williams, Miller, Beckett, Ionesco, Pinter, Osborne, and Albee.

Text: To be announced.

Lectures: Three hours a week; two semesters.

409.0: LITERATURE, THOUGHT, AND ART – 1880-1930

Prerequisite: English 201.0 .

This is not a course in the history of ideas. It is an exploration of the relationship between the cultural background of the period and its effect on imaginative works.

Text: To be announced.

Lectures: Three hours a week; two semesters.

410.0: THE MODERN NOVEL

Prerequisite: English 201.0 .

Authors may include James, Conrad, Lawrence, Joyce, Forster, Virginia Woolf.

Text: To be announced.

Lectures: Three hours a week; two semesters.

411.0: THEORY AND PRACTICE OF CRITICISM

Prerequisite: English 201.0 **and** two 300.0 level courses.

A course offering practice in individual judgment of various literary forms, with introduction to the principles of criticism.

ENGLISH

Prospective Honours students are recommended to take this course after (at least) two courses at the 300 level. Students may select this course only if they have the approval of the Department.

Text: To be announced.

Lectures: Three hours a week; two semesters.

412.0: THE DEVELOPMENT OF ENGLISH CANADIAN LITERATURE

Prerequisite: English 201.0

Although some Canadian intellectual and cultural history is required background reading, this is not a course where literary works are studied as example texts in the history of ideas. The main literary and background themes are Imperialism, sectarianism and regionalism. Writers studied include McCulloch, Haliburton, Susanna Moodie, Sara Duncan, Roberts, Leacock, Pratt, Innis, George P. Grant.

413.0: MODERN ANGLO-IRISH LITERATURE

Prerequisite: One course beyond the 201.0 level in some aspect of modern literature, preferably the modern novel.

The purpose of this course will be to study the contradictions and fissures in modern Ireland as these are seen through the imagination of her writers. An attempt will be made to relate this study to the social and intellectual background of the Atlantic area which is beset by many of the same problems as Ireland and blessed with similar advantages as well. 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, Paddy Kavanaugh, Padric Colum, Sean O'Faolain, James Stephens, J.B. Kane, and Brian Freele.

Text: To be announced.

Lectures: Three hours a week; two semesters.

450.0: SPECIAL AUTHOR

Prerequisite: English 201.0 and at least three 300.0 level courses.

A tutorial course open to students who prove themselves worthy of studying a given author in depth.

Text: To be announced.

Tutorials: By arrangement with supervisor.

451.0: SPECIAL SUBJECT

Prerequisite: English 201.0 and **at least** three 300.0 level courses.

A tutorial course open to students who prove themselves worthy of studying a special theme or movement in depth.

Text: To be announced.

Tutorials: By arrangement with supervisor.

500.0: SPECIAL AUTHOR

Prerequisite: Enrollment in the English Honours Programme, 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, two semesters.

551.0: SPECIAL SUBJECT

Prerequisite: Enrollment in the English Honours Programme, 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, two semesters.

552.0: LITERATURE AND CRITICISM SEMINAR

Prerequisite: Enrollment in the English Honours Programme, 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.

Seminars: Two hours per week, two semesters.

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MODERN LANGUAGES

FRENCH — GERMAN — SPANISH

FRENCH

Guy LePierres	Associate Professor, Chairman
F.J. Devine, S.J.	Professor
Maryvonne Herivault	Assistant Professor
John Mackriss	Assistant Professor
Arthur Murphy	Assistant Professor
Sister Fernande Pepin	Associate Professor
Rose Marie Poulet	Assistant Professor

DEPARTMENTAL POLICY

1) A student registering for a major concentration in French is required to obtain FIVE University credits beyond the 102.0 level.
2) French 300.0 is MANDATORY for all students majoring in French.
3) The courses on the fourth year level will be offered by rotation.
4) All students majoring in French MUST take Classics 301.0.
5) The students are also strongly advised to take the following courses, regarded as most desirable electives:
   History 331.0 ⎞ For all students
   Philosophy 203.0 or 208.0 or 209.0)
   Philosophy 355.0 in conjunction with French 409.0
   History 122.0 in conjunction with French 412.0
   English 401.0 in conjunction with French 414.0
   Religious Studies 305.0 in conjunction with French 415.0.
6) Courses beyond the 102.0 level are taught in French.
7) French ·100.0 is open ONLY to students who have never taken French before or whose level is below Grade XI French.
8) Laboratory attendance is regarded as OBLIGATORY in French 100.0, 102.0, 200.0 and 301.0

100.0: INTRODUCTION TO THE FRENCH LANGUAGE.

Prerequisite: None.

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.
Text: The New Fundamental French (Micks and Longi).
Lectures: Three hours a week, two semesters.

Language Laboratory: Three half-hours a week, two semesters.

N.B.: This course is open only to students who have never taken French before or whose level is below Nova Scotia Grade XI French. Such students enrolled in the course as are not eligible for it will not be granted credit.

FRENCH 102.0: ORAL AND WRITTEN FRENCH

Prerequisite: Junior Matriculation French.

An audio-lingual course based on modern principles of linguistics whose main objective is the development of the ability to speak French. It is supplemented by a Workbook for written composition and by oral practice in the language laboratory.

Texts: Parole et Pensée – (1st part) – Yvone Lenard (Harper and Row) – Workbook for Parole et Pensée.

Lectures: Three hours a week, two semesters.

Language Laboratory: Three half hours a week, two semesters.

FRENCH 200.0: INTERMEDIATE ORAL AND WRITTEN FRENCH

Prerequisite: Senior Matriculation French or French 102.0.

A continuation of the method adopted in French 102.0 to develop proficiency in the use of the spoken language. The course also includes the writing of free compositions in French on topics of current interest.

Texts: Parole et Pensée – (2nd part) – Yvone Lenard (Harper and Row) – Workbook for Parole et Pensée.

Lectures: Three hours a week, two semesters.

Language Laboratory: Three half hours a week, two semesters.

FRENCH 300.0: INTRODUCTION TO FRENCH LITERATURE

Prerequisite: French 200.0.

A study of the main trends in French Literature through the works of representative writers. Literary analysis of selected texts in prose and verse. This course is OBLIGATORY for all students whose major concentration is French.

Text: Lectures classiques et Modernes. Hall et Michaud (Odyssey) Harrap's French – English Dictionary. (or any other adequate one).

Lectures: Three hours a week, two semesters.

FRENCH

FRENCH 301.0: ADVANCED CONVERSATION AND CULTURAL STUDIES

A thoroughly practical course intended to further develop the student's ability to speak French. Various aspects of French cultural life will be discussed in class. Texts by French contemporary writers will help the student acquire a general idea of French civilization. Oral practice in the Language Laboratory.

Text: France de nos jours, Carlut et Brée (MacMillan).

Lectures: Three hours a week, two semesters.

Laboratory: Two half-hours a week, two semesters.

FRENCH 400.0: XVI CENTURY FRENCH LITERATURE

Texts: XVI Siècle, Lagarde et Michard (Bordas)
Rabelais, Oeuvres (extraits) 2 volumes (Classiques Larousse)
Montaigne, Essais, 3 volumes (Nouveaux Classiques Larousse).

Lectures: Three hours a week, two semesters.

FRENCH 401.0: XVII CENTURY FRENCH LITERATURE

Texts: XVIIe Siècle—Lagarde et Michard (Bordas); Cinna—Corneille, Iphigénie—Racine; Les Précieuses Ridicules — Molière.

Lectures: Three hours a week, two semesters.

FRENCH 402.0: XVIII CENTURY LITERATURE

Texts: XVIIIe Siècle — Lagarde et Michard (Bordas); Candide — Voltaire; Discours sur l'origine et les fondements de l'inégalité parmi les hommes — Rousseau; Le Mariage de Figaro — Beaumarchais.

Lectures: Three hours a week, two semesters.

FRENCH 407.0: XIX CENTURY ROMANTICISM

Texts: XIXe Siècle — Lagarde et Michard (Bordas); Atala — Chateaubriand; Ruy Blas — Hugo; Poésies Choisies — Musset.

Lectures: Three hours a week, two semesters.

FRENCH 408.0: XIX CENTURY REALISM

Texts: Le Rouge et le Noir, La Chartreuse de Parme — Stendhal; Madame Bovary, L'Education Sentimentale — Flaubert.

Lectures: Three hours a week, two semesters.

FRENCH 409.0: XX CENTURY LITERATURE FROM 1900 to 1950.

Texts: Vol de Nuit — Saint-Exupéry; Thérèse Desqueyroux — Mauriac; Antigone — Anouilh; La Peste — Camus' La guerre de Troie n'aura pas leu — Giraud oux; la Reine morte-Montherlant.

Lectures: Three hours a week, two semesters.

FRENCH 410.0: CONTEMPORARY FRENCH LITERATURE.

Text: Anthologie vivante de la littérature d'aujourd'hui — Pierre de Boisdeffre. (Librairie Académique Perrin).

Lectures: Three hours a week, two semesters.

FRENCH 412.0: FRENCH CANADIAN LITERATURE

A study of the origins until 1930; compared development of Canadian Literature and popular Tradition. Besides, this course is designed to acquaint students with the ideas of the writers, with special emphasis on the Novel, Poetry, Theatre and Cinema, from 1930 to the present day.

Text (Reference): Histoire de la Littérature Française du Québec, Pierre de Grandpré (Beauchemin)

Text (Analysis): La dalle des Morts et la Folle -Savard (Nénuphar)
Le Survenant-Guèvremont (Fides)
Poèmes choisis-Nelligan (Fides)
L'Oeuvre de pierre - Paradis (Editions Garneau)
Les voyageurs sacrés -M.-C. Blais (Editions HMH)

Lectures: Three hours a week, two semesters.

FRENCH 413.0: FRENCH CIVILIZATION

An in-depth study of France and of fundamental aspects of French life and culture: history; geography; contemporary political institutions; educational system; social and artistic life; through lectures, readings, discussions and exposes. The topics will often be illustrated with slides.

Text: La civilisation française, Victor Duloup (Longmans).

Lectures: Three hours a week, two semesters.

FRENCH 414.0: EVOLUTION OF THE FRENCH NOVEL

An examination of the principal stages in the development of the French Novel.

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FRENCH – GEOLOGY

Texts: La Princesse de Clèves – La Fayette; Manon Lescaut - l'abbé Prévost; Eugénie Grandet – Balzac; Le Rouge et le Noir – Stendhal; Madame Bovary – Flaubert; Du côté de chez Swann – Proust.

Summer reading is strongly advised.

Lectures: Three hours a week, two semesters.

FRENCH 415.0: THE FRENCH THEATRE

A study of some of the major works of French dramatic literature. Texts: Le Cid-Corneille; Don Juan -Molière; Phèdre -Racine; Le jeu de l'amour et du hasard-Marivaux; Le Mariage de Figaro -Beaumarchais; On ne badine pas avec l'amour -Musset; Huis Clos-Sartre; En attendant Godot -Beckett.

Lectures: Three hours a week, two semesters.

FRENCH 416.0: POETRY IN FRANCE

A survey course in the evolution of epic and lyrical forms from the 12th century to the present day.

Text: Le Livre d'Or de la Poésie française – Pierre Seghers. (Marabout)

Lectures: Three hours a week, two semesters.

GEOLOGY

C.A.R. de Albuquerque	Chairman, Assistant Professor
D. Hope-Simpson	Associate Professor
Q.A. Siddiqui	Assistant Professor

The Department of Geology offers programs of study for students enrolled in a Science degree with concentration in Geology and for those registered for a Geology degree.

The "core courses" in both programs are the five Geology courses numbered 311.0, 322.0, 324.0, 411.0 and 413.0.

Registration in other 400-level courses is open, as an elective, to students enrolled for the Science degree.

Students enrolled in a Geology major program will normally take courses numbered 450 to 499, with a choice of specialization in the fields of "hard-rock" or "soft-rock" geology.

Registration in courses numbered 310 and above will be with consent of the Department. Normally 400-level courses will follow 300-level courses although 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 "Biology" as supporting courses 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

D. Hope-Simpson.

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.

Text: To be announced.

Lectures: Three hours a week, two semesters.

Laboratory/Seminar: 2 hours, every second week.

Field work as specified.

101.0: PRINCIPLES OF GEOLOGY

Staff

Prerequisites: Physics 111.0 and or Chemistry 101.0 or equivalent.

Earth as a planet. Earth materials. Geological cycles. Geologic time. External processes: geomorphology, sedimentation, etc. Internal processes: deformation, the earth's interior, volcanoes, plutonism, metamorphism, and mountain building. Evolution of the lithosphere. Geology in industry.

Field work; maps and mapping; geology of the Maritime area.

Text: To be announced.

Lectures: Three hours a week, two semesters.

Laboratory: Three hours a week, two semesters.

GEOLOGY

304.0: THE FACE OF THE EARTH

D. Hope-Simpson

Prerequisite: Geology 111.0

The earth's upper mantle and crust. The development of continents and ocean basins. Plate tectonics. The evolution of North America. Special topics including regional studies will be presented by students in seminars.

Text: To be announced.

Lectures: 3 hours per week.

Laboratory/Seminar: One hour every two weeks.

311.0: CRYSTALLOGRAPHY AND MINERALOGY

Staff

Morphological classification and atomic structure of crystals; chemical mineralogy and determinative mineralogy, optical mineralogy.

Text: To be announced.

Lectures: Three hours a week, two semesters.

Laboratory: Three hours a week, two semesters.

322.0: PALEONTOLOGY

Q.A. Siddiqui

Fossils, their nature and mode of preservation. The morphology, classification and stratigraphic ranges of the main groups of invertebrate fossils. Elementary vertebrate paleontology.

Text: Moore, Invertebrate Fossils.

Lectures: Three hours a week, two semesters.

Laboratory: Three hours a week, two semesters.

324.0: STRATIGRAPHY AND HISTORICAL GEOLOGY

Staff

Principles of stratigraphy. Historical geology and tectonic evolution of North America. Principles of stratigraphic paleontology; paleoecology; facies; faunal and floral assemblages.

Text: To be announced.

Lectures: Three hours a week, two semesters.

Laboratory: Three hours a week, two semesters.

355.0: ANAYLTICAL CHEMISTRY FOR CHEMISTS AND GEOLO-GISTS (Chemistry 331.0)

Staff

An integrated lecture-laboratory course at the intermediate level with emphasis on analytical methods of importance to chemists and geochemists.

Text: To be announced

Lecture/Laboratory: Six hours per week, 2 semesters.

411.0: PETROLOGY

E.A.R. Albuquerque

The optical properties of minerals. The description and interpretation of igneous, sedimentary and metamorphic rocks.

Text: To be announced.

Lectures: Three hours a week, two semesters.

Laboratory: Three hours a week, two semesters.

413.0: STRUCTURAL AND FIELD GEOLOGY

Staff

Primary and secondary structures of rocks. Field mapping. Map interpretation. The graphical analysis of structural field observations. Tectonics.

Students are strongly recommended to attend the Maritime Universities Geological Field School early in May preceding or following this course.

Text: To be announced.

Lectures: Three hours a week, two semesters.

Laboratory: Three hours a week, two semesters.

GEOLOGY

453.0: IGNEOUS AND METAMORPHIC PETROLOGY

Staff

Modern concepts and theories of petrogenesis. Study of selected suites of igneous rocks and metamorphic complexes. Igneous rocks, lunar rocks and meteorites.

Text: To be announced.

Lectures: Three hours per week, two semesters.

Laboratory: Three hours per week, two semesters.

455.0: GEOCHEMISTRY

C.A.R. Albuquerque

Principles of distribution of elements. Geochemical features of geological processes. Chemistry of igneous rocks, lunar rocks and meteorites.

Text: To be announced.

Lectures: Three hours per week, two semesters.

Laboratory: Three hours per week, two semesters.

457.0: ECONOMIC GEOLOGY

Staff

The occurrence and classification of ore-deposits. Theories of origin. Field and laboratory investigations. Surface and underground mapping problems.

Text: To be announced. Reference to Journals.

Lectures: Three hours a week, two semesters.

Laboratory: Three hours a week, two semesters.

462.0: MICROPALEONTOLOGY

Q.A. Siddiqui

Principles of Micropaleontology: major groups of micro-fossils and their use in the petroleum industry. Paleocology and correlation. Techniques of collection, preparation and identification.

Text: To be announced.

Lectures: Two hours a week, two semesters.

Laboratory: Three hours a week, two semesters.

Field work as required.

454.0: SEDIMENTOLOGY

Staff

Mineralogy, petrography and petrogenesis of the main groups of sedimentary rocks.

Text: To be announced.

Lectures: Three hours a week, two semesters.

Laboratory: Three hours a week, two semesters.

466.0: PETROLEUM GEOLOGY

Staff

The origin, migration and accumulation of oil and natural gas. Types of oil bearing structures, basic principles of the search for oil, geological and geographical distribution of oilfields.

Text: To be announced.

Lectures: Three hours a week, two semesters.

Laboratory: Three hours a week, two semesters.

GERMAN

Roman Nahrebecky   Assistant Professor

100.0:

An introductory language course for those beginning the study of German. Basic linguistic structures will be studied with particular emphasis on the oral aspect.

Text: To be announced.

200.0:

Prerequisite: German 100.0

This course presents an intensified study of grammar and syntax and the reading of German texts.

Text: A Practical German Review Grammar – Emory E. Cochran.

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.

Text: To be announced.

300.0: MODERN GERMAN LITERATURE

A study of trends in modern German literature (Naturalism, Impressionism, Expressionism).

301.0: THE ROMANTIC AGE

Prerequisite: German 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.

Poems, tales and historic tales by L. Tieck, Novalis, H. von Kleist, C. Brentano, A. von Arnim, A. von Chamisso, E.T.A. Hoffmann, L. Uhland, J. von Eichendorff and H. Heine will be read and discussed.

Two hours per week; two semesters.

HISTORY

Elizabeth A. Chard	Associate Professor, Chairman
Stanislaw Bobr-Tylingo	Professor
Robert Bollini	Assistant Professor
R.H. Cameron	Assistant Professor
Elizabeth Haigh	Lecturer
Colin Howell	Lecturer
Burkhard Kiesekamp	Assistant Professor
John R. MacCormack	Professor
Wallace Mills	Assistant Professor
Mary Sun	Assistant Professor
George F.W. Young	Assistant Professor

DEPARTMENTAL POLICY

(1) To obtain a major concentration in History a student is required to have FIVE university credits in History beyond 120.0. A History credit from high school will satisfy the Bachelor of Arts requirement of a compulsory History credit but will NOT count towards the History concentration. A History major therefore will have six university History credits in his/her B. A. degree programme.

(2) The History Department strongly advises that students without university experience begin their studies in the History Department with the 120.0 level courses. PLEASE NOTE: Students with junior matriculation MUST begin their studies in the Department on the 120.0 level.

(3) At least 50% of a student's elective work should be done at the 300.0 level or above. Suggested supporting courses for History majors include: Political Science, Economics, Anthropology, and Sociology.

(4) The Honours Programme in History follows the regulations as stated in this calendar.

(5) All students majoring in History are strongly advised to have two university credits in one foreign language. In the case of students majoring in Canadian History, French is specified as the language suggested.
PLEASE NOTE : This language requirement is no longer compulsory for a History major.

(6) The programme for a major in History must be approved by the Department.

COURSE DESCRIPTIONS (GENERAL)

(a) All History courses are full credits and are year-length courses.

(b) History 121.0, 122.0, 123.0, &124.0 are survey courses which fulfill the University requirement of one History credit for the B.A. degree. These courses normally combine lectures with small tutorial group meetings. Three hours per week is the time allotment. These courses can also be counted toward a major in History.

(c) History courses on the 200.0 level and 300.0 level are frequently structured to consist of both lectures and seminars. Two hundred level courses normally meet for 3 hours per week; three hundred level courses for 2 hours per week.

HISTORY

(d)   History courses on the 500.0 level are seminar courses designed for advanced work by History majors and honours students in their junior and senior years and Master's candidates. These classes meet 2 hours per week.

(e)   History courses on the 600.0 level are graduate courses. Certain courses at other levels may be taken for graduate credit and will be designated as follows: for example 340.0 (600.0 level).

COURSE OFFERINGS FOR THE 1972-1973 ACADEMIC TERM

The courses below marked with an asterisk (*) will not be offered by the Department of History during the 1972-73 academic term. Students are urged to check with the Department prior to registration to confirm the Department's offerings.

110.0

Students eligible for advanced standing in History will be given this number for a credit.

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: HISTORY OF CANADA

A survey course from the earliest times to the present with emphasis on the French regime, the 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 the central themes of U.S. history from the Revolution to World War II.

124.0: A HISTORY OF BRITAIN — 1066 TO THE PRESENT

The 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.

205.0: THE TWENTIETH CENTURY

An historical 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 an industrial society.

206.0: EUROPE: 1815-1945

An introduction to nineteenth and twentieth century Europe with particular emphasis on the diplomatic background of the First and Second World Wars.

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: MODERN LATIN AMERICA

A survey of the emergence and historial development of the Latin American Nations since their independence from Spain and Portugal in the early 19th century. The course will focus especially on the political, economic and social evolution of the more populous nations.

211.0: THE HISTORY OF SCIENCE

The course will cover the major innovations and developments in science and its 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 establishement of the Rurik dynasty. There will be emphasis on Russia's social situation and the way it shaped political developments.

219.0: CANADIAN-AMERICAN RELATIONS

This course will examine the basic developments in Canadian-American Relations. Emphasis will be on the events of the geographical

region of New England and the Maritime Provinces. 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.

303.0: TUDOR AND STUART ENGLAND

Prerequisite: one University History course or the consent of the instructor.

The history of England with special emphasis on the development of the English parliament.

306.0: MONARCHY, REVOLUTION AND EMPIRE

Prerequisite: One University History course or the consent of the instructor.

The attempts of European societies to create a valid polity after the shocks of the Renaissance and Reformation. The course examines the political, economic, social and intellectual history of Europe from the end of the Thirty Years' War to Waterloo (1648-1815).

*311.0: MEDIEVAL ENGLAND

Prerequisite: One University History credit or the consent of the instructor.

The course attempts to trace the evolution and continuity of ideas and institutions in the great formative period of English History.

*312.0: MEDIEVAL EUROPE

The main currents of medieval European history with special emphasis on the intellectual and cultural aspects.

313.0: EUROPE, 1815-1870

In this course particular emphasis will be placed on the history of France, on the revolutions of 1848-1849, and on the unification of Germany and Italy.

314.0: EUROPE, 1870-1945

Emphasis will be placed upon the backgrounds of World Wars I and II and the problems of modern industrial society.

315.0: NINETEENTH-CENTURY BRITAIN

Prerequisite: One University History credit or the consent of the instructor.

A study of society and values in the leading world power of the age.

316.0: FOUNDATIONS OF AMERICAN HISTORY: Colonial Period to 1789

Prerequisite: One University History course or the consent of the instructor.

A course which is concerned with the foundations 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: AMERICA IN THE NINETEENTH CENTURY

Prerequisite: One University History course or the consent of the instructor.

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, expanding into the West, waging a Civil War, and the triumph of the industrialists.

*Not offered, 1972-1973.

318.0: AMERICA IN THE TWENTIETH CENTURY

Prerequisite: One University History course or the consent of the instructor.

A course concerned with the rise of financial capitalism and the United States as a world power.

320.0: BRITISH EMPIRE-COMMONWEALTH

A study of trends in 18th and 19th century Britain with special emphasis on the practice and theory of imperialism.

321.0: 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: SOUTH AFRICA

A study of the complex inter-relationships and conflicts arising from different cultures, religions and skin colours from the 17th century to the "apartheid" state of the mid-twentieth century.

323.0: THE HISTORY OF CHINA, 618-1911

Prerequisite: Two History credits or the consent of the instructor.

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: THE HISTORY OF JAPAN, 710-1868

Prerequisite: Two History credits or the consent of the instructor.

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.

*325.0: THE IBERIAN EMPIRES IN THE NEW WORLD, 1492-1810

Prerequisite: One History credit or the consent of the instructor.

The History of colonial Latin America with special emphasis on the Iberian maritime expansion, conquest, and colonization of the New World; the survival and continuing influence of the American peoples in the Colonial World; the impact of the African negro on Colonial society; and the administration, economy and final collapse of the empire.

*Not offered, 1972-1973.

326.0: THE IBERIAN PENINSULA FROM ROMAN TIMES TO THE PRESENT

Prerequisite: One History credit or the consent of the instructor.

A study of the History of Spain and Portugal from their Roman foundations to the present, with special emphasis on the period since the reigns of Ferdinand and Isabella.

322.0: SOUTH AFRICA

A study of the complex inter-relationships and conflicts arising from different cultures, religions and skin colours from the 17th century to the "apartheid" state of the mid-twentieth century.

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A study of the History of Spain and Portugal from their Roman foundations to the present, with special emphasis on the period since the reigns of Ferdinand and Isabella.

*327.0: A HISTORY OF NEW FRANCE TO 1791

Prerequisite: One University History course or the consent of the instructor.

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.

328.0: A HISTORY OF BRITISH NORTH AMERICA, 1763-1867

Prerequisite: One University course in History or the consent of the instructor.

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: HISTORY OF CANADA, 1849-1920

Prerequisite: One University course in History or the consent of the instructor.

This course deals with the problems arising from the attempt to build a British North American nation in the age of Macdonald and Laurier.

*331.0: MODERN FRANCE, 1815-1940

Prerequisite: One University History course or the consent of the instructor.

The struggle of Frenchmen to reconcile the ambiguities of their revolutionary past with the exigencies of nationalism and state security is the theme of this course. Students will find a modest reading knowledge of French useful, if not essential.

*Not offered, 1972-1973

*332.0: THE SCIENTIFIC REVOLUTION

Prerequisite: One University History course or the consent of the instructor.

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 18th centuries.

333.0: A HISTORY OF CANADA IN THE 20TH CENTURY

Prerequisite: One University History course or the consent of the instructor.

A course designed to examine the emergence of Canada's social, political, and economic structure 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: MYTH AND HISTORY: THE PROBLEM OF INTERPRETING HUMAN EXISTENCE.

Prerequisite: One University History course or the consent of the instructor.

Man's search for meaning. The life of man in relation to his past and that of his communities: the question put to Marc Bloch; "Papa, what good is history?" Students in this course coregister in Religious Studies 334.0.

*335.0: RESTORATION AND EIGHTEENTH-CENTURY ENGLAND

Prerequisite: One University History course or the consent of the instructor.

The emphasis will fall on the continuity and development of institutions, procedures, and ideas. Politics and the constitution receive special attention.

*Not offered, 1972-1973.

*336.0: ENVIRONMENT, INSTITUTIONS, AND VALUES IN CANADA AND THE UNITED STATES DURING THE 19TH and 20TH CENTURIES.

Prerequisite: Two University History courses, one of which must be in either Canadian or American History, or consent of instructor.

This course will examine the development of insitutions and attitudes in Canada and the United States during the 19th and 20th Century. Unlike traditional courses in Canadian-American relations it will deal with the development of a 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: RUSSIA IN REVOLUTION

Prerequisite: Two history credits or consent of the Instructor.

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 nineteenth 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.

338.0: HISTORY AND HUMAN VALUES

Prerequisite: One University History course or the consent of the Instructor.

The course will be comparative in structure rather than chronological. The main topics will be the effect of natural-law ideas and church-state conflict on the political and legal institutions of Western Europe in the Middle Ages; the impact of Protestant values on the revolutions of the 17th and 18th centuries; the erosion of natural law by Cartesianism and man's attempt to find the new value-structures in the 19th and 20th centuries. There will be guest lectures on the political significance of Confucianism, Indian value system, and Medieval philosophy.

Not offered, 1972-1973.

HISTORY 339.0: RUSSIA AND THE U.S.S.R. SINCE 1917

Prerequisite: Two History credits or consent of the Instructor.

The course will deal with Russia and the Soviet Union from the abdication of Tsar Nicholas II until 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.

The course is designed as a companion to History 337 and they should be given in alternate years.

HISTORY 340.0: HISTORY OF THE ATLANTIC PROVINCES

Prerequisite: One University History course or the consent of the instructor.

Commencing with the earliest European contact with the region, the 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.

**500.0 (600.0 level): READING COURSES IN HISTORY

Prerequisite: The consent of the instructor.

Each Reading Course will be organised 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 (600.0 level): THE PURITAN REVOLUTION AND THE CROMWELLIAN PROTECTORATE

Prerequisite: History 303.0 or consent of the instructor.

A pro-seminar with particular emphasis on political and economic changes during the Puritan Revolution.

*502.0 (600.0 level): THE ERA OF THE FRENCH REVOLUTION

The background, course and impact of the French Revolution.

*503.0 (600.0 level): GERMAN FOREIGN POLICY, 1890-1945

The history of Germany with special emphasis on German foreign policy.

*Not offered, 1972-1973
**These courses will be offered in 1972-1973 providing there is sufficient student demand.

504.0 (600.0 level): BRITISH FOREIGN POLICY, 1890-1945

Prerequisite: History 203.0, History 314.0, History 315.0, or consent 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.

Not offered, 1972-1973.

505.0: (600.0 level) UNITED STATES FOREIGN POLICY 1890-1945

Prerequisite: At least one University course in U.S. History or consent of the instructor.

Emphasis will be placed on the emergence of the United States as a world power prior to World War I; the retreat into isolation after 1918 and American-Japanese relations to 1941.

506.0: (600.0 level) THE POLITICS OF THE PEACE SETTLEMENT 1919-1921

A seminar in which students will be expected to work closely in the documentary sources.

508.0: (600.0 level) CHURCH AND STATE THROUGH THE AGES (CROSS—LISTED IN 3 OTHER DEPTS.)

Prerequisite: History 338.0 or consent of the instructor.

An inter-departmental seminar made possible by the cooperation of the following departments: History, Philosophy, Political Science, and Religious Studies.

509.0: (600.0 level) THE ERA OF THE AMERICAN CIVIL WAR

A course concerned with the causes and impact of the American Civil War.

510.0: (600.0 level) A PERIOD IN THE HISTORY OF NOVA SCOTIA

Prerequisite: At least one University course in Canadian History or the consent of the instructor.

A course designed especially for Honours History students who will be afforded an opportunity to use the original material as found in the Public Archives of Nova Scotia. The course will be conducted as a seminar with the presentation of papers on given topics as well as discussion of these papers and related topics.

511.0: (600.0 level) MODERN EAST ASIA, SELECTED PROBLEMS

Prerequisite: History 209.0 or consent of the instructor.

Theme: The influence of the West on the modernization efforts of China and Japan during the 19th and 20th Centuries.

*512.0: (600.0 level) SPECIAL TOPICS IN PRE-CONFEDERATION CANADIAN HISTORY

Prerequisite: At least one University course in Canadian History or the consent of the instructor.

This course will enable students to explore certain historiographical problems in Canadian History and to use primary source material more extensively than is possible in lecture courses.

*Not offered 1972-1973

*513.0: (600.0 level) SELECTED PROBLEMS IN POST–CONFEDERATION CANADIAN HISTORY

Prerequisite: At least one University course in Canadian History or the consent of the instructor.

The course is designed to introduce the student in a detailed way to some of the major problems of the Canadian national experience. Particular emphasis will be placed on one or more of the following: the political, economic, social, intellectual, and/or religious dimension of this experience. Students will be introduced to some of the primary documents of the period.

*514.0: (600.0 level) PRO-SEMINAR IN LATIN AMERICAN HISTORY

Prerequisite: History 210.0 or the consent 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 said period and/or problem under consideration. While not absolutely required, a reading knowledge of Spanish or Portuguese is strongly desirable.

Cross-Listed Courses.

Courses offered in other Departments which are cross-listed in History are:

205.0 – Classics 205.0	– Hellenistic History
203.0 – Classics 203.0	– History of Greece
204.0 – Classics 204.0	– History of Rome
300.0 – Anthropology 351.0	– The Dawn of Civilization
308.0 – Religious Studies 308.0	– Towards the Reformation

The Department is prepared to allow some courses, other than those listed above, to be counted in a student's History concentration. Students must seek the Department's permission in such cases.

LATIN (See Classics)

MATHEMATICS

S. Singh	Associate Professor, Chairman
Faith Chao	Lecturer
H.D. Cochrane	Assistant Professor
F. Jackson	Associate Professor
D. Kabe	Associate Professor
P. Scobey	Lecturer
Y.P. Singh	Assistant Professor
B. White	Lecturer

110.1(110.2): ALGEBRA AND TRIGONOMETRY I

Prerequisite: Grade XI Mathematics

Introduction to Algebra and Trigonometry.

Sets and Operations; Real Numbers; Functions; Relations; Graphs of Elementary Functions; Elementary Trigonometry; Exponential Function; Linear and Quadratic Inequalities, Logarithm.

Lectures: Three hours a week, one semester
Tutorials one hour a week, one semester - half course.

111.1 (111.2): ALGEBRA AND TRIGONOMETRY II

Prerequisite: Mathematics 110.1 (110.2)

Logarithms; Solution of Triangles; More Advanced Trigonometry; Polynomials; Remainder Theorem; Matrices and Determinants; Sequences; Mathematics Induction; Analytical Geometry, Algebra of Complex numbers.

Lectures: Three hours a week; one semester.
Tutorials one hour week; one semester - half course.

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MATHEMATICS

112.0 MATHEMATICS FOR LIBERAL ARTS STUDENTS

Prerequisite: Grade XI Mathematics.

A course intended to illustrate various aspects of modern mathe matics. The material may differ from year to year. Problems and written assignments will form an integral part of the course. This course does not contain any formal material prerequisite for more advanced courses.

Lecture: Three hours a week. Two semesters.

113.0: MATHEMATICS FOR COMMERCE STUDENTS

Prerequisite: Grade XI Mathematics.

Elementary set theory, real numbers, relations and functions, graphs, exponential and logarithmetic functions, sequences and series, Permutations, combinations, binomial theorem, inequalities, polynomial functions, systems of linear equations, matrices and solution of linear systems, limits.

Lectures: Three hours a week; two semesters
Tutorials, one hour a week; two semesters.

115.0: HISTORY AND DEVELOPMENT OF MATHEMATICS

Prerequisite: None

The development of the arithmetica including elementary classification of numbers, the concept of unity to algebraic operations, and artificial numbers. The development of Euclidean and analytic geometry with applications to optics and earth measures. The progress of a system of measures, of trigonometry and the concept of limits from the Greeks to Leibnitz and Newton, and Cauchy. Special attention will be paid to the effects of mathematics on the cultural development of the period.

Lectures: Three hours a week: Two semesters.

116.2: INTRODUCTION TO DIFFERENTIAL AND INTEGRAL CALCULUS TECHNIQUES

Prerequisite: Math 110.1 (110.2) or concurrently.

This course introduces the Engineering student to the basic concepts of differential and integral calculus. In particular the geometric significance of these concepts along with the techniques of differentiation and integration of elementary functions are presented.

Lectures: Three hours a week, one semester.

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127.0: ELEMENTS OF COMPUTER SCIENCE

Prerequisite: Senior Matriculation.
Junior Matriculation 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; tree structures, lists, stacks. 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.

Lectures: Two hours a week; two semesters.

Tutorials: One hour a week; two semesters.

210.1 (210.2): DIFFERENTIAL CALCULUS

Prerequisite: Grade XII Mathematics or Mathematics 111.1 (111.2).

Inequalities, absolute values, functions and their graphs, limits and continuity, derivative, implicit differentiations, application of derivatives to geometrical problems, mechanics and maxima, minima, second derivatives, Rolle's Theorem, mean value theorem, differential and approximations.

Lectures: Three hours a week for one semester half course.

Tutorials one hour a week for one semester.

211.1 (211.2): INTEGRAL CALCULUS

Prerequisite: Mathematics 210.1 (210.2)

Antiderivative, the definite integral, fundamental theorem of integral calculus, applications of definite integral, techniques of integration, parametric coordinates.

Lectures: Three hours a week; one semester.

Tutorial one hour a week, one semester half course.

226.1 (226.2): NUMERICAL ANALYSIS (PART ONE)

Prerequisite: Mathematics 210.0 (210.2), 211.1 (211.2) or concurrently.

MATHEMATICS

A study of Fortran languages with special emphasis on version IV. Applications to numerical solutions to certain non-linear equations, numerical integration and differentiation and evaluation of certain functions.

Lectures: Three hours a week, one semester.

Laboratory: one hour per week.

227.1 (227.2): NUMERICAL ANALYSIS (PART TWO)

Prerequisite: Mathematics 226.1 (226.2).

Matrices and solutions to non-linear equations. Finite differences. Iterative techniques. Interpolation. Numerical differentiation and integration. Difference and differential equations.

Lectures: Three hours a week, plus laboratory periods; one semester.

310.0: CALCULUS II

Prerequisite: Mathematics 211.1 (211.2).

Coordinate systems (polar, cylindrical, spherical), indeterminate forms, l'Hopital's Rule, improper integrals, determinants and Cramer's Rule, vector algebra and three dimensional geometry, vector calculus, partial differentiation, maxima and minima of functions of two variables, multiple integration, infinite sequences and series, convergence, Taylor's Theorem in one and two dimensions.

Lectures: Three hours a week; two semesters.

Tutorial: One hour a week; two semesters.

311.0: ENGINEERING MATHEMATICS

Prerequisite: Mathematics 211.1 (211.2)

Matrices and determinants, vector algebra, infinite sequence series, partial derivations, double integrals, line integrals, algebra of complex numbers, first order differential equations, linear differential equations with constant coefficient. Various engineering applications will be discussed. (Except for its greater emphasis on applications this course covers almost the same material as Maths 310.0 and is considered equivalent to that for all departmental purposes.)

Lectures: Three hours a week, two semesters.

Tutorials: One hour a week, two semesters.

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312.0: LINEAR ALGEBRA

Prerequisite: Mathematics 310.0 or 311.0 or concurrently.

Abstract systems. Fundamental properties of vector spaces. Linear transformations and matrices. Linear equations and determinants. The Hamilton-Cayley theorem. Canonical forms. Metric concepts. Functions of matrices.

Lectures: Three hours a week; two semesters.

Tutorial: One hour a week; two semesters.

314.0: APPLIED STATISTICS

Prerequisite: Mathematics 211.1 (211.1).

Elements of set theory, probability, conditional probability, Bayes-Laplace rule, binomial, hypergeometric, poisson, multinominal, uniform, exponential, gamma, beta, and normal distributions. Mathematical expectation, moments, moment generating functions. Chebychev's theorem. Sums of random variables. Sampling distributions, chi-square, F and T distribution. Point and interval estimation. Tests of hypotheses. Linear regression and correlation. Bivariate normal distribution. The method of least squares.

Lectures: Three hours a week, two semesters.

Laboratory: Three hours a week, two semesters.

327.0: NUMERICAL ANALYSIS II.

Prerequisite: Mathematics 227.1 (227.2).

Further studies in interpolation, numerical integration and differentiation, matrix inversion and solutions of systems of linear equations and numerical solutions of ordinary and partial differential equations.

Lectures: three hours a week, two semesters.

Laboratory: one period a week.

349.0: ANALYSIS I

Prerequisites: Math. 211.1 (211.2) and preferably Math. 310.0 or 311.0.

Sets, functions, and relations. Real numbers field. Upper and lower bounds. Countability, sequences and subsequences. Accumulation points. Metric spaces. Continuous function. Integration.

Lectures: Three hours a week, two semesters.

MATHEMATICS

410.0: CALCULUS III

Prerequisite: Mathematics 310.0, or 311.0.

Uniform convergence, series and limits vector algebra and matrices. Multivariate Calculus. Fourier Series, Green's, Stokes and divergence theorem. Jacobian and implicit functions theorem.

Lectures: Three hours a week; two semesters.

413.0: MODERN ALGEBRA

Prerequisite: Mathematics 312.0.

A study of formal algebraic systems and integral domains, groups, rings, fields and vector spaces and the deduction of their more important properties.

Lectures: Three hours a week, two semesters.

414.0 STATISTICS II

Prerequisite: Mathematics 310.0 or Mathematics 311.0.

Non-parametric methods; simple tests and estimation of hypotheses. Elements of sampling theory. Analysis of variance and related design of experiments.

Lectures: Three hours a week; two semesters.

Laboratory: Three hours a week; two semesters.

420.0: ACTURIAL MATHEMATICS – MATHEMATICS OF INSUR-ANCE

Prerequisite: Math 310.0 or 311.0

Elements of probability, survival function of one or more persons, measures of mortality. Commutation functions, premiums and reserves, continuous and varying annuities, stationary population theory, basic acturial functions, single and multiple life contingencies.

Lectures: Three hours a week; two semesters.

425.0: ORDINARY AND PARTIAL DIFFERENTIAL EQUATIONS

Prerequisite: Mathematics 310.0 or Mathematics 311.0.

Classical techniques of solving first and second order equations

ystems of equations. Series solutions. Transform methods. Introduction to partial differential equations and discussion of simple types.

Lectures: Three hours a week; two semesters.

335.0: THEORY OF A COMPLEX VARIABLE

Prerequisite: Mathematics 310.0 or Mathematics 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.

Lectures: Three hours a week, two semesters.

445.0: INTRODUCTORY OPERATIONS RESEARCH

Prerequisite: Mathematics 310.0 or 311.0 and (or concurrently) Mathematics 312.0.

The first half of the course will be devoted to a thorough discussion of linear programming, including geometry of convex sets in n-dimensional space, a theoretical development of the simplex algorithm, and duality. Approximately one half of the second semester will be devoted to dynamic programming, with the remainder of the term taken up by special topics to be selected from: game theory and its relation to linear programming, transportation problems, network problems, decomposition of linear programming problems, integer programming, queuing theory, classical optimization theory, calculus of variations. The selection of topics will vary from year to year, depending on the interests of the students.

Lectures: Three hours a week; two semesters.

449.0: ANALYSIS II

Prerequisites: Mathematics 349.0

A study of sets, sequences and functions including the Bolzano-Weierstrass, Heine-Borel and Bairs Category theorem. Measure Theory. Lebesgue integration. Fator's Egoroff's, Lusins' and Birkhoff's ergodic theorems. Properties of functions of bounded variation.

Lectures: Three hours a week; two semesters.

MATHEMATICS

515.0: THEORY OF STATISTICS

Prerequisites: Mathematics 310.0, or 311.0

Fundamental concepts and theorems of probability; Distribution functions as probability models for the discret and continuous cases. Moment generating functions; ampling distributions; Point and interval estimation; Statistical inference and hypotheses testing; Correlation and regression analysis.

Lectures: Three hours a week, two semesters.

516.0: STOCHASTIC PROCESSES

Prerequisites: Mathematics 414.0.

Probability models for physical situations; Branching processes; Random walk; Markov chains; The Poisson Processes; The pure birth and death process; Waiting line and serving problems.

Lectures: Three hours a week, two semesters.

517.0: INTRODUCTION TO STATISTICAL DECISION THEORY

Prerequisites: Mathematics 310.0 or 311.0 and 312.0 and 414.0

Statistical decision problems; Bayes decision rule; Linear programming and its applications to statistical decision problems; Minimax Wald sequential rule; Conventional statistical theory and decision theory.

Lectures: Three hours a week, two semesters.

525.0: PARTIAL DIFFERENTIAL EQUATIONS

Prerequisites: Mathematics 425.0.

Derivation of standard second order equations. Method of characteristics. Greens functions. Separation of variables, Poisson's integral. Integral transforms with emphasis on Laplace methods. Special functions.

Lectures: Three hours a week; two semesters.

535.0: COMPLEX ANALYSIS

Prerequisite: Mathematics 435.0.

Analytic functions, residues, Laurent's series, Analytic continuation, Conformal mapping, Riemann surfaces, Integral transforms, special functions, Asymptotic expansions and applications.

Lectures: Three hours a week, two semesters.

0: ANALYSIS III

Prerequisite: Mathematics 449.0

Contents: Elementary Topology. Metric Spaces. The Stone-Weierstrass Theorem. The Baire Category Theorem and applications. Equivcontinuity and the Ascoli-Arzela Theorem. Named linear spaces. The Hahn-Banach Theorem. Introduction to Hilbert Space. Stieltiejs integral. Lebesgue integration Fourier Series.

Lectures: Three hours a week for two semesters.

6.0: INTRODUCTION TO APPLIED MATHS

Prerequisites: Mathematics 435.0 and 425.0.

The course will deal with topics such as those given below:

Linear analysis and group theory, vector and tensor analysis, Interpolation, curve fitting, and numerical analysis. General discussion of ordinary and partial differential equations occuring in physical problems leading to different types of boundary value problems, special functions, asymprotic methods, variational methods.

Lectures: Three hours a week; two semesters.

557.0: FLUID MECHANICS I

Prerequisites: Mathematics 435.0, with 525.0 concurrently.

Elementary theory of perfect fluids. Internal forces, conservation laws, Eulerian and Langrangian approaches. Complex potentials, sources and sinks. Blasius' theorem, Flows past plates and cylinders.

Lectures: Three hours a week, two semesters.

PHILOSOPHY

Richard H. Beis	Associate Professor, Chairman
Rolf Gruner	Associate Professor
Robert N. Ansell	Assistant Professor
Henry Lackner	Assistant Professor
James Lowry	Lecturer
Rowland C. Marshall	Associate Professor
Arthur P. Monahan	Professor
William A. Stewart S.J.	Professor
Sheila Kindred	Lecturer

PHILOSOPHY

Preliminary Remarks

1. The courses from No. 120.0 to No. 129.0 inclusive are introductory and **alternative**. Normally, a student selects one of them according to his preference. A course above No. 129.0 may be counted as satisfying the requirement in Philosophy.
2. With permission of the Department courses numbered as honour courses may also be taken in the general degree programme.
3. 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 and Political Science.
4. Philosophy courses on the 600.0 level are graduate courses. Certain courses at other levels may be taken for graduate credit and will be designated as follows: for example 300.0 (600.0).

201.0: INTRODUCTION TO PHILOSOPHY

W.A. Stewart

This course deals with five major philosophical problems: The problem of philosophy itself, of knowledge, of material being, of living material being, of man. The student is encouraged to seek intellectually satisfying answers for himself, and at the same time to examine critically some of the major historical and contemporary viewpoints. The course's primary aim is the development of method in philosophy and of the student's own critical intelligence and reflection.

Text: Classrooom Notes.

Lectures: Two hours a week; two semesters.

Seminar: One hour every second week.

202.0: INTRODUCTION TO PHILOSOPHY

A.P. Monahan

Is a human being an animal, a machine? Does a human being know like an animal, like a machine? Does a human being act freely? Are there values, norms, for human behaviour?

This course aims to develop abilities to deal rationally with such questions as they engage the attention of the contemporary mind.

Text: Selected readings from ancient, modern and contemporary philosophers.

Lectures: Two hours a week; two semesters.

Seminars: One hour a week; two semesters.

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203.0: INTRODUCTION TO PHILOSOPHY: LOGIC, MAN AND SCIENCE

R.C. Marshall

First term: An introductory study of logic, including uses of language, informal fallacies, definition, forms of deductive and inductive argument.

Second term: An examination of philosophical problems which emerge from a consideration of human capacities and behaviour and physical phenomena. Perception and the reality of material things, reasons and causes, free choice and necessity, minds and machines.

Texts: Introduction to Logic — I.M. Copi; text for second term to be announced.

Lectures: Two hours a week, two semesters.

Seminar: One hour every second week.

204.0: INTRODUCTION TO PHILOSOPHY

An introductory examination of Philosophy as an intellectual discipline and type of knowledge and of its method of treating such problems as the nature of reality, human knowledge and human values.

Text: To be announced.

Lectures: Two hours a week; two semesters.

Seminar: One hour every second week.

205.0: INTRODUCTION TO PHILOSOPHY: SEMANTICS, LOGIC AND GENERAL PHILOSOPHICAL ISSUES

(Evening Course)
R.N. Ansell

The first term will be devoted to the development of precision, rigour and clarity in the student's thinking. Lectures will be supplemented by seminars in which small groups will work through exercises in logic and semantics, of an elementary character.

During the second term general philosophical issues will be discussed in lectures and seminars. Fundamental problems in ethics, philosophy of religion, philosophy of perception and theory of knowledge will be raised.

Text: To be announced.

Lectures and Seminars: Three hours a week, two semesters.

206.0: INTRODUCTION TO PHILOSOPHY

J. Lowry

Is the world real? Is there any absolute truth or beauty? Or is human life a meaningless dream which makes any search for a final reality futile? Is it possible for anyone to really *know* anything or is knowledge finally just a matter of opinion? This course will take up these most basic questions on the basis of the earliest philosophers (since they were the first men to formulate them) and relate their ideas to those modern social, political, and scientific theories, which, as underlying principles, are the ground of contemporary life.

Text: To be announced.

Lectures and Seminars: Three hours a week, two semesters.

207.0: INTRODUCTION TO PHILOSOPHY: THE BIG QUESTIONS

H. Lackner

This course introduces students to philosophy by looking into questions which are of particular relevance in our time of upheaval, questions such as 'What can I believe?', Is there a God and an after-life?', 'How ought I to live my life?', 'How does man differ from inanimate objects (such as stones), from animals and from computers?' Instead of being provided with definite answers, students will be given the tools to enable them to search for themselves.

Text: To be announced.

Lectures and Seminars: Three hours a week, two semesters.

208.0: INTRODUCTION TO PHILOSOPHY

S.E. Kindred

Philosophy requires clarity of thought and expression. Accordingly, the first months will be spent in developing techniques of analysis. Ability to reason inductively and deductively, to spot fallacies and ambiguities and to construct adequate definitions will be sought through regular exercises.

The skills thus gained will then be used to study problems of freedom and determinism and moral issues concerning the individual and society. Is man a machine? Am I free to choose how to act? If I am not, may I be held morally or legally responsible for what I do? If I am free to choose, are there moral reasons why I ought or ought not to do anything? How can I judge whether an act is right or wrong? Have I a

ght to judge others? Can we judge what individual acts will promote
prevent social justice? What constitutes a just society?

The discussion of these and similar questions will be aimed at
establishing ways of appraising ethical points of view. The course does
not pretend to provide final answers but to instill techniques that
students may use in the resolution of everyday problems.

Text: To be announced.

Three hours a week, two semesters.

Lectures and Seminars:

9.0: INTRODUCTION TO PHILOSOPHY

R. Beis

Students will be introduced to philosophy in this course through a
consideration of certain philosophical problems. The following are
representative.

First term: What is the meaning of "meaning"? How logical is language?
How truly does language reflect the world when it attempts to do so?
What is the role of metaphor in language and in talk about God?

Second term: What ought I to do and why? Are ethical positions mere
matters of taste about which no rational argument is possible or, if not,
what is the nature of rational argument in ethics? What is the meaning
of "good", "bad", "right", and "wrong"? Why be moral?

Texts: Philosophy of Language – W. Alston. Ethics – W. Frankena.

Lectures: Three hours a week, two semesters.

215.0: INTRODUCTION TO SYMBOLIC LOGIC

Prerequisites: Normally, Philosophy 123.0, 124.0, or 125.0, or courses
in pure Mathematics or Computer Science (any of the above con-
currently with this course, if desired).

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.

Texts: Beginning Logic – E.J. Lemmon; Introduction to Symbolic
Logic and Its Applications – R. Carnap.

Lectures and Seminars: Three hours a week, two semesters.

Relevant Courses in Other Areas: Engineering 204; any course in pure
Mathematics.

PHILOSOPHY

220.0: MEDIAEVAL PHILOSOPHY AND POLITICS

Prerequisites: None.

An examination of the mediaeval 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.

Lectures and Seminars: Three hours a week, two semesters.

Relevant Courses in Other Areas: History 338

300.0 (600.0): HEGEL'S POLITICAL PHILOSOPHY

Prerequisites: None (courses in any of the social sciences and/or Philosophy would be helpful).

A lecture and seminar course to examine 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 endeavour will be made to relate the more relevant aspects of his political philosophy to current concepts and problems.

Text: Philosophy of Right — G.W.F. Hegel.

Reference: Hegel's other political writings.

Lectures and Seminars: Three hours a week, two semesters.

Relevant Courses in Other Areas: Political Science 450; Religious Studies 310.

224.0: MARXIST PHILOSOPHY

Prerequisites: None (courses in Philosophy, Sociology and/or Economics would be helpful).

Marxist philosophy — which at present has more followers in the world than any other — will be critically described and evaluated. The emphasis will be on the scientific naturalism of the later Marx and contemporary Marxists, but the early, 'humanistic' Marx will also be discussed if the class so desires. — Marx's theory of knowledge (which claims to replace ideology by science and which supplements synchronic with diachronic analysis) will be discussed in detail. But most of the year's work will be devoted to Marxist social philosophy. Here

orical Materialism will be examined, as a scientific theory and as an
alternative to various other social and political theories. Such mis-
understood Marxian concepts as 'dialectic', 'necessity' and 'contra-
diction' will be shown to refer to underlying, basic economic laws.
These laws will be examined in turn and their fundamental role in
Historical Materialism demonstrated. Evidence for and against will be
investigated.

Text: To be announced.

Lectures and Seminars: Three hours a week, two semesters.

Relevant Courses in Other Areas: Economics 311;
Religious Studies 310.

226.0: PHILOSOPHY OF MIND

Prerequisites: None (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 by special emphasis will be
given to those of S. Freud and K. Dabrowski.

Text: To be announced.

Lectures and Seminars: Three hours a week, two semesters.

230.0: PHILOSOPHICAL FOUNDATIONS AND METHODOLOGY

Prerequisites: 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. —This course is useful for any other
course in philosophy.

Text: To be announced.

Lectures and Seminars: Three hours a week, two semesters.

PHILOSOPHY

250.0: GREEK PHILOSOPHY

J. Lowry

Prerequisites: None.

This course is designed to introduce students to Greek philosophy by a) considering in a general way the major figures and schools in Greek philosophy within the context of their overall historical movement; b) studying and discussing in detail a few basic Greek philosophical works and c) allowing students to follow their own individual interests through independent work.

Texts: To be announced.

Lectures and Seminars: Three hours, two semesters.

Relevant Courses in Other Areas: Classics 120; Greek 120: History 211: Religious Studies 306.

222.0: INTRODUCTION TO ETHICS

Prerequisites: One course in Philosophy or permission of the professor.

An introduction to moral philosophy designed to acquaint students with historical expressions of basic ethical problems and with contemporary analytic approaches to ethics.

Text: To be announced.

Lectures and Seminars: Three hours a week, two semesters.

306.0: EPISTEMOLOGY

Prerequisites: None (an introductory course in Philosophy would be helpful).

An investigation of the problem of knowledge through a study of the epistemological thought of Bernard Lonergan.

Text: Insight — B. Lonergan.

Lectures: Two hours a week, two semesters.

Seminar: One hour every second week.

308.0: (608.0) PHILOSOPHICAL LOGIC

Prerequisites: Normally, Philosophy 150.0 or 230.0 (concurrently with this course, if desired).

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The course tackles philosophical problems surrounding, and arising out
of logic: the nature of logic* and mathematics, analyticity, modal
properties, the *a priori,* logical truth, mathematical truth. (The
relevance of these topics to the gauging of past, present and future
philosophical techniques will be brought to the fore.) Subsidiary topics:
identity, proper names, the verb 'to exist' and the ontological
argument, Russell's theory of descriptions, conditional statements,
entailment, Platonism, Nominalism, logical paradoxes.

Text: To be announced.

Lectures and Seminars: Three hours a week, two semesters.

Relevant Courses in Other Areas: Any course in pure Mathematics.

320.0: AESTHETICS: THE PHILOSOPHY OF ART.

Prerequisites: One course in Philosophy or permission of the professor.

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
the philosophy of art or aesthetics. What is the nature and significance
of art? What is a work of art? What is aesthetic experience? What is
involved in the creation of a work of art? What are the criteria for
criticism in the arts, especially literature, music, painting, drama and
film? Aesthetics involves findings answers to these questions and,
through such inquiry, expanding critical awareness about art forms and
artistic expression.

Text: To be announced.

Lectures and Seminars: three hours a week, two semesters.

Relevant Courses in other Areas: English 300; English 409; English 411.

350.0: (650.0) MEDIAEVAL PHILOSOPHY

Prerequisites: One course in Philosophy or permission of the professor.

A history of the major philosophical doctrines and currents in western
Europe from the period of Augustine to the fifteenth century.

Text: History of Christian Philosophy in the Middle Ages − E. Gilson.

Lectures: Three hours a week, two semesters.

Relevant Courses in Other Areas: History 312.

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PHILOSOPHY

351.0: (651.0) PHILOSOPHY OF SCIENCE

Prerequisites: None.

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.

Text: To be announced.

Lectures: Three hours a week, two semesters.

Relevant Courses in Other Areas: History 211, 332.

352.0: (652.0) BRITISH EMPIRICISM

Prerequisites: Normally, Philosophy 230 (concurrently, if desired).

A critical examination of some works by Locke, Berkeley, Hume, Russell and Ayer, with attention focused mainly on their theories of knowledge, meaning and perception.

Texts: Readings in Locke, Berkeley, Hume, Russell and Ayer.

Lectures and Seminars: Three hours a week, two semesters.

353.0: (653.0) CONTINENTAL IDEALISM, DESCARTES TO HEGEL

Prerequisites: One course in Philosophy or permission of the professor.

A lecture and seminar course to examine the development of rationalist and idealist though from Descartes to Hegel.

Texts: Readings in Descartes, Malebranche, Spinoza, Leibniz, Kant, Fichte, Schelling and Hegel.

Lectures and Seminars: Three hours a week, two semesters.

Relevant Courses in Other Areas: French 301.

354.0: (654.0) METAPHYSICS

J. Lowry

Prerequisites: One course in Philosophy or permission of the professor.

The greatest claim that metaphysicians have made is that human reason is capable of totalling knowing God and the universe. This course will consider such a claim to total knowledge by asking whether there can be a philosophy which, as total system uniting logic and reality, is the

science wherein is comprehended both the form and content
particular sciences and arts. Emphasis is placed on discussion and
independent work as well as on lectures.

To be announced

Three hours a week, two semesters.

(655.0) THE EXISTENTIALIST VIEW OF MAN

Prerequisites: One course in Philosophy or permission of the professor.

A lecture and seminar course to examine the origins, expressions and
significance of the existentialist movement in contemporary Philo-
sophy.

Texts: Readings in Kierkegaard, Nietzsche, Jaspers, Marcel, Sartre and
Camus.

Lectures and Seminars: Three hours a week, two semesters.

7.0: (607.0) PHILOSOPHY OF BEING

Prerequisites: None.

This course is a philosophical investigation into the foundations of
metaphysics in cognitional theory, of the principles of proportionate
being, of the problem of a transcendent being or God. It also
investigates related problems such as the problems of human freedom
and of evil and the position of atheism, agnosticism and pantheism.

Text: Insight — B. Lonergan.

Lectures: Two hours a week, two semesters.

Seminar: One hour every second week.

49.0: (649.0) THE PHILOSOPHY OF WITTGENSTEIN

Prerequisites: Normally, Philosophy 230.0 (concurrently, if desired).

A critical examination of Wittgenstein's philosophy, chiefly that of the
late period.

Text: Remarks on the Foundations of Mathematics, The Blue and
Brown Books, Philosophical Investigations—L. Wittgenstein.

Lectures, Seminars and Tutorials: Approximately three hours per week,
two semesters.

PHILOSOPHY

450.0: (650.0) PHENOMENOLOGY

Prerequisites: One course in Philosophy or permission of the professor.

The origins, developments, concepts, method and influence of the phenomenological movement in contemporary Philosophy.

Texts: Selections from Husserl, Heidegger, Sartre, Merleau-Ponty.

Reference: The Phenomenological Movement—H. Spiegelberg.

465.0: (665.0) CONTEMPORARY ANALYTIC PHILOSOPHY

Prerequisites: One course in Philosophy or permission of the professor.

A lecture and seminar course to examine the origins, expressions and significance of the contemporary analytic movement in Philosophy.

Texts: Readings from representative members of the Analytic School.

Lectures and Seminars: Three hours a week, two semesters.

466.0: (666.0) ADVANCED ETHICAL THEORY

Prerequisites: One course in Philosophy or permission of the professor.

A lecture and seminar course to examine 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 Brandt.

Texts: Selected readings in the above-mentioned authors.

Lectures and Seminars: Three hours a week, two semesters.

467.0: (667.0) AUGUSTINE AND AQUINAS ON PHILOSOPHY

Prerequisites: One course in Philosophy of permission of the professor.

A lecture and seminar course to explore the meaning of Philosophy and its relation to Theology in the writings of Augustine and Aquinas.

Texts: Selected Readings in Augustine and Aquinas.

Lectures and Seminars: Three hours a week, two semesters.

PHYSICS

B.S.Murty	Professor, Chairman
K. Fillmore	Assistant Professor
W. Lonc, S.J.	Assistant Professor
U. Merdsoy	Associate Professor
G.F. Mitchell	Assistant Professor
F. Tomscha	Associate Professor

NOTE: Students failing to complete a laboratory course prior to the date of examination will not be eligible to write the examination. Marks will be awarded for the practical work and combined with the examination results for the final mark.

CALENDAR DESCRIPTION AND OTHER COMMENTS:

101.0: THE WORLD OF PHYSICS

Prerequisite: Freshman standing.

A non-mathematical introduction to contemporary concepts and techniques, especially those relevant to the informed person. The lectures will include experimentation with representative physical phenomena.

This is not a substitute for Physics 111.0.

Text: To be announced.

Lectures: Three hours/week.

111.0: GENERAL PHYSICS

Introduction to mechanics, sound, light, heat and electricity.

Text: Physics, Foundations and Frontiers — G. Gamow and J.M. Cleveland.

Lectures: Three hours a week, two semesters.

Laboratory: Three hours a week, two semesters.

221.0: UNIVERSITY PHYSICS

Tutorial (Compulsory) one hour a week.

Prerequisite: Physics 111.0 or a knowledge of Grade 12 Physics is necessary, and it will be essential for students to be taking an Introductory Calculus course concurrently.

PHYSICS

Text: Lorrain and Corson.

Lectures: Three hours a week, one semester.

Laboratory: Three hours/week, one semester.

434.1: ELECTRIC CIRCUITS: I

Prerequisites: Math 222 and Physics 221.0.

Circuit elements; equilibrium equations (mesh and mode analysis), network theorems, complex impedance and the use of phasors, steady state analysis, basic measurements.

Text: To be announced.

Lectures: Three hours per week, one semester.

Laboratory: Once a week, three hours, one semester.

435.2: ELECTRIC CIRCUITS: II

Prerequisites: Physics 434.1 or equivalent.

Laplace Transform and Fourier Analysis methods as applied to circuit theory, analysis of circuits' containing non-linear elements, analysis of circuits containing active elements.

Text: To be announced.

Lectures: Three hours per week, one semester.

Laboratory: Once a week, three hours, one semester.

438.1: NUCLEAR PHYSICS I

Prerequisites: Physics 321.1, 322.2 and Math 310.0.

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: Nuclear Physics - Irving Kaplan.

Lectures: Three hours a week, one semester.

Laboratory: Three hours a week, one semester.

439.2: NUCLEAR PHYSICS II

Prerequisite: Physics 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.

Text: Nuclear Physics - Irving Kaplan

Lectures: Three hours a week, one semester.

Laboratory: Three hours a week, one semester.

441.1: PHYSICAL OPTICS

Prerequisite: Physics 321.1 and 322.2, Math 410.0 concurrently.

Light as wave motion, velocity and scattering. Polarization and double refraction, optical activity, interference, diffraction, coherence and radiation theories.

Text: Concepts of Classical Optics, John Strong.

Lectures: Three hours a week, one semester.

Laboratory: Three hours a week, one semester.

442.2: OPTICAL INSTRUMENTS

Prerequisites: Physics 441.1.

Images of points by single surface, images of points by systems of surfaces, image defects. Magnification, aperture and field of instruments. Interferometers. Radiation detectors, Optical filters.

Text: Concepts of Classical Optics, John Strong.

Lectures: Three hours a week, one semester.

Laboratory: Three hours a week, one semester.

452.1: ADVANCED MECHANICS

Prerequisites: Physics 332.2 and Math 310.0.

A study of generalized mechanics with particular emphasis on those formulations required for quantum mechanics and statistical physics.

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Topics will include: Lagrange's equations, Hamilton's canonical equations, variational principals, transformation theory, the Hamilton-Jacobi method, continuous systems, fields.

Text: Classical Mechanics—J.W. Leech (Methuen)

Reference: Classical Mechanics—H. Goldstein (Addison-Wesley)

Lectures: Three hours a week, one semester.

453.2: CLASSICAL THERMODYNAMICS

Prerequisites: Physics 332.2 and Math 310.0.

Thermal phenomena from a macroscopic viewpoint: Temperature, work, heat, internal energy, entropy, the laws of thermodynamics, other state functions, Maxwell's relations, applications to simple systems, criteria for equilibrium.

Text: Thermodynamics — Vanderslice, Schamp, and Mason (Prentice-Hall)

Lectures: Three hours a week, one semester.

455.1: ELECTRICAL MEASURING INSTRUMENTS

Prerequsite: Math 310.0; Physics 431.1 concurrently.

Measuring instruments, absolute, secondary instruments, recording integrating instruments. Extension of instrument range.

Text: Electrical Measurements and Measuring Instruments, Golding (Sir Isaac Pitman and Sons).

Lectures: Three hours per week, one semester.

Laboratory: Three hours per week, one semester.

456.2: ELECTRICAL MEASUREMENTS

Prerequisite: Physics 455.1.

Measurements of resistance, inductance, capacitance, magnetic measurements, high voltage measurements, electrical methods of measuring temperature and eddy currents.

Text: Electrical Measurements and Measuring Instruments, Golding (Sir Isaac Pitman and Sons).

Lecture: Three hours a week, one semester.

Laboratory: Three hours a week, one semester.

461.1: ELECTRONICS I

Prerequisite: Math 310.0, Physics 431.1 may be taken concurrently.

Electrical measurements, power supplies, application of vacuum tubes and transistors, amplifier circuits, oscillators, comparison measurements.

Text: To be announced.

Lectures: Three hours a week, one semester.

Laboratory: Three hours a week, one semester.

462.2: ELECTRONICS II

Prerequisite: Physics 461.1.

Servo systems, operational amplifiers for measurement and control, electronic switching and timing and digital counting systems, an integrated system of instruments, test equipment.

Text: To be announced.

Lectures: Three hours a week, one semester.

Laboratory: Three hours a week, one semester.

550.0: TOPICS IN THEORETICAL PHYSICS

Prerequisites: Physics 332.2, Math 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: Fluid Dynamics —G.H.A. Cole (Methuen).

Tensor Calculus—B. Spain (Oliver and Boyd).

Lectures: Three hours a week, two semesters.

PHYSICS

551.0: THERMODYNAMICS AND STATISTICAL MECHANICS

Prerequisites: Physics 432.2, Mathematics 410.0.

First and second law of thermodynamics and their application to simple thermodynamic systems and to chemical reactions. Kinetic theory and transport phenomena—in statistical mechanics the macro canonical and grand canonical ensembles, and Bose-Einstein and Fermi-Dirac statistics are discussed and applied to gases, electrons in metals, and low temperature physics.

Text: Thermodynamics and Statistical Mechanics—Zemansky.

Lectures: Three hours a week, two semesters.

552.0: QUANTUM MECHANICS

Prerequisites: Physics 432.2, Mathematics 410.0.

Wave mechanical concepts—wave equation of Schrodinger—energy eigen function—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 operator—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: Quantum Mechanics—Mandl (Butterworth Publication, London).

Lectures: Three hours a week, two semesters.

553.0: UPPER ATMOSPHERE

Prerequisites: Physics 432.2, Mathematics 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, the transport properties in the upper atmosphere.

Text: The Upper Atmosphere—Craig (Academic Press, New York).

Reference: Physics of the Upper Atmosphere—Ratcliffe (Academic Press, New York).

Lectures: Three hours a week, two semesters.

554.1: INTRODUCTION TO SOLID STATE PHYSICS

Prerequisites: Physics 432.2.

Crystal Structure; Lattice vibrations; Free electron Fermi gas; Band structure; Properties of simple metals; semiconductors and insulators; Superconductivity.

Text: Introduction to Solid State Physics —C. Kittel (Wiley and Sons)

Lectures: Three hours a week; one semester.

Laboratory: Three hours a week, one semester.

555.2: TOPICS IN ADVANCED NUCLEAR PHYSICS:

Prerequisites: Physics 439.2, Math 410.0.

Some selected topics in Nuclear Physics will be discussed. Topics will be oriented towards research problems.

Reference: Alpha-Beta-Gamma Ray Spectroscopy. Vol. 1 and 2., K. Siegbahn. (North-Holland).

Lectures: Three hours a week, one semester.

556.1: ASTROPHYSICS

Prerequisites: Physics 432.2, Math 410.0.

An investigation of the physics of stellar structure with applications to the evolution of stars, nucleosynthesis, supernovae, and neutron stars.

The relations of stellar physics to galaxy evolution and to the cosmological problem will be examined.

Text: To be announced.

Reference: Principles of Stellar Structure—Cox Giuli (Gordon and Breach).

Lectures: Three hours a week, one semester.

ASTRONOMY 201.0: THE ASTRONOMICAL UNIVERSE

Prerequisites: Sophomore standing or permission of the professor.

This course is designed in particular for the non-science student. The subject matter will include the solar system, the life-cycles of stars, the structure of our Galaxy, the nature of external galaxies, and the

expanding universe. Recent discoveries and unsolved problems, such as quasars, pulsars, exploding galaxies, and "black holes" will be discussed to illustrate the open and evolving nature of scientific investigation.

Text: To be announced.

Lectures: Three hours per week, two semesters.

There will be evening observing sessions about twice a month by arrangement. Students will have access to the Burke-Gaffney Observatory.

ASTRONOMY 301.0: INTRODUCTION TO ASTRONOMY

Prerequisites: Physics 221.0, Mathematics 210.1 and 211.2.

An introductory survey of astronomy with emphasis on physical principles. The Solar System: The structure and motions of the earth, the moon, planetary orbits, properties of the planets, comets, meteors, the sun. Properties of Stars: Radiation theory, stellar spectra, stellar atmospheres, stellar interiors, the evolution of stars, variable stars, supernavae. Stellar Systems: Binary stars, star clusters, the structure of our galaxy, galaxies and the universe.

Text: To be announced.

Lectures: Three hours a week, two semesters.

There will be occasional evening observing sessions by arrangement. Students will have access to the Burke-Gaffney Observatory.

POLITICAL SCIENCE

Theodore B. Ciuciura	Professor, Chairman
Robert G. Boyd	Associate Professor
Guy Chauvin	Assistant Professor
Peter A.B. Dale	Lecturer
William J. Dalton	Professor
Joseph G. Jabbra	Assistant Professor
Edward J. McBride	Assistant Professor
Thomas M. Tynan	Lecturer

Students who intend to complete a major concentration in Political Science must take a minimum of five courses in Political Science. There are two required courses: Political Science 200.0 and 304.0. The Department also strongly recommends 'that a student take Political

Science 301.0 and one seminar at the 500.0 level in one of the following sub-fields: Canadian Government, Comparative Government, International Relations, Political Thought.

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,' a pamphlet 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.

Text: To be announced.

Lectures and group discussions: three hours a week, two semesters.

301.0: SCOPE AND METHODS OF POLITICAL SCIENCE

Prerequisite: Political Science 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.

Text: To be announced.

Lectures and group discussions: Three hours a week, two semesters

302.0: DEMOCRATIC GOVERNMENT

An examination of the basic features of western democratic government. Great Britain, the United States and Canada are used as the main examples of this type of government. Considerable attention is paid to the ideological foundations of the modern liberal democratic state.

Text: To be announced.

Lectures and group discussions: Three hours a week, two semesters.

POLITICAL SCIENCE

303.0: GOVERNMENT AND POLITICS IN THE SOVIET UNION

A survey of the history, culture 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).

Texts: To be announced.

Lectures and group discussions: Three hours a week, two semesters.

304.0: CANADIAN GOVERNMENT AND POLITICS

Prerequisite: Political Science 200.0 or equivalent.

A study of Canadian constitutional democracy, encompassing an analysis of both political institutions and political behaviour.

Text: To be announced.

Lectures and group discussions: Three hours a week, two semesters.

305.0: INTERNATIONAL RELATIONS

Prerequisite: Political Science 200.0 or equivalent.

An introduction to the foreign policies of the major democracies, the Communist powers, and the new states, and a survey of processes of conflict and co-operation in the world community, with special reference to trends towards regional integration and to problems of arms control and economic development.

Texts: To be announced.

Lectures and group discussions: Three hours a week, two semesters.

306.0: COMPARATIVE STUDY OF GOVERNMENTS: WESTERN EUROPE

Prerequisite: Political Science 200.0 or equivalent.

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.

Text: To be announced.

Lectures and group discussions: Three hours a week, two semesters.

204

10: GOVERNMENT AND POLITICS OF THE U.S.A.

Prerequisite: Political Science 200.0 or equivalent.

An inquiry into the theory and practice, the nature and operation, and the form and function of the American system of government, with particular emphasis upon the overlapping spheres of the governmental structure, the constitutional order and the political process.

Text: To be announced.

Lectures and group discussions: Three hours a week, two semesters.

7.0: GOVERNMENT AND POLITICS IN THE MIDDLE EAST

Prerequisite: Political Science 200.0

A comparative study of the governments and politics of Middle Eastern countries, with an emphasis on the analysis of the fundamental political and socioeconomic changes that are occurring in the area and attempting to shape its modernizing pace.

Text: To be announced.

Lectures and group discussions: Two hours a week, two semesters.

417.0: COMPARATIVE STUDY OF GOVERNMENTS: EASTERN EUROPE

A survey of political and institutional developments from 1848 to 1918, with special attention to multi-national Austria-Hungary; a comparative study of contemporary political institutions and processes in Communist Party-States of Eastern (or East Central) Europe: German Democratic Republic, Poland, Czechoslovakia, Yugoslavia, and others.

Text: To be announced.

Lectures and group discussions: Two hours a week, two semesters.

418.0: INTERNATIONAL LAW AND ORGANIZATION

Prerequisite: Political Science 200.0 or equivalent.

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.

Texts: To be announced.

Lectures and group discussions: Three hours a week, two semesters.

POLITICAL SCIENCE

419.0: COMPARATIVE CONSTITUTIONAL LAW

Prerequisite: Political Science 200.0 or equivalent.

A comparative analysis of constitutional systems. It 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.

Text: To be announced.

Lectures and group discussions: Two hours a week, two semesters.

430.0: INTRODUCTION TO PUBLIC ADMINISTRATION

Prerequisite: Political Science 200.0 or equivalent.

A study of the structure and operation of the administrative branch of government — both in theory and in 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.

Texts: To be announced.

Lectures and group discussions: Three hours a week, two semesters.

435.0: POLITICAL THOUGHT TO THE FRENCH REVOLUTION

A 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.

Text: To be announced.

Lectures and group discussions: Three hours a week, two semesters.

436.0: MODERN POLITICAL THOUGHT

An examination of political ideas from the French Revolution era to the present.

Text: To be announced.

Lectures and group discussions: Three hours a week, two semesters.

440.0: THE POLITICS OF THE DEVELOPING AREAS

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.

Texts: To be announced.

Lectures and group discussions: Three hours a week, two semesters.

441.0: GOVERNMENT AND POLITICS IN EAST ASIA

A study of government structures and political dynamics in mainland China, Southeast Asia and Japan, with emphasis on current trends in the Chinese system.

Texts: To be announced.

Lectures and group discussions: Three hours a week, two semesters.

445.0: PROBLEMS IN CANADIAN POLITICS

This course offers a systematic investigation of a number of problems that face all levels of government in Canada.

Text: To be announced.

Lectures and group discussions: Two hours a week, two semesters.

550.0: SEMINAR IN THE HISTORY OF POLITICAL THOUGHT

An intensive study of major trends in political thought, early and modern, with special attention to contemporary political doctrines and ideologies, their transformation in the course of history and their interrelation in the course of history and their interrelation with social and political conditions.

Sessions: Two hours a week, two semesters.

551.0: CANADIAN GOVERNMENT SEMINAR

A study of selected aspects of Canadian government and politics, especially some of the dynamic forces which operate outside the formal constitutional framework.

Sessions: Two hours a week, two semesters.

552.0: SEMINAR IN COMPARATIVE GOVERNMENT

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.

Sessions: Two hours a week, two semesters.

553.0: INTERNATIONAL STUDIES SEMINAR

A seminar on the contemporary interaction of the major powers, with special consideration of selected world problems, tensions, trends and developments.

Sessions: Two hours a week, two semesters.

555.0: SEMINAR ON CANADIAN FOREIGN POLICY

An examination of the factors shaping Canada's external policy, the major issues in her foreign relations, and her roles in the international community. Special attention is given to Canada's participation in the United Nations, NATO and the Commonwealth, and to her aid programmes in the developing areas.

Sessions: Two hours a week, two semesters.

PSYCHOLOGY

J. Darley	Chairman, Assistant Professor
S. Ahmad	Assistant Professor
D. Lander	Assistant Professor
I. Lenzer	Assistant Professor
E. Millman	Instructor

Psychology is normally begun at Saint Mary's at the Sophomore level. The Introductory course is a broad survey of the discipline and is a prerequisite for all other Psychology courses. The 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). These courses must be taken before a student moves on to the 400 range of more specialized courses.

A special seminar (449.0) is offered to those students whose interest and ability in the subject motivates them to exploration of the literature in greater depth.

201.0: INTRODUCTION TO PSYCHOLOGY

Prerequisites: Sophomore standing, or permission of the department.

The science of behaviour. Methods and Measurement. Physiological basis of behaviour. 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 his credit. The number of hours will be announced at the beginning of the course.

Text: Krech, D., Crutchfield, R.S. and Livson, N: — Elements of Psychology — (A.A. Knopf). Reader to be announced.

301.0: PSYCHOLOGY OF LEARNING

Prerequisites: A grade of C in Psychology 201.0 or the permission of the Department. Psychology 301.0 is compulsory for all students wanting to take 400 level Psychology courses. The student is recommended to take Psychology 305.0 concurrently.

Classical conditioning and instrumental learning will be studied as examples of the learning process. In addition, 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 will be studied.

Text: To be announced.

Lectures: Three hours a week, two semesters.

305.0: EXPERIMENTAL DESIGN AND PSYCHOLOGICAL STATISTICS

Prerequisites: A grade of C in Psychology 201.0 or the permission of the Department. Mathematics 110.1 — 111.2. Psychology 305.0 is compulsory for all students wanting to take 400 level Psychology courses. Students are strongly advised to take Psychology 305.0 in the same year as Psychology 301.0.

PSYCHOLOGY

Importance of Statistics in Psychology. Permutations and Combinations. Probability and Probability Distributions. Binomial and normal distributions. Characteristics of distributions: skewness, kurtosis, measures of central tendency and dispersion. Sampling and hypothesis testing. Parametric statistics: t, F, and chi-square tests; Analysis of Variance and Co-variance; Correlation and Regression. Non-parametric Statistics: Mann-Whitney and Wilcoxon; Friedman; Spearman's and Kendall's correlation coefficients.

Designing experiments in Psychology in the light of the above. Varying factors and observing changes in responses. Interpretation of results based on experimental design and application of the relevant statistic. Emphasis in this course will be laid on applications of statistics, and upon practical analysis of results obtained in laboratory course 301.0.

Text: To be announced.

Lectures: Three hours a week, two semesters.

Laboratory: Three hours a week, two semesters.

402.0: PSYCHOLOGY OF SENSATION AND PERCEPTION

Prerequisites: Psychology 301.0 and 305.0 or the permission of the Department.

A panoramic view of all the senses and their interaction. Emphasis will be placed on the perceptual rather than on the sensory aspect.

Text: To be announced.

Books recommended:

Geldard, F.A.	Human Senses
Wyburn, Pickford and Hirst	Human Senses and Perception
von Fieandt	The World of Perception
Christman	Sensory Experience
Forgus	Perception
Expstein	Varieties of Perceptual Learning

Lectures: Two hours a week, two semesters.

Laboratory: Two hours every other week, two semesters.

403.0: PSYCHOLOGY OF MOTIVATION

Prerequisites: Psychology 301.0 and 305.0 or the permission of the Department.

A study of the impelling factors in behavior such as instincts, needs, drives and incentives. Behavioural and physiological components of

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nger, thirst, sex, aggression and curiosity. An ethological examination of the biology of human and animal behaviour.

Text: To be announced.

Lectures: Three hours a week, two semesters.

Laboratory: Two hours a week, two semesters.

04.0: COMPARATIVE AND PHYSIOLOGICAL PSYCHOLOGY

Prerequisites: Psychology 301.0 and 305.0 or the permission of the Department.

Physiological and neural mechanisms of behaviour. The sensory systems. Alerting mechanisms: sleep, arousal and attention. Physiological basis of learning, memory, motivation and emotion. Physical control of the mind through electrical stimulation of the brain. Physical control of the mind through drugs.

Text: To be announced.

Lectures: Three hours a week, two semesters.

Laboratory: Two hours a week, two semesters.

410.0: SOCIAL PSYCHOLOGY

Prerequisites: Psychology 201.0, Psychology 305.0 or Sociology 300.0. Psychology 301.0 or any 300 level Sociology.

Motives, Attitudes, Conformity, Communication: Group Structure and Leadership. Aggression. Person Perception. Methodology. Social Psychology in International Affairs. In addition to the above mentioned topics any topic of interest to the students or to the teacher may be discussed in the class. A project will be undertaken as part of this course by students working individually or together.

Text: Freedman, Carlsmith, Sears: Social Psychology.

Books recommended:
Freedman, Carlsmith, Sears   Readings in Social Psychology
Brown   Social Psychology
Wrightsman   Comtemporary Issues in Social Psychology
Lindgren   An Introduction to Social Psychology

Lectures: Three hours a week, two semesters.

Projects: Preparation first semester. completion second semester.

PSYCHOLOGY

411.0: INDUSTRIAL AND APPLIED PSYCHOLOGY

Prerequisites: Psychology 301.0 and 305.0 or permission of the Department.

The Individual within the Organization. Inter-personal relations and organizational structure. Selection, placement, training and performance. Motivation and morale. Leadership and decision-making. Psychomotor coordination in the carrying out of tasks. Cybernetics, work study, linear programming and critical path analysis.

Text: To be announced.

Lectures: Three hours a week, two semesters.

412.0: COGNITIVE PROCESSES

Prerequisites: Psychology 301.0 and 305.0.

Symbolic processes. Problem solving, creativity, concept formation and rule learning. Choice. Logic and psycho-logic. Communication, elements of language processing and psycholinguistics. Perception and memory as determiners of the decision-making process.

Text: A.W. Staats — Learning, Language and Cognition (Holt, Rinehart and Winston)

Lectures and Laboratory: Three hours a week, two semesters.

413.0: ARCHITECTURAL AND ENVIRONMENTAL PSYCHOLOGY

Prerequisites: Psychology 301.0 and 305.0 or permission of the Department.

The functions of buildings; the role of the architect in society. The criteria for design and patterns of research; performance, comfort, stimulation; curiosity, and arousal. Perception of space, personal and movement space, territoriality. Lighting: apparent brightness, gloom, glare. Acoustics: noise and stress, speech interference, distraction. Thermal environment: temperature and arousal, behavior under heat stress. Perception of the city: cognitive maps, the sonic environment, visual complexity. The street and its social functions. Stress in the urban environment: Calhoun's rats and the rat race.

Text: To be announced.

Lectures: Three hours a week, two semesters.

41.0: HISTORICAL AND CONTEMPORARY SYSTEMS OF PSYCHOLOGY

Prerequisites: Psychology 301.0 and 305.0 or permission of the Department.

Greek Psychology. Arabian and Western European development. Mediaeval and Renaissance approaches. Early scientific influences: ideas from physics, mathematics and physiology. Nineteenth and twentieth century theories and experiments. Psychology as a natural, biological and social science. The outlook.

The basic issues: Classical and scientific Psychology. Voluntary and involuntary behavior. Respondent and Operant behavior. Choice and preference. Drives and values. Uncertainty and Information. Intelligence. Symbolic Processes and Language. Problems of measurement and evaluation. Organization and evaluation.

Text: To be announced.

Lectures: Three hours a week, two semesters.

431.0: CHILD PSYCHOLOGY AND ADOLESCENT DEVELOPMENT

Prerequisites: Psychology 301.0 and 305.0 or the permission of the Department.

Research Methodology in Child Development. Theories of Behaviour and Development. Prenatal development. The Neonate. Maturation and Learning. Nature versus nurture. The Development of Intelligence and Personality. Psychological Assessment of Children. Problems of early life. Pathological versus normal development. Puberty. Changes and Problems of Adolescence.

Text: To be announced.

Lectures: Three hours a week, two semesters.

432.0: CLINICAL PSYCHOLOGY

Prerequisites: Psychology 301.0 and 305.0. Students are recommended to take Psychology 433.0 before Psychology 432.0. If they elect not to do so, they must take Psychology 433.0 concurrently with Psychology 432.0.

Mental illness and Mental health. Normal and abnormal behaviour. Origin, development, symptoms and cures of certain behaviour disorders.

PSYCHOLOGY

Neurosis and Psychosis. Psychological and physiological factors as joint causes of psychological problems. Counselling, psychotherapy, behaviour therapy, group therapy. Mental retardation. Functions of mental hospitals, child guidance clinics, psychotherapists and psychiatrists.

Text: To be announced.

Lectures and Laboratory: Three hours a week, two semesters.

433.0: PSYCHOLOGY OF PERSONALITY

Prerequisites: Psychology 301.0 and 305.0, or permission of the Department.

Major personality theories from Freud to Laing will be examined in terms of their assumptions concerning personality structure, developmental sequences, and environmental and social determinants. The practical importance of these personality theories as it is reflected in current psychotherapy and treatment of psychosomatic disorders will be discussed.

Text: To be announced.

Lectures: Two hours a week, two semesters.

Laboratory: One hour a week, two semesters.

440.0: EDUCATIONAL AND PSYCHOLOGICAL TESTS AND MEASUREMENTS

Prerequisites: Psychology 301.0 and 305.0.

Basic principles: Statistical sampling and testing: Psychological measurement and the construction of scales. Test construction: standardisation, validity, reliability. Types of tests in common use: intelligence, aptitude, ability, personality, educational, vocational. Special tests: language, clerical, perceptual, speed, mechanical. Uses of testing and evaluation in teaching, counselling, educational and vocational selection, diagnosis and follow-up.

Text: A. Anastasi: Psychological Testing (3rd edition) (MacMillan)

Lectures and Laboratories: Three hours a week, two 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.

Course Outline: A reading course in diverse areas of Psychology, recommended for senior students. Each section of this course will be overseen by the member of the department most specialised in the area. The specific topics will vary from year to year.

Texts: To be announced.

RELIGIOUS STUDIES

S.A. Armstrong	Chairman, Assistant Professor
D. Clarke	Assistant Professor
G.R. Hoffmann, S.J.	Assistant Professor
T. Macho, S.J.	Associate Professor
L.B. Miller	Lecturer
L.F. Murphy, S.J.	Assistant Professor
T. Rigelhof	Lecturer
E. Stiegman	Assistant Professor
G.W. Tait, S.J.	Part time
M. Waida	Lecturer

The purpose of the university study of religion is to analyze the meaning of religion in human experience and to investigate its role in personal and social structures. In this pursuit it employs the perspectives afforded by numerous other disciplines – anthropology, art, history, literature, philosophy, psychology, sociology, etc. – as well as those afforded by its own – ascetics, liturgics, mythology, theology, etc.

The Department of Religious Studies offers its courses in terms of three general areas:

RELIGION IN WESTERN CIVILIZATION
HISTORY OF RELIGIONS (COMPARATIVE RELIGION)
RELIGION IN CONTEMPORARY SOCIETY

Complete details of the arts degree program with a concentration in Religious Studies are available to students in the departmental office. Individual, specialized guidance and instruction are available to students of proven academic ability.

Some of the courses listed below which are taught by members of this department are marked as "cross-listed" in other departments. Students taking such courses are normally allowed to count the course as a credit in whichever of the departments they choose. Students who wish to count such a course towards a major in another department should double check with that department.

RELIGIOUS STUDIES

A partial list of related courses follow many course descriptions. These courses cannot be counted as credits in Religious Studies, but are suggested as an aid to students who wish to construct an integrated program.

All courses, unless otherwise specified, are two semester courses, have no prerequisites, and provide for group discussion.

Because the largest number of students enrolled in religious studies courses at all levels are non-majors, a few notes on the department's interpretation of the numbering system may be helpful. We offer four levels of courses: 100.0, 200.0, 300.0, 400.0. The 100.0 level course provides a general introduction to the whole field of religious studies. The 200.0 level courses provide foundations for the three general areas of our program. The 300.0 level courses provide work in particular areas of more special interest. The 400.0 level course provides independent, guided study for students of proven ability. We recognize that a non-major's interest in religious studies may be restricted to a particular area and that he may have room for only one or two courses in our department; consequently, the introductory and foundational courses are not prerequisites for the 300.0 level courses. A student may take courses at any level regardless of his year with these restrictions: Freshmen will not normally be allowed in courses above the 200.0 level, and sophomores will not be allowed in the 400.0 level.

Courses

100.0: MAN'S EXPERIENCE OF THE SACRED: INTRODUCTION TO RELIGIOUS STUDIES

This course seeks to understand man's visions of what has been variously thought of as the Transcendent, or Sacred powers, or dark human forces. It asks such questions as: Is the sacred a fiction man has outgrown? How has man integrated his experience of suffering, maturing, change, sexuality, and death with the sacred? The course will therefore analyze such samples of religious experience as Israelite cosmology, Babylonian New Year festivals, Confucian ethics, Indian yoga, Buddhist monasticism, Christian mysticism, etc.

Staff

RELIGION IN WESTERN CIVILIZATION

201.0: BELIEF AND UNBELIEF

Does God exist? The apparent contradiction of faith and reason. The problem of intellectual responsibility in any "leap" to faith. Is a faith

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...essary to man? Can there be a "natural theology"? Can we ...mythologize the Bible? Consideration of the principal authors who ...scuss the problem of belief.

E. Stiegman, D. Clarke, T. Macho

2.0: 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.

D. Clarke

10.0: 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 course treats the religious roots of the divisions today among Christians with some attention to the religious history of Nova Scotia. The French revolution and the attack on Christianity. Science, liberalism, and marxism and the modern critique of Christianity. The de-christianization of contemporary culture.

L. F. Murphy, S.J.

304.0: THE CHURCH

A study of the nature of the Church, especially through a study of its emergence and place in salvation history. The course will consist of a fair amount of class discussion and so will concentrate on those areas of particular interest to the students.

Hasseveldt, The Church: A Divine Mystery
The Bible
The Documents of Vatican II

G.R. Hoffmann, S.J.

305.0: DRAMA AND RELIGION (Cross-listed as English 306.0)

A close reading of great plays, from world literature, emphasizing Greek tragedy, Shakespeare, and the modern English-American stage. The course strives for an awareness of the religious dimensions of the

fictional universe which every play creates, and of the myth的 character of the play's central action. Attention is drawn to the birth from religious ritual of both classical and modern drama, and to the "dramatic" essence of Judaism and Christianity as religions of event.

E. Stiegman

306.0: MYTH AND HISTORY: THE PROBLEM OF INTERPRETING HUMAN EXISTENCE

Prerequisite: One University History course or consent of the instructor.

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?" Students in this course coregister in History 334.

S. Armstrong   R. Bollin

308.0: TOWARDS THE REFORMATION

Problems — political, intellectual and religious — which originated in early mediaeval Christendom, reached their climax in the middle ages, and resulted in the reformation. Students will see that the Church exists in time, as well as space, and that the times were ripe for a sweeping revolution. Western Christendom was torn asunder. What made this possible? And what is the significance of that split for us today, who shall live with it?

G.R. Hoffmann, S.J.

313.0: JESUS OF NAZARETH

Jesus of Nazareth: God, man and/or superstar? The life and teaching of Jesus of Nazareth as contained in the Gospels and other New Testament literature have inspired millions down through the centuries. But 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.

L.F. Murphy, S.J.

HISTORY OF RELIGIONS (COMPARATIVE RELIGION)

320.0: THE COMPARISONS OF RELIGION

This course offers a general introduction to the study of religions from their primitive beginnings to their more developed forms. The course will survey the basic theories of religion and the methodologies employed in their genesis — history, ethnology, psychology, sociology, philosophy, linguisitcs, etc. — and their application to specific problems in religion through representative examples, including Plato, Voltaire, Hume, Darwin, Freud, Jung, Eliade et al.

T. Rigelhof   M. Waida

321.0: PRIMITIVE RELIGIONS IN ASIA

A study of the so-called primitive religions among (1) hunters and food-gatherers 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 myths".

M. Waida

322.0 EURASIAN RELIGIONS: CRISIS AND RENEWAL

A survey of the new religious patterns emerging in the ancient Near East, Iran, India, and China. Special emphasis will be paid on the problem of man and his destiny in the religion of Zarathustra in Iran, Brahmanism, Hinduism, and also be paid to the recent progress in the study of various forms of Asian mysticism, e.g., Indian Yoga, Chinese Taoism, and "Shamanism," the religious phenomenon predominant in Central and North Asia.

M. Waida

323.0: THE RELIGIONS OF INDIA

A survey to the religious traditions of India from the Indus Valley civilization to the present. This course will concentrate on the foundations and development of the Hindu, Buddhist, and Jain traditions in India and will consider their characteristic doctrines in some detail. Attention will also be given to the general methodological problems in the study of Oriental religions.

T. Rigelhof.

RELIGIOUS STUDIES

324.0: THE RELIGIONS OF CHINA

A study of Chinese religious traditions — Confucianism, Taoism, and Buddhism as well as folk religion. Special emphasis will be laid on Taoism with its major motifs, myths, rituals, institutional forms, etc.

M. Waida

325.0: MYSTICISM AND MEDITATION: EAST AND WEST

Mysticism is a specific type of religious orientation wherein man attempts to unite himself to the "other" through the realization of internal resources. Meditation is the principal means it employs to effect this unity. This course will systematically investigate several mysticisms — old and new, Eastern and Western — and some of the systems of meditation they have produced. It will also investigate the roles played by chants, symbols, drugs, etc. in the meditative processes. Special attention will be paid to the uneasy relationship between the "mystical" and the "scientific".

T. Rigelhof

RELIGION IN CONTEMPORARY SOCIETY

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 ask what some of them have learned which might help us with our own questioning.

S. Armstrong

238.0: PROBLEMS IN CONTEMPORARY ROMAN CATHOLICISM

The Catholic Church is undergoing today 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. Problems to be treated include: atheism and belief, social justice and revolution, new morality, change in dogma, ecumenism, birth control, priest and layman, freedom of conscience and authority, the pentecostals, war and peace.

L.F. Murphy, S.J.   G.R. Hoffmann, S.J.

██.█: ULTIMATE VALUES: AN INTRODUCTION TO MODERN ██RAL THEOLOGICAL THINKING

██er a study of general principles underlying moral decisions, the ██rse will consist of an examination by means of class discussion of ██se areas of morality that are of particular concern to the Christian ██ay. Questions and issues brought up by the class itself will be given ██cial emphasis.

██tafson, The Church as Moral Decision-Maker
██ing, The Law of Christ

██R. Hoffmann, S.J.

██7.0 MARXISM AND RADICAL RELIGION

██ho is man? What may he hope for? This team-taught seminar course ██ll participate in the dialogue between Marxists and Christians. What ██ilarities and differences emerge in this dialogue? Was the Marxian ██itique of religion correct? Is Christianity a status-quo opiate of the ██asses or a revolutionary force for social change? What forms of ██dical religion" have developed out of this dialogue?

T. Macho, S.J.   L.B. Miller

██0.0: SOCIAL ETHICS: MAN AND FREEDOM IN A TECHNO-LOGICAL SOCIETY

██ Technological Man myth or reality? Is the Technological Society a ██reat to freedom or the context for a new participatory society? How can the world be made free for man and man for the world? What is the ██ace of fantasy and festivity in Technocracy? What religious and ethical resources are important for the creation of a humanized society? How ought we to live? Can we survive?

This is a seminar course.

L.B. Miller

342.0: THE SOCIO–ECONOMIC TEACHING OF THE CATHOLIC CHURCH

How did the Church react to the Industrial Revolution?; to the teaching of Marx?; to Lenin's revolution? How does it react today to the liberation movements of the Third World?

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RELIGIOUS STUDIES

This course intends to follow the development of the official teaching of the Catholic Church as it confronted Laissez-faire Capitalism, Marxist-Leninism, Fascism and Nazism, nuclear war and Third World development. Special attention will be given to the Theology of Liberation as it is being articulated by Latin American theologians.

T. Macho, S.J.

345.0: THEOLOGY OF LOVE AND SEXUALITY

This team-taught course will explore man's self-understanding in the areas of love and sexuality from a theological perspective but one which is broadened and deepened through recourse to the insights offered by philosophy, sociology, psychology, art, and history. 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, ecology and the family.

D. Clarke   L.B. Miller

346.0: THE THEOLOGY OF SCIENCE, COMMERCE, AND GOVERNMENT

The "other-worldiness" of religion presents the practical man with a major difficulty. Does religion in general, and Christianity in particular, merely tolerate man's involvement in the activities of science, commerce, and government; or does it view these activities as of real importance? The special approach of this course will be a dialogue between the lecturer and members of the faculties of Science and Engineering, the faculty of Commerce, and the department of Political Science.

E. Stiegman

400.0: SPECIAL TOPIC

Students will choose a theme or movement in collaboration with a member of the department and pursue it through specialized reading and tutorials.

Staff – Permission of Chairman is required.

SOCIOLOGY

Gerry Adler — Lecturer
Donald Cosper — Chairman, Assistant Professor
Walter Friedman — Assistant Professor
Brian Joseph — Lecturer
Patricia Loiselle — Lecturer
Daniel MacInnes — Lecturer
Annie Poushinsky — Lecturer
Linda Ruffman — Assistant Professor

In order to graduate with a major in sociology, a student must be admitted to the program, meet all course requirements, and maintain the required grade average. Normally Introductory Sociology is the first course taken. The student wanting to be admitted to standing as a sociology major must so petition the department during the second semester of his introductory course, at the earliest. Standing as a sociology major is subject to review at the end of the student's Junior year. To major in sociology, a student must get credit for Introductory Sociology, normally taken in the Sophomore year; Research Methods and Sociological Theory, normally taken in the Junior year; and one senior level course, either Modern Sociology or Senior Seminar. In addition a sociology major must take a minimum of three other courses from allied fields (anthropology, economics, political sicence, psychology), at least one of which must be on the 300 or 400 level. The student majoring in sociology must receive an average of "C" or more in his sociology courses.

Prerequisites for all courses are either as stated or by consent of instructor. Courses are all the equivalent of three hours per week per academic year, although specific course schedules are decided by the department.

200.0: INTRODUCTORY SOCIOLOGY

An introductory study of sociological perspectives, basic sociological concepts, man's interaction and organization in society, particularly in modern Canadian society, and the relationship between sociological theory and research; analysis of major social institutions (familial, religious, educational, economical, and political), and of major trends in society (urbanization, industrialization, bureaucratization, and the technological revolution).

SOCIOLOGY

300.0: RESEARCH METHODS

Prerequisite: One Sociology course.

An examination of the basic methods and techniques employed at various stages in social research. Topics to be discussed include selecting a research problem, research designs, methods of Data collection, content analysis and problems of measurement. Practical experience will be provided by means of a research project.

301.0: SOCIOLOGICAL THEORY

Prerequisite: One Sociology course.

A critical examination of sociological theory with emphasis on difference and congruance in the writings of European and American scholars from Saint-Simon and Comte to Parsons and other contemporary theorists. Analysis of major sociological concepts to discover conceptual links between past usuages and meanings and current trends and realities. Relationship of specific theories and their ideas to modern times.

302.0: SOCIAL PROBLEMS INVOLVING DISORGANIZATION AND DEVIANCE

Prerequisite: One Sociology course.

A positive approach to establish proper perspectives for adjustment of personal, family, industrial, religious, social and various other problems such as addictions, health, handicaps; vocational difficulties; emotional controls and suicide; industrial hazards, community problems, national problems, minority groups, war, population, prejudice and discrimination; family problems.

303.0: CRIMINOLOGY AND PENOLOGY

Prerequisite: One Sociology course.

The philosophies of causation and prevention of crime; types of criminal behavior; organized crime and vice. Agencies of apprehension, trial, custody, and after-care of prisoners. World trends in penological philosophy.

304.0: COMPARATIVE SOCIAL SYSTEMS

This course is designed to analyse systematically the major social organizations such as: economic structures, kinship structures, political structures, work structures, recreational structure, of a variety of differently organized social systems. The focus of the course is to compare sociologically the structure and functioning of large social systems. This is presented from a sociological perspective.

305.0: SOCIAL AND ECONOMIC DEVELOPMENT

Prerequisite: One course in Sociology or Economics.

The application of sociological principles to problems of the third world, economic development, urbanization, and modernization. Problems in the transition from agrarian to urban societies.

306: (EDUCATION 507.0) SOCIOLOGY OF EDUCATION

Prerequisite: Two or more Sociology courses or for students in Education.

The institutional structure of education and the social roles of administrators, teachers, and students.

307.0: MASS COMMUNICATIONS

Prerequisite: One Sociology course.

An analysis of the role of mass communications in modern society with particular emphasis on communication media: their structure and control, content, audience, and effects. Theories of mass communication and research data concerning their impact upon the individual in society.

308.0: URBAN SOCIOLOGY

Prerequisites: One 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.

309.0: (PHILOSOPHY 402.0) PHILOSOPHY OF THE SOCIAL STUDIES

Prerequisite: One course in Sociology.

SOCIOLOGY

310.0: HUMAN ECOLOGY

Prerequisites: One Sociology or Biology course.

The course will cover basically the biological underpinnings of society. Non-human and human social structure will be compared. The general theory of ecology will be outlined, and the place of man in nature will be examined. Finally, the conclusions of what is generally considered to be human ecology will be treated in light of the above.

311.0: POPULATION

Prerequisite: One Sociology course.

Determinants and consequences of population, size, growth, rates, composition, distribution, fertility, mortality, and immigration.

313.0: SOCIOLOGY OF KINSHIP AND FAMILY

Prerequisite: One Sociology course.

Cross-cultural analysis of family and changing family patterns; relationship between family and other institutions; appropriate roles and patterns of interaction at each stage of family life-cycle. This will be presented from a sociological perspective with emphasis on theoretical and methodological issues.

316.0: ORGANIZATION THEORY AND BUREAUCRACY

Prerequisite: One Sociology course.

An examination of the formal structure and bureaucratic organization of systems of modern society, deals with organizational theory in relation to occupational, professional, industrial, and work situations.

317.0: (RELIGIOUS STUDIES 317.0) SOCIOLOGY OF REI IGION

Prerequisite: One Sociology or Religious Studies course.

Analysis of the nature of the sociological study of religion and of its theoretical development. The relationship between religion and society. Applications of the major theoretical concepts of the contemporary religious situation.

318.0: SOCIAL CHANGE

Prerequisite: One Sociology course.

This course has two objectives: (1) to present a sociological view of

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story, and (2) to introduce the student to the more important theories of the form, causes, and processes of social change.

319.0: SOCIALIZATION

Prerequisite: One Sociology course.

An analysis of the mechanisms by which individuals acquire from birth to death, the necessary attributes, values and skills for adequate functioning in society. A major concern of the course will be to analyze the processes which operate to cause both conformity and deviance within a particular culture and social system. The course will also include a sociological analysis of some of the main socializing agents in society such as: mass media, schools, family, reference groups, peer groups, etc.

320.0: ETHNIC AND MINORITY GROUPS

The concept of race and ethnicity; the Problems of Minority groups; ethnic differentiation and assimilation in Canadian and American Societies; Segregation, Inequality and Race Conflict. Selected Canadian and American Minorities. Selected World Minority Groups; Race and collective behaviour.

321.0: CANADIAN SOCIETY

Prerequisite: One Sociology course.

An examination of the institutional framework and value basis of Canadian Society. Topics to be discussed include ethnic composition, class structure, economic institutions, political institutions and industrialization. A look will also be taken at the broad spectrum of social problems confronting Canada, both externally and internally.

322.0: POLITICAL SOCIOLOGY

The seminar will examine the connections between large structural changes in societies (notably industrialization and urbanization) and the appearance of collective violence, protest and revolution. The course will deal especially with European experience, although there will be plenty of opportunity to use materials from other parts of the world.

323.0: THE INDIVIDUAL AND SOCIETY

Prerequisite: One Sociology or Psychology course.

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SOCIOLOGY

The course will emphasize the development of the self in society with particular reference to role theory, symbolic interaction, reference groups, motives, influence, conformity, social performance and group structure.

324.0: SOCIAL STRATIFICATION

Prerequisite: One Sociology course.

An analysis of the main features of social inequality in modern industrial societies. Analysis of the distribution of power and wealth, the existence of 'power elites' or 'governing classes', comparative community power structures, the institutionalisation of class conflict, problems of social mobility, the political expression of class and status groups, will all be dealt with. Also, a critical examination of varying sociological perspectives on stratification, both classical (Marx, Weber) and contemporary (Functionalist and Conflict theorists).

325.0: THE SOCIOLOGY OF LANGUAGE AND MEANING

Prerequisite: One Sociology course.

The study of language or communication as a social institution, and the social foundations of meaning. These topics are treated in the first term: biosocial basis of language, structure of language, language change, dialectology, relationships with other institutions, writing. The second term considers: social definitions of reality, ethnomethodology, and sociology of knowledge.

326.0: SOCIOLOGY OF SMALL GROUPS

Prerequisite: Sociology 200.0

An analysis of Human Behavior in small groups, such as experimental groups in the laboratory, T-Groups, Families, Communes, Work Groups, and Political Groups. Theories dealing with styles of inter-action, Role Playing, Deviance, Social Control, and Group continuity and Change will be considered.

327.0: SOCIAL POLICY

Prerequisite: One Sociology Course.

Focus on the various issues and areas of decision making for policy makers in which sociological theory and research have made or could make some contribution. Also an examination of channels and strategies through which policy is effected.

328.0: HISTORY OF SOCIAL THOUGHT

Prerequisite: Sociology 200.0.

Selected authors in The History of Social Thought from the Greeks and Romans to the Present. A critical examination of Sociological Theory in Historical Perspective.

329.0: RURAL SOCIOLOGY

Prerequisite: Sociology 200.0.

This course undertakes a Study of the Institutions of Social Life in those areas still Predominately food-producing or extractive in Occupational & Economic Base, or in Ideology. Many of these areas now face the Prospect of Industrialization and/or Urbanization. The course will deal extensively with Resultant Problems of Social Change, as well as Focusing on Significant Aspects of Life Styles and conditions in Urban Areas.

330.0: SOCIOLOGY OF KNOWLEDGE AND SCIENCE

Prerequisite: Sociology 200.0.

This course undertakes an examination of those patterns which can be discovered in the social processes that produce ideas and such activities as "science". Of particular concern is the relationship between social statuses and the nature of thought patterns produced. Beginning in this field the course progresses to more recent research findings and theoretical considerations in this area.

331.0: LAW AND SOCIETY

Prerequisite: Sociology 200.0.

The law codes and the social arrangements established to enforce such law in any society are a basic component of the particular social order by the society. This course undertakes an examination of the relationship between public morality, social roles and norms, and those special norms we describe as "legal" i.e. law. Law as a social institution then is investigated to discover the causes and consequences of different approaches to the formation and administration of a society's laws/legal norms.

332.0: STUDIES IN SELECTED SOCIETIES AND CULTURES

Prerequisite: One Sociology Course.

An indepth study of the societal organization, institutions, customs and life styles of a particular country or area of the world. Areas may vary

from year to year and will be chosen according to student interest, interdisciplinary programs, and available faculty.

430.0: MODERN SOCIOLOGY

Prerequisite: Open only to Senior majors in sociology.

Issues in contemporary sociology are examined. The course emphasizes student participation and development.

433.0: SENIOR SEMINAR

Prerequisite: Open only to senior majors in Sociology.

An opportunity for a small group of students to intensively study selected topics in sociology and to gain experience in advanced skills in sociology. Recommended primarily for majors planning to do graduate work.

SPANISH

Annabelle Edwards   Lecturer

101.0: INTRODUCTION TO THE SPANISH LANGUAGE

Concentrated study of basic structures with particular emphasis on oral aspects.

Text: Modern Spanish. (Longman. Second Edition).

Lectures: Three hours a week, two semesters.

201.0: ELEMENTARY SPANISH

Prerequisite: Spanish 101.0 or Spanish matriculation.

Continuation of work begun in Spanish 101.0 with particular emphasis on conversation and reading with understanding. Systematic building of vocabulary through study of Spanish civilization.

Text: Beginning Spanish. Second Edition by Zenia Sacks da Silva. (Harper and Row.)

Lectures: Three hours a week, two semesters.

Laboratory: Three half hour (periods) a week.

301.0: COMPLETION OF THE AUDIO-LINGUAL PROGRAM

Prerequisite: Spanish 201.0.

Particular emphasis on conversation and writing using a style and vocabulary appropriate to the material or the occasion. Building of vocabulary through study of cultural materials and especially the anthropological concept of culture.

Text: To be announced

Lectures: Three hours a week, two semesters.

Laboratory: Three½ hour (periods) a week.

302.0: PROSE AND STYLISTICS

Prerequisite: Sound knowledge of Spanish grammar.

Aim: Students learn to "feel" the most appropriate expression in particular circumstances. Class time involves mainly the correction of exercises prepared at home, concentrating on choice of words, imagery, shades of meaning etc.

Text: Spanish Composition through Literature by Candido Ayllón and Paul Smith. Publisher — Prentice Hall. A good Spanish Dictionary. No pocket Editions.

Lectures: One hour weekly. Spanish — English.

One hour weekly. English — Spanish.

303.0: SPANISH DRAMA

An interpretation of the Spanish Drama from the Middle Ages to our days, with particular emphasis on modern Spanish drama and its peculiar characteristics.

Text: To be announced.

Lectures: Three hours a week, two semesters.

304.0: THE GENERATION OF 1898

The Spanish culture before and after this generation. Particular. emphasis on Baroja, Unamuno, and Ortega.

Text: To be announced.

Lectures: Three hours a week, two semesters.

305.0: DON QUIJOTE (NOT OFFERED 1971-72)

Cervantes and his time.

Text: To be announced.

Lectures: Two hours a week, and one hour seminar, two semesters.

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F. Dockrill,B.A.,B.Ed.,M.A.

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To June 1974
G. Harrison, B.A., M.A., Ph.D., Dip.Ed.
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D. Hope, B.Comm., M.B.A., C.A.
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Program Analyst	S.G. Russell
Machine Operator	R. Dupuis (Miss)

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Supervisor of Records	K. Snair

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Football Coach	A.D. Keith, B.A., B.P.E., B.Ed.

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Manager	W. Greenwood, B. Comm.

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Physical Plant Administrator	G.H. Somers, Dip.Eng.
Superintendent	G. Cigolotti
Residence Manager	H.A. DeCoste
Receiving and Stores Agent	R. Lownds

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Dean of Residence (Women)	E.A. Chard (Mrs. D.), B.A., B.Ed., M.A.

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Chaplain (Protestant)	D.S. MacDougall, B.A., B.D., S.T.M.
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Counsellor	J.J. Hennessey, S.J., B.A., M.A.
Counsellor	F. Whelen, S.J., B.A., B.D., M.A.
Placement Officer, Canada Manpower Centre	A.V. Benson, B. Comm.
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FACULTY 1971-1972

Gerald S. Adler
Visiting Lecturer, Sociology
B.A., Roosevelt University

Shahab S.M. Ahmad
Assistant Professor, Psychology
B.Sc., The Aligarh Muslim University;
M.A., Bihar University, Ph.D., University
of Glasgow

Carlos A.R. de Alburquerque
Assistant Professor, Geology
Lic. Geol. Sci., University of Coimbra
Ph.D., Cambridge University

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University of Glasgow

Stanley A. Armstrong
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A.B., Brown University; B.D., Harvard
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B. Comm., University of Ain Shams
M.B.A., Ph.D., Indiana University

Vedat Baydar
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Dean, Commerce; Professor, Business Administration
B. Comm., Saint Mary's University; R.l.A.
(Society of Industrial Accountants of Nova Scotia)
D. Litt., Saint Mary's University

Richard Beis
Associate Professor, Philosophy
B.A., University of Western Ontario
M.A., Ph.D., University of Notre Dame

Mrs. Halina Bobr-Tylingo
Assistant Professor, Biology
M.Sc., Agriculture, S.G.G.W. Warsaw;
Diplôme d'ingénieur E.S.A.A.T.
Paris; Diplômé Centre de Pathologie
Végétale de l'office de la Recherche
Scientifique, Paris

Stanislaw Bobr-Tylingo
Associate Professor, History
LesL, DesL, University of Paris
Dr. Habil in History

Robert J. Bollini
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B.A. Cornell University,
M.S. Georgetown University

Robert G. Boyd
Associate Professor, Political Science
B.A. (Honours), Melbourne

Donald J. Brean
Lecturer, Business Administration
B.A., Saint Mary's University
M.B.A., University of Toronto

William A. Bridgeo
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B.Sc., St. Francis Xavier University;
Ph.D., University of Ottawa

Reverend M.W. Burke-Gaffney, S.J.
Professor Emeritus, Astronomy
B.A., University of Montreal;
B.E., National University of Ireland;
Ph.D., Georgetown University;
D. Eng., Nova Scotia Technical College

Cyril J. Byrne
Lecturer, English
B.A., Saint Dunstan's University
M.A., National University of Ireland
M.A., Oxford University

R. Hugh Cameron
Assistant Professor, History
B.A., University of Toronto
Ph.D., University of London

Faith Chao
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B.A., Agnes Scott College
M.Sc., Emory University

Donald F. Chard
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B.A., Dalhousie
M.A., Dalhousie

Elizabeth A. Chard
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Theodore B. Ciuciura
Professor, Political Science
Certif. in Law and Pol. Sci., University of Lviv (Lwow);
M.A. (Public Law and Government), Columbia
University, Certif., Dr. Jur, Habilitation, University
of Munich and Ukrainian Free University

Diana Clarke
Assistant Professor, Religious Studies
B.A., Newton College of the Sacred Heart
M.A., The Catholic University of America

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Hugh D. Cochrane
Assistant Professor, Mathematics
B.A., University of Toronto,
B.A., M.A., Cambridge University

Philip R. Coelho
Assistant Professor, Economics
B.A., Bowdoin College
M.A., Ph.D., University of Washington

Ronald D. L. Connell, CD, P.Eng.,
Associate Professor,
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