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1972

University of Windsor Faculty of Arts and Science Calendar 1972-1973

University of Windsor

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University of WINDSOR

WINDSOR, ONTARIO

FACULTY OF
ARTS AND SCIENCE

SCHOOL OF DRAMATIC ART
SCHOOL OF NURSING
SCHOOL OF SOCIAL WORK
SCHOOL OF COMPUTER SCIENCE

CALENDAR

1972·1973

TABLE OF CONTENTS

PART F — SCHOOL OF COMPUTER SCIENCE

Separate calendars are available for
THE FACULTY OF APPLIED SCIENCE
THE FACULTY OF BUSINESS ADMINISTRATION
THE FACULTY OF EDUCATION
THE FACULTY OF PHYSICAL AND HEALTH EDUCATION
THE FACULTY OF LAW
THE FACULTY OF GRADUATE STUDIES
THE DIVISION OF EXTENSION (SUMMER SESSION)
THE DIVISION OF EXTENSION (EVENING DIVISION)

PART A

UNIVERSITY OF WINDSOR

WINDSOR, ONTARIO, CANADA

and its

Federated and Affiliated Institutions

ASSUMPTION UNIVERSITY

HOLY REDEEMER COLLEGE

CANTERBURY COLLEGE

IONA COLLEGE

•

CALENDAR

1972-73

•

FACULTY OF ARTS AND SCIENCE

SCHOOL OF DRAMATIC ART

SCHOOL OF NURSING

SCHOOL OF SOCIAL WORK

SCHOOL OF COMPUTER SCIENCE

DETROIT RIVER

RIVERSIDE DRIVE WEST

N

25

AMBASSADOR BRIDGE

VISTA PLACE

PATRICIA ROAD

SUNSET AVENUE

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2

2A

3

UNIVERSITY AVENUE WEST

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M

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6

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7

A
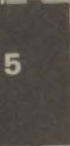
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12

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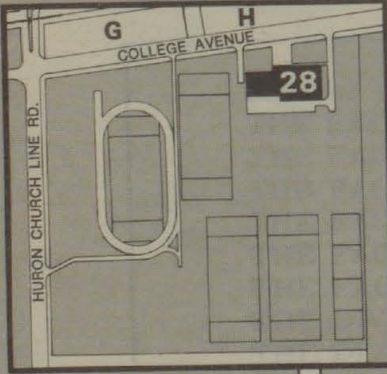
8

9

13

14

R

MILL STREET

11

E

HURON CHURCH LINE RD.

27

N

26

B

24

23

14B

15

K

L

G   H

COLLEGE AVENUE

28

22

19

HURON CHURCH LINE RD.

21

20

D

16

SUNSET AVENUE

C

17   F

WYANDOTTE STREET WEST

PATRICIA ROAD

18

MAIN CAMPUS
UNIVERSITY OF WINDSOR

MAIN CAMPUS—UNIVERSITY OF WINDSOR

1. Iona College (1969)

2. Canterbury College (1957)
   (a) Geoffrey Fisher Hall (1967)
   (Married Students and Faculty Residence)

3. Electa Hall (Residence; 1958; 1963)

4. Faculty of Law (1970)

5. University Library (1958)

6. Assumption Church (1728; 1874)

7. Assumption Church Rectory

8. Assumption University (1857)

9. St. Michael's Hall (Residence; 1915; 1960)

10. University Centre (1962)

11. St. Denis Hall (Gymnasium; 1915; 1948)

12. Memorial Hall (Closed-Circuit TV, 1948; 1966)

13. Dillon Hall (Classrooms; 1928; 1957)

14. Windsor Hall (Administration Tower; 1965)
    (a) North Academic Wing (1965)
    (b) South Academic Wing (1967)

15. Biology Building (1966)

16. Mathematics Building (1971)

17. Fine Arts Building (1951; 1966)

18. Music Building

19. Essex Hall (Engineering, Chemistry,
    Physics, Computer Centre; 1961; 1964)

20. Sir Wilfrid Laurier Hall (Residence; 1969)

21. Vanier Hall (Student Centre; 1969)

22. Sir John A. Macdonald Hall (Residence; 1967)

23. Cody Hall (Residence; 1962)

24. The Shipping Annex

25. The Centre for the Study of Man

26. Huron Hall (residence; 1968)

27. Tecumseh Hall (residence; 1971)

28. Faculty of Physical and Health Education
    Track and Athletic Field (1966)
    Classrooms, Laboratories, Swimming Pool (1968)

Not Shown:
Holy Redeemer College
(National Redemptorist Seminary; 1958; on Highway 3)

Faculty of Education (600 Third Concession)

*Where more than one date is given, the first refers to original construction, and the second to later renovation, addition or assignment.

THE UNIVERSITY OF WINDSOR

is a full member of
The University Matriculation Board of Ontario
The Association of Universities and Colleges of Canada
The Association of Commonwealth Universities
The International Association of Universities

1972

JANUARY
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1973

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May 1—Recommended final date for application for admission to First Year Law.

May 5—Last date for registration without penalty for Intersession and Summer Night Session.

May 15—Intersession and Summer Night Session begin.

May 17—Last date for late registration and change of course for Intersession and Summer Night Session.

May 19—Graduation assembly for Faculty of Education

May 20—Spring Convocation for all Faculties except Law and Graduate Studies.

May 22—(Monday) Observance of Victoria Day (statutory holiday). Intersession classes as usual.

May 29—Last day for drama auditions.

June 3—Spring Convocation for Faculties of Law and Graduate Studies.

June 23—Last date for registration without penalty for Summer Session.

June 26-August 18—Graduate Summer Session for Faculty of Physical and Health Education.

June 28— Last date for application for supplemental examinations.

July 1—(Saturday) Dominion Day (statutory holiday).

July 3-August 12—Summer Session.

July 5—Last day for Summer Session late registration and change of course.

July 19, 20, 21—Supplemental examinations for second semester and full year courses.

August 7—(Monday) Civic Holiday (statutory holiday). Summer session classes as usual.

August 15—Last date of application for Fall term, Extension Division.

August 28—Registration in person for Fall term, Faculty of Law.

August 29—Classes begin in Faculty of Law.

September 1—Last day for submitting Ph.D. dissertations to Departments for Fall graduation. Last day for registration by mail for Fall term, Extension Division.

September 2—Classes begin in the Faculty of Physical and Health Education for students selecting PHE 461a as an option. Late registration penalty begins for undergraduate evening courses.

September 4—(Monday) Labour Day (statutory holiday).

September 5-11—Observation week for the Faculty of Education; each student must spend this week in an elementary school of his choice if this has not been done during May and June, 1972.

September 7, 8, 9—Day division registration in person, or confirmation in person for those who have pre-registered, as follows: September 7, for all local new undergraduate students in the Faculties of Arts and Science and Business Administration; September 8, for all out-of-town new undergraduate students in the Faculties of Arts and Science and

Business Administration, and all undergraduate students in the Faculty of Applied Science, and School of Computer Science; for all undergraduate and graduate students in the Faculty of Physical and Health Education; September 8 and 9, for all returning undergraduate students in the Faculties of Arts and Science and Business Administration; September 9, for all students in the Faculty of Graduate Studies. (Counselling for graduate students will be held on September 8).

September 8—Late registration penalty begins for undergraduate evening division. Last day for submitting Master's theses to Departments for Fall graduation.

September 11—Classes begin, day and evening, in all Faculties except Law and Education.

September 12—Registration in person in the Faculty of Education.

September 13—Classes begin in the Faculty of Education.

September 15—Last day for oral presentation of theses and dissertations for Fall graduation.

September 25—Field work begins, School of Social Work.

October 2—Last day of late registration for Fall session, day and evening.

October 7—Fall Convocation.

October 9—(Monday) Thanksgiving Day (no classes).

October 13-20—First session continuous teaching, Faculty of Education.

November 3-10—Second session continuous teaching, Faculty of Education.

November 24-December 1—Third session continuous teaching, Faculty of Education.

December 11—Last day of first semester classes in all except Law and Graduate Social Work.

December 12-14—Study period.

December 13—Last day of first semester classes in Faculty of Law.

December 14—First semester examinations begin in Faculties of Law and Education.

December 15—First term field work and graduate classes end, in Social Work. First semester exams begin in all Faculties except Law and Education.

December 25—(Monday) Christmas Day (statutory holiday).

1973

January 1—(Monday) New Year's Day (statutory holiday).

January 2—Second semester classes begin for all faculties except Law. Second term field work begins in School of Social Work.

January 4—Second semester late registration penalty for evening division begins.

January 8—Second semester begins in Faculty of Law.

January 19 - February 2—Fourth session continuous teaching, Faculty of Education.

January 22—Last day of registration for second semester courses, day and evening.

February 19-23 inclusive—Midyear recess for all Faculties except Education.

A-8

February 23 - March 2—Fifth session continuous teaching, Faculty of Education.

March 19-23—Mid-winter recess for Faculty of Education.

April 9—Last day of classes, day and evening, except in Law and Graduate Social Work.

April 10-13 inclusive—Study period.

April 13—School of Social Work graduate classes end.

April 14—Spring final examinations begin, for all faculties except Law.

April 18—Last day for submitting Ph.D. dissertations to Departments for Spring graduation.

April 20—Good Friday (statutory holiday)

April 22—Easter Sunday.

April 23-27—Final examinations in Faculty of Education.

April 25—Last day for submitting Master's theses to Departments for Spring graduation.

April 27—Last day of lectures in Faculty of Law. Second term field work ends in Social Work.

April 27 - May 11—Final session continuous teaching, Faculty of Education.

April 30—Second semester examinations begin in Faculty of Law.

May 11—Last day for oral presentation of theses and dissertations for Spring graduation.

May 13—Last day for drama auditions.

May 14—Intersession begins.

May 19—Spring Convocation for all Facultlies except Law and Graduate Studies.

May 21—(Monday) Observance of Victoria Day (statutory holiday).

June 2—Spring Convocation for Faculties of Law and Graduate Studies.

July 1—(Sunday) Dominion Day (statutory holiday).

July 2 - August 11—Summer Session.

****

Final Dates for dropping courses without grade assignment, are as follows:

Intersession (full course)—3 weeks after the class begins.

Intersession (half course)—10 days after the class begins.

Evening Summer Session (course of 12 weeks)—6 weeks after the class begins.

Summer Session (full course)—3 weeks after the class begins.

Summer Session (half course)—10 days after the class begins.

Winter Session (full year course)—January 15.

Winter Session (first semester course)—November 1.

Winter Session (second semester course)—February 15.

HISTORY OF THE UNIVERSITY OF WINDSOR

On July 1, 1963, the new, non-denominational University of Windsor inherited an educational comples founded in 1857 as Assumption College, developed since 1870 by the Basilian Fathers (the Congregation of St. Basil), and expanded to independent University status in 1953. The transition from an historic Roman Catholic university to a non-denominational institution was unprecedented.

The new institution included Assumption University as a federated member, operating residences on campus for men and women and holding in abeyance its degree-granting powers except in the graduate Faculty of Theology. All of the facilities and teaching faculty of Assumption University were absorbed in the University of Windsor, as were those of its federated, non-denominational Essex College, which ceased to exist.

Heritage

Assumption College opened its doors on February 10, 1857, largely through the efforts of Rev. Pierre Point, S.J., pastor of Assumption Parish in Sandwich, established as a mission in 1748 and made a parish in 1767, the oldest in Canada west of Montreal. M. Theodule Girardot was the first instructor. The College was incorporated by an Act of the Legislature of the Province of Canada which received Royal Assent August 16, 1858, during the Superiorship of Rev. Joseph Malbos, a Basilian who guided it for one year. Successively, the College was directed by Jesuits, Benedictines and secular clergy until the Basilians returned in 1870.

During the early years, the curriculum consisted of classical and commercial courses providing a complete high school and Arts course, primarily designed to prepare students for theological seminaries, although many alumni entered business and professional spheres. In 1919, Assumption affiliated with Western University, London, Ontario (now the University of Western Ontario), as an integral part of the latter's Faculty of Arts and Science with a broadened curriculum including General and Honours Courses in Arts and Science leading to Bachelor of Arts and Bachelor of Science degrees, graduate work in Philosophy leading to the Master of Arts degree, and pre-professional programs such as pre-engineering, pre-medicine and pre-law.

From 1934 to 1962, Holy Names College, conducted by the Sisters of the Holy Names of Jesus and Mary, enabled Assumption to become co-educational. Then the Sisters disbanded the College, while continuing to teach at the University, and Assumption took over its women's residence which was re-named Electa Hall.

University Development

On July 1, 1953, Assumption College ended its affiliation with the University of Western Ontario and obtained its own university powers through an Act of the Ontario Legislature. In 1954 it was admitted to full membership in the National Conference of Canadian Universities and Colleges, to the University Matriculation Board of Ontario, and to the Association of Universities of the British Commonwealth.

In 1956, the College changed its name to Assumption University by an Act of the Ontario Legislature and accepted as an affiliate the non-denominational Essex College, incorporated in 1954, which assumed responsibility for the Faculty of Applied Science, the Schools of Business Administration and Nursing, and the Departments of Biology, Chemistry, Geology and Geography,

Mathematics, and Physics. Holy Redeemer College, national seminary of the Redemptorist Fathers, located three miles off campus, also affiliated. In 1957, Canterbury College, offering courses in Philosophy, Religious Knowledge and Medieval History, became the first Anglican college in the world to affiliate with a Roman Catholic university.

Recent Expansion

The University of Windsor was incorporated by the Ontario Legislature on December 19, 1962, accepting Assumption University in federation. During 1963 and 1964, affiliation agreements were made with Holy Redeemer College, Canterbury College and the new Iona College (United Church of Canada), the latter two planning to sponsor student residences and chaplains. A notable innovation in 1963-64 was the establishment of an inter-denominational, undergraduate Department of Theology, now offering courses in three theologies (Anglican, Roman Catholic and United Church), but available to others as the need arises.

The University of Windsor assumed control of the campus on July 1, 1963, and became a member of the International Association of Universities in June, 1964. Rev. E. C. LeBel, C.S.B., first President and Vice-Chancellor of the University of Windsor, was succeeded on July 1, 1964, by Dr. J. F. Leddy, who had been Vice-President (Academic) of the University of Saskatchewan.

The Faculty of Education (formerly Windsor Teachers College) became a part of the University in July, 1970.

The Interfaculty Department of Computer Science was raised to the status of autonomous School of Computer Science in 1970. The Faculty of Law building, the Library addition and the Mathermatics Building have been completed.

Presidents: 1963-64: Rev. Eugene Carlisle LeBel, C.S.B., C.D., LL.D.
          1964-   : John Francis Leddy, D.Phil., D.Litt., D.es L., LL.D., D.C.L.

SUMMARY OF REGISTRATION, 1971-72

Regular Winter Session	Men	Women	Total
Arts	1464	1035	2499
Science	382	95	477
Dramatic Art	28	23	51
Fine Art	56	47	103
Music	33	19	52
Nursing	6	210	216
Social Work	80	159	239
Physical and Health Education	101	81	182
Applied Science	342	0	342
Commerce	594	33	627
Computer Science	48	13	61
Education	88	97	185
Law	300	18	318
Graduate Studies	402	85	487
Full Time Day (total)	3924	1915	5839
Part Time—Day and Evening (total)	1531	1572	3103
Intersession and Summer Session 1971			3962
			12904

THE COAT-OF-ARMS

BONITATEM·DISCIPLINAM·SCIENTIAM

The form of the Letters Patent, issued in 1963 by Garter, Clarenceux and Norroy-and-Ulster Kings of Arms in granting the armorial bearings, was the first of its kind in the history of armory, using the style and title of Her Majesty Queen Elizabeth II as Queen of Canada and placing Her Royal Arms of Canada in the centre rather than the traditional Royal Arms of British sovereigns as monarchs of Britain.

Gold and blue, the colors of the University of Windsor, predominate in the bearings. Gold and green had been the colors of the former Essex College, which was absorbed by the new University. Blue, gold and white are the colors of Assumption University, now federated with the University of Windsor.

The Shield of Arms consists of a gold background on which are three piles, or wedgeshaped heraldic charges, emphasizing the Christian origin of the University, as well as the arduous nature of academic endeavour.

Each pile carries an armorial charge: the upper two a Maple Leaf and Fleur-de-Lis, both gold, alluding to the historic nature of the seat of the University and the nationalities of the major population groups in Windsor. The lower pile is charged with a silver lily with gold wings, a device taken from the arms of Assumption University.

Over the whole of the shield stretches a symbolic bridge with twin allusions to the location of the University at the Canadian base of the Ambassador Bridge linking Canada and the United States, Windsor and Detroit, and to the principal aims of the university—to bridge chasms of ignorance and join the firm grounds of truth.

A-12

Above the shield is the Helm of the corporation, a closed steel vizor lined with red silk. From the Helm rises the Crest, consisting of a Black Greek Cross recalling the association of the Basilian Fathers (the Congregation of St. Basil) with Assumption almost since its founding in 1857.

The Cross stands in front of two red Seaxes, or notched swords, as a cant (or pun) on Essex, the County in which the University is located. The composition is irradiated with gold rays as a further allusion to the County, the "Sun Parlor of Canada." Around the base of the Crest is a Wreath of the University of Windsor colors, blue and gold, and from this, down on either side of the Helm, flows the mantling of the same colors.

The gold Supporters on either side of the Shield are a Canadian Deer and a Moose, alluding to the Supporters of the Arms of Ontario and the derivation of the University's academic authority and principal financial support from the Provincial Legislature, but reversed from those of Ontario. The head of each Supporter is placed in the position known as "guardant," that is, looking toward the viewer, forward-looking.

The whole composition is placed on a green mound, or Compartment, at the base of which is the Motto Scroll, inscribed, "BONITATEM, DISCIPLINAM, SCIENTIAM", words taken from a latin version of Psalm (118) (119)—"Goodness, Discipline and Knowledge."

UNIVERSITY OF WINDSOR
Telephone: (519)253-4232

BOARD OF GOVERNORS (as of January 1, 1972)

Member ex officio:
J. Francis Leddy, D.Phil., D. Litt., D.es L., LL.D., D.C.L., **Vice-Chancellor and President**

Eected Members:
F. Stanley Arbour
Brigadier W. W. Bradley, C.D., A.D.C., **Vice-Chairman**
George Burt, LL.D.
J. Robert Calcott, B.A.
William A. Cowan, Q.C.
Mrs. F. M. Dunlop, B.A.
Rev. D'Arcy L. Egan, C.Ss.R., S.T.L.
Martin Goldberg, B.A.
Benjamin Luborsky, M.D., L.M.C.C., M.C.F.R., F.A.S.A.S.
Walter L. McGregor, Q.C., LL.D.
Robert W. Meanwell, B.A., F.C.A., LL.D.
James R. Moore, B.Sc., M.A.
Frederick R. Palin, F.C.A.
Edwin R. Rowzee, M.Ch.E., D.Sc.
Robert J. Tebbs, B.A.

Members Appointed by Assumption University:
Rev. J. F. Callaghan, C.S.B., M.A.
Charles J. Clark, Q.C., LL.D., **Chairman**
Rev. J. R. Dougherty, C.S.B., M.S.
Rev. A. R. Howell, C.S.B., M.A.Sc.
Rev. Eugene R. Malley, C.S.B., S.T.D.
His Honour Judge Joseph P. McMahon, B.A., Q.C.

Members Appointed by the Alumni Association:
Armando F. A. DeLuca, B.A., LL.B.
Leon Z. McPherson, Q.C.

Members Appointed by the Lieutenant Governor in Council:
A. E. Caza
Mrs. Letitia Graybiel, B.Comm.
John C. Judge, B.A., M.Ed.
Hugh McConville

Members Appointed by the Senate:
J. Maxwell Brownlie, B.A., M.B.A.
Alex W. Gnyp, B.A.Sc., M.A.Sc., Ph.D.
Byron P. Rourke, B.A., M.A., Ph.D.
Walter S. Tarnopolsky, B.A., LL.B., A.M., LL.M.

ASSUMPTION UNIVERSITY

Federated with the University of Windsor
Rev. Eugene R. Malley, C.S.B., S.T.D., **President**
Rev. John F. Murphy, C.S.B., Ph.D., **Chaplain**

BOARD OF GOVERNORS
Rev. E. R. Malley, C.S.B., S.T.D., **President and Superior**
Rev. A. R. Howell, C.S.B., M.A.Sc., **Treasurer**
Rev. J. F. Callaghan, C.S.B., M.A.
Rev. C. P. Crowley, C.S.B., Ph.D.
Rev. J. R. Dougherty, C.S.B., M.A.
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Baumanis, Julija (Mrs.); Grad. Agron. (Latvia), A.M.L.S. (Michigan).
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Beeton, Elizabeth (Mrs.); B.A. (York), B.L.S. (McGill).
    Head, Bibliographic Searching Department.

Breuer, Otto Z.; B.A. (British Columbia), M.L.S. (Washington).
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    Head, Circulation Department.

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Magee, Joan; B.A. (Western Ontario), B.L.S., M.L.S. (Toronto).
    Head, Reference Department.

Malone, Patrick J.; B.A., M.A. (Windsor), M.S.L.S. (Wayne State).
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    Catalogue Librarian.

Murray, Patricia M.; B.A., M.A., B.L.S. (British Columbia).
    Reference Librarian.

Nyaradi, Thomas; L.Th. (Archiepiscopal Sem., Hungary), Cert. Theol. (Luther Theol.
    Sem., Sask.), M.S.L.S. (Wayne State). Catalogue Librarian.

Pakauskas, Milda; B.A. (Windsor), B.L.S. (Toronto).
    Reference Librarian.

Ramachandran, Munuswamy T.; B.A., Dipl. L.S. (Madras), M.L.S. (Hawaii).
    Catalogue Librarian.

Rappé, Idalia H. (Mrs.), B.A. (Assumption), A.M.L.S. (Michigan).
    Catalogue Librarian.

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    Assistant Librarian for Technical Services.

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    (British Columbia). Catalogue Librarian.

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    Reference Librarian.

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    (Rosary). Coordinator of Library Orientation.

Venkateswarlu, Tadiboyina; B.A., M.A. (Andhra), M.Sc. (Alberta), M.L.S. (Western
    Ontario). Reference Librarian.

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    Head, Acquisitions Department.

Williamson, Elizabeth J.; B.A., B.L.S. (Toronto).
    Head, Cataloguing Department.

Winter, Frank H.; B.A.. B.L.S. (British Columbia).
    Government Documents Librarian.

Wolfe, Martha F. (Mrs.); A.B. (Emmanuel College, Boston), M.L.S. (Pittsburgh).
    Reference Librarian.

Zolobka, Vincent; M.A., B.L.S. (Ottawa), A.M.L.S. (Michigan).
    Interlibrary Loans Librarian.

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Abraham, Puthenvilla Y.; B.Sc.N. (Alberta), M.P.H. (Michigan), Reg. N. Assistant Professor of Nursing—1971.

Adorni, Sergio; Laurea (Siena), M.A. (Wisconsin). Assistant Professor of Hispanic and Italian Studies—1970.

*Akeley, Rev. T. C., O.G.S.; B.A. (Johns Hopkins), L. Th., B.D. (Seabury-Western Theol. Sem.), Ph.D. (Cantab). Associate Professor of Theology—1965.

Amore, Roy C.; A.B. (Ohio), B.D. (Drew), Ph.D. (Columbia). Assistant Professor of Theology—1970.

Ansley, Clive; B.A., M.A. (British Columbia). Assistant Professor of Asian Studies—1968.

Atkinson, Colin B.; B.Eng. (McGill), B.A. (Sir George Williams), M.A. (Columbia), Ph.D. (New York U.). Assistant Professor of English—1971.

Atkinson, Harold R.; B.Sc. (Western Ontario), M.Sc. (Assumption), Ph.D. (Queen's). Associate Professor of Mathematics—1964.

Auld, Frank; B.A. (Drew), M.A., Ph.D. (Yale). Professor of Psychology—1970.

Balance, William D.; B.A. (Birmingham Southern College), Ph.D. (Alabama). Associate Professor of Psychology—1968.

Banerjee, Sourendra Kumar; B.Sc., M.Sc. (Patna U.), Ph.D. (Toronto). Associate Professor of Mathematics—1969.

Barnes, John; B.A., M.S.W. (Toronto), D.S.W. (Pennsylvania). Associate Professor of Social Work—1968.

Barnett, Donald F.; B.A. (Carleton), M.A., Ph.D. (Queen's). Assistant Professor of Economics—1968.

Batra, Carol D. (Mrs.); B.Sc.N. (Toronto), M.Ed. (Columbia), Reg.N. Assistant Professor of Nursing—1968.

Baylis, William Eric; B.S. (Duke), M.S. (Illinois), D.Sc. (Technical Univ. of Munich). Associate Professor of Physics—1969.

Benedict, Winfred Gerald; M.Phil. (Leeds), B.S.A., Ph.D. (Toronto). Professor of Biology—1957.

Benson, Jane (Mrs.); L.G.S.M. (Guildhall). Assistant Professor of Dramatic Art—1969.

Bertman, Stephen; B.A. (New York), M.A. (Brandeis), Ph.D. (Columbia). Associate Professor of Classical Studies—1967.

Bird, Harold W.; B.A., Dipl.Ed., M.A. (Cambridge), M.A. (McMaster). Associate Professor of Classical Studies—1969.

*Black, Paul J.; B.A., M.A. (Windsor). Assistant Professor of English—1966.

Blackbourn, Anthony; B.Sc. (London), M.A. (Georgia), Ph.D. (Toronto). Associate Professor of Geography—1963.

*On leave.

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Officers of Instruction

Blair, John A.; B.A. (McGill). Assistant Professor of Philosophy—1967.

Blair, Mansell John; B.A., S.T.B. (Assumption), Ph.D. (Notre Dame). Assistant Professor of Sociology—1968.

Boles, Daniel; B.A. (Stanford), M.F.A. (Tulane). Assistant Professor of Fine Arts—1969.

Booth, David; B.A. (Chicago), M.A. (Illinois), Ph.D. (Northwestern). Associate Professor of Sociology—1970.

*Bounsall, E. J.; B.A.Sc., (Chem. Eng.), M.A. (Toronto), Ph.D. (Imperial College, London). Associate Professor of Chemistry—1965.

Brazel, Anthony J.; B.A., M.A. (Rutgers). Assistant Professor of Geography—1969.

Breaugh, Joseph B.; B.S., M.A. (Central Michigan). Assistant Professor of Sociology—1970.

Briggs, Elsworth Donald; B.A. (New Brunswick), Ph.D. (London). Vice-Dean, Division of Social Sciences; Associate Professor of Political Science—1963.

Bringmann, Wolfgang G.; B.S. (Darmstadt), M.A., Ph.D. (Alabama). Professor of Psychology—1967.

Britten, Daniel J.; B.A. (Merrimack College), M.S., Ph.D. (Iowa). Assistant Professor of Mathematics—1971.

Brown, Alan Andrew; B.A. (City U. of New York), M.A., Ph.D. (Harvard). Professor of Economics—1971.

Brown, Jerome V.; B.A. (Iona College, N.Y.), M.A., Ph.D. (Toronto). Associate Professor of Philosophy—1961.

Brown-John, C. Lloyd; B.A. (British Columbia), M.A., Ph.D. (Toronto). Assistant Professor of Political Science—1968.

Buckley, Lola E.; B.B.A. (Houston), M.S.W. (Denver), D.S.W. (Southern California). Associate Professor of Social Work—1970.

Bunt, Miriam Elizabeth; B.A., B.S., M.Ed., Ph.D. (Wayne State). Professor and Head, Department of Psychology—1963.

Burrell, Peter R.; B.A. (Assumption), M.A. (Pennsylvania). Associate Professor of Economics—1965.

*Burton, Bruce Edward; M.A. (Oxon.), M.Soc.Sc. (Hague). Associate Professor of Political Science—1966.

*Callaghan, Rev. John Francis, C.S.B.; B.A., M.A. (Toronto). Associate Professor of Economics—1957.

Caron, Marie-Therese; B.A. (Ottawa), M.A. (Laval), Ph.D. (Wisconsin). Associate Professor of French Language and Literature—1964.

Cassano, Paul; B.A. (Windsor), M.A. (New York), Ph.D. (Columbia). Associate Professor of French Language and Literature—1968.

Cervin, Vladimir Bohdan; B.A., B.Sc. (Vienna, Austria), D.S.S. (Brussels), Ph.D. (Prague). Professor of Psychology—1961.

Chabot, Marcel Eugene; B.A. (Windsor), A.M., Ph.D. (Harvard). Assistant Professor of French Language and Literature—1970.

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*Chandler, Robert; B.A., B.S.W., M.S.W. (Toronto). Assistant Professor of Social Work—1968.

Chandna, Om Parkash; B.A. (Panjab), M.A. (Delhi), M.Sc., Ph.D. (Windsor). Associate Professor of Mathematics—1968.

Chrypinski, Vincent Casmere; M.L. (Catholic U. of Lublin, Poland), M.A. (Wayne), Ph.D. (Michigan). Professor of Political Science—1957.

Clarke, Harold Dowler; B.A., M.A. (Western Ontario), Ph.D. (Duke). Assistant Professor of Political Science—1971.

Clarke, James P.; A.B., M.S. (Columbia), Ph.D. (New York). Associate Professor of Social Work—1969.

Cohen, Jerome S.; B.A. (Michigan State), M.A., Ph.D. (Wayne State). Assistant Professor of Psychology—1968.

Cooke, Bernard J.; A.B., M.A., Phil.Lic. (St. Louis), S.T.L. (St. Mary's, Kansas), S.T.D. (Inst. Catholique, Paris). Professor of Theology—1970.

Crowell, George H.; A.B. (Princeton), B.D., Th.D. (Union Theol. Sem.). Associate Professor of Theology—1968.

Crowley, Rev. Cornelius Patrick Joseph, C.S.B.; B.A. (Toronto), M.A., Ph.D. (Michigan); Dean of Graduate Studies, Professor of English—1944.

Crowley, Rev. Edward J., C.Ss.R.; B.A. (St. Joseph's, New Brunswick), S.T.L. (Catholic U. of America), S.S.L. (Pontifical Biblical Institute, Rome). Professor and Head, Department of Theology—1957.

Cruz, Valentin; B.A. (Providence College), B.S.W., M.S.W. (Ottawa). Associate Professor of Social Work—1971.

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Cunningham, Stanley B.; B.A. (Manitoba), M.A. (Toronto), M.S.L. (Pontif. Inst.), Ph.D. (Toronto). Associate Professor of Philosophy—1961.

Czajkowski, M; M.Sc. (Nicholas Copernicus), D.Sc. (Torun, Poland). Associate Professor of Physics—1967.

Daly, Raymond M.; B.S., M.A., Ph.D. (Loyola). Associate Professor of Psychology—1967.

DeAngelis, Joseph R.; B.F.A. (Rhode Island School of Design), M.F.A. (Syracuse). Assistant Professor of Fine Arts—1969.

Deck, John Norbert; B.A., M.A. (Western Ontario), Ph.D. (Toronto). Professor of Philosophy—1957.

DeLauro, Joseph Nicola; B.F.A. (Yale), M.F.A. (Iowa). Professor and Head, Department of Fine Arts—1960.

Della Valle, Philip A.; B.A. (Windsor), M.A. (Toronto), Ph.D. (State U. of New York). Associate Professor of Economics—1968.

DeMarco, Frank A.; B.A.Sc., M.A.Sc., Ph.D. (Toronto); Vice-President. Professor of Chemistry and Chemical Engineering—1946.

deVillers, Jean-Pierre Andreoli; L. es L. (Aix-en-Provence), Ph.D. (Colorado). Associate Professor and Head, Department of French Language and Literature—1968.

*On leave.

Officers of Instruction

Diemer, Ann Henderson (Mrs.); B.A., Ph.D. (Wanyne State). Associate Professor of Sociology—1967.

Dietz, Mary A. (Mrs.); B.A. (Wayne State), M.A. (Michigan State), Ph.D. (Wayne State). Associate Professor of Sociology—1968.

Ditsky, John M.; B.A., M.A. (Detroit), Ph.D. (New York). Associate Professor of English—1967.

Doctor, Antonio P.; B.A.F. (Santo Tomas), M.F.A. (Notre Dame). Assistant Professor of Fine Arts—1967.

Dougherty, Rev. John Roger, C.S.B.; B.A. (Western Ontario), S.T.B. (St. Michael's, Toronto), M.S. (Cornell). Associate Professor of Biology—1951.

Doyle, Robert Joseph; B.A., M.A. (Western Ontario), M.S. (Michigan State), Ph.D. (Wayne State). Professor and Head, Department of Biology—1948.

Drake, John E.; B.Sc., Ph.D. (Southamption). Professor of Chemistry—1969.

Drake, Gordon W. F.; B.Sc. (McGill), M.Sc. (Western Ontario), Ph.D. (York). Associate Professor of Physics—1969.

Drouillard, Clarence Joseph; B.A., M.A. (Toronto), Ph.D. (Laval). Professor of French Language and Literature—1956.

Ducharme, Edward W.; B.A., M.A. (Windsor). Lecturer in English—1969.

Duggal, Krishan; B.A. (Panjab), M.A. (Agra), M.Sc., Ph.D. (Windsor). Associate Professor of Mathematics—1968.

Edmunds, Hugh H.; B.A., B.Ed. (Saskatchewan). Associate Professor of Communication Arts—1971.

Egan, Rev. D'Arcy Lawrence, C.Ss.R.; S.T.L. (Catholic U of America). Principal of Holy Redeemer College. Associate Professor of Theology—1957.

Engel, Grace; B.A., M.A. (Wayne State). Assistant Professor of Home Economics—1969.

Engelhart, Roland; A.B. (Davidson), Ph.D. (Duke). Associate Professor of Psychology—1968.

Faber, Seymour; M.A. (Michigan). Lecturer in Sociology—1966.

Fallenbuchl, Zbigniew Marian; B.Sc. (Econ.) (London), M.A. (Montreal), Ph.D. (McGill). Professor and Head, Department of Economics—1957.

Fantazzi, Charles; A.B., M.A. (Catholic U. of America), Ph.D. (Harvard). Associate Professor of Classical Studies and Italian Studies, and Head, Department of Classical Studies—1960.

Farrell, Michael J.; B.A., M.A. (Florida State). Assistant Professor of Fine Arts—1968.

Faught, Rev. Donald Thomas, C.S.B.; B.A. (Toronto), M.A. (Michigan). Professor and Head, Department of Mathematics—1954.

Fehr, Robert Charles; B.A. (Toronto), M.A. (Detroit), Ph.D. (Fordham). Professor of Psychology—1951.

Felver, William E.; B.A., M.A. (Cornell). Assistant Professor of Classical Studies—1963.

Ferguson, John D.; B.A., M.A. (Toronto), Ph.D. (Columbia). Associate Professor of Sociology—1968.

Ferraro, Robert C.; B.A. (City College, New York), M.F.A. (Southern Illinois). Assistant Professor of Fine Arts—1968.

Flood, Patrick Francis; B.A., M.A. (Western Ontario), Ph.D. (Ottawa). Professor of Philosophy—1945.

*Fortune, J. Neill; B.Sc.A. (Toronto), M.A. (Western Ontario), Ph.D. (Indiana). Assistant Professor of Economics—1968.

Fournier, Guy; Lic. en Droit, D. de l'Un. (Paris). Assistant Professor of French Language and Literature—1967.

Fournier, Yvonne (Mrs.); L.es L., D. de l'Un. (Lille). Assistant Professor of French Language and Literature—1967.

Frisch, Giora Ron; B.A. (City College, N.Y.), Ph.D. (Tennessee). Assistant Professor of Psychology—1969.

Gazetas, Aristides; B.A. (City College of N.Y.), M.F.A. (Boston). Assistant Professor of Dramatic Art—1971.

Gerace, Mary; B.A., M.A. (Windsor). Lecturer in Communication Arts—1967.

Gillen, William John; B.A. (Assumption), M.A. (Toronto). Professor of Economics—1959.

Goerzen, Susie Mae (Mrs.); B.S. (Southwestern State College, Okla.), M.S. (Kansas State). Assistant Professor of Home Economics—1969.

Gold, Alan John; B.A. (Windsor), Dip. d'Etudes, Doct. de Spec. (Clermont). Assistant Professor of Mathematics—1969.

Gravenor, Conrad P.; B.A. (Toronto), M.S. (Wisconsin), Ph.D. (Indiana). F.R.S.C., Vice-Dean, Division of Mathematics and Science. Professor of Geology—1969.

Gravitz, Herbert L.; B.S. (Maryland), M.A., Ph.D. (Tennessee). Assistant Professor of Psychology—1969.

Green, Reuben; B.A., M.A. (Windsor), Ph.D. (London). Assistant Professor of Economics—1968.

Guccione, Antonio; Laurea (Palermo), Ph.D. (California). Associate Professor of Economics—1967.

Gupta, Anna (Mrs.); B.Sc.N., M.Sc. (Wayne State), Reg. N. Professor and Director, School of Nursing—1968.

Habib, Edwin Emile; B.Sc. (Birmingham), Ph.D. (McMaster). Associate Professor of Physics—1959.

Habowsky, J. E. J.; Diplom-Landwirt (B.S.A.) (Cobourg, Bavaria), M.S.A., Ph.D. (Toronto). Associate Professor of Biology—1964.

Hackett, Joan; B.S.S. (Northwestern), M.A. (Michigan State), Ph.D. (Wayne State). Associate Professor of Dramatic Art—1969.

Halford, Peter W.; B.A., M.A. (Windsor). Assistant Professor of French Language and Literature—1966.

Hansen, Forrest C.; B.A. (Alberta), B.S.W., M.S.W. (Toronto). Assistant Professor of Social Work—1971.

Hanson, Jens; B.Sc. (M.I.T.), M.A. (Denver), Ph.D. (Yale). Associate Professor of Music—1968.

*On leave.

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Officers of Instruction

Harder, Bernhard D.; B.A., M.A. (British Columbia). Assistant Professor of English—1970.

*Hedgecock, Nigel Edward; B.A., M.A. (British Columbia), Ph.D. (McMaster). Associate Professor of Physics—1961.

Helbing, Reinhard K. B.; B.Sc., M.Sc., Ph.D. (Rhein. Friedr. Wilhelms U., Bonn). Professor of Physics—1972.

Helling, Rudolph A.; B.A. (Wayne State), Dipl. Disc. Pol. (Wilhelmshaven-Goettingen), Ph.D. (Wayne State). Professor of Sociology—1956.

Hencher, John L.; B.A., Ph.D. (McMaster). Assistant Professor of Chemistry—1967.

*Hill, Rev. Henry Gordon; B.A. (Queen's), B.A., M.A. (Cambridge), L.Th. (Trinity). Associate Professor of History—1964.

Hirota, Theodore T.; B.A. (British Columbia), M.A., Ph.D. (Toronto). Assistant Professor of Psychology—1968.

Hoffman, The Rev. John Charles; B.A. (Toronto), B.D., Ph.D., S.T.M. (McGill), Th.D. (Union Theol. Sem.), Principal of Iona College. Associate Professor of Theology—1964.

Holland, Cornelius J.; B.S. (St. Joseph's, Philadelphia), M.A. (Detroit), Ph.D. (Catholic U. of America). Associate Professor of Psychology—1967.

Holland, William John; B.Sc. (Queen's), M.S., Ph.D. (Wayne State). Professor of Chemistry—1960.

Holmes, David M.; B.A. (Western Ontario), M.A. (Windsor), D.Phil. (Oxford). Associate Professor of English—1964.

Holuj, Frank; B.Sc. (London, England), M.Sc., Ph.D. (McMaster). Professor of Physics—1961.

Horn, Dieter; Dr. Phil. (Marburg). Associate Professor of German Language and Literature—1966.

*Hornsey, Richard F.; B.A., M.A. (Windsor). Lecturer in English—1969.

Horvath, Theodore; B.A. (Waterloo Lutheran), M.A., Ph.D. (Windsor). Assistant Professor of Psychology—1968.

Hoskins, Ronald G.; B.A., M.A. (Windsor). Assistant Professor of History—1966.

Hrycay, Rudolph; B.A., M.A. (Saskatchewan) Ph.D. (Alberta). Assistant Professor of Mathematics—1969.

Huang, Roderick; B.A. (Fukien Christian, China), M.A. (Wesleyan), Ph.D. (Northwestern). Professor of English—1965.

Hudec, Peter P.; B.Sc. (Western Ontario), M.S., Ph.D. (Rensselaer Polytech. Inst.). Associate Professor of Geology—1970.

Huschilt, John; B.A., M.A. (Toronto), Ph.D. (Wayne State). Associate Professor of Physics—1953.

Jairazbhoy, N. A.; B.A. (Washington), Ph. D. (London). Associate Professor of Asian Studies—1969.

Janzen, Henry David; B.A. (Assumption), M.A. (Windsor), Ph.D. (Wayne State), Assistant Professor of English—1970.

Johnson, Ralph Henry; B.A. (Xavier), M.A. (Notre Dame). Assistant Professor of Philosophy—1966.

*On leave.

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Jones, Joyce A.; B.S.N. (Saskatchewan). Reg. N. Lecturer in Nursing—1970.

Jull, Robert Kinsley; B.Sc., M.Sc. (Alberta), Ph.D. (Queensland). Associate Professor of Geology—1968.

Kaloni, Purna N.; M.Sc. (Allahabad), M.Tech., Ph.D. (Indian Inst. of Tech.) Professor of Mathematics—1970.

Kaplan, Marvin L.; B.A. (Rochester), Ph.D. (Buffalo). Professor of Psychology—1969.

Keenleyside, Terence A.; B.A. (Toronto), Ph.D. (London). Assistant Professor of Political Science—1971.

Kelly, Daniel Patrick; B.A., M.A. (Toronto). Professor and Director, School of Dramatic Art—1958.

Kelly, Thomas I.; S.T.L. (Catholic U. of America). Assistant Professor of Theology—1967.

Kennedy, Rev. Leonard Anthony, C.S.B.; B.A., M.A., Ph.D. (Toronto). Professor of Philosophy—1963.

King, Bruce A.; B.A. (Columbia), Ph.D. (Leeds). Professor of English—1970.

King, Joseph Norman; B.A., M.A. (Toronto), S.T.B. (Laval), Ph.D. (U. of St. Michael's College). Assistant Professor of Theology—1964.

Kingston, Rev. Frederick Temple; B.A., M.A. (Toronto), L.Th., B.D. (Trinity), D. Phil. (Christ Church, Oxford), Principal, Canterbury College. Professor of Philosophy—1959.

Kingstone, Basil D.; B.A., M.A., Ph.D. (Oxford). Associate Professor of French Language and Literature—1963.

Kliever, Lonnie D.; B.A. (Hardin-Simmons U.), B.D. (Union Theol. Sem.), Ph.D. (Duke). Professor of Theology—1969.

Klinck, David M.; B.A., M.A. (Western Ontario). Lecturer in History—1968.

Kobasigawa, Akira; B.A., M.A. (George Peabody College), Ph.D. (Iowa). Associate Professor of Psychology—1969.

Kolinski, Ralph; B.S. (Marquette), M.A. Ph.D. (Wayne State). Associate Professor of Economics—1966.

Koloseike, Alan D.; B.A. (Cornell), M.A. (U.C.L.A.). Assistant Professor of Anthropology—1970.

Kovacs, Aranka Eve; B.A. (McMaster), M.A. (Toronto), Ph.D. (Bryn Mawr). Professor of Economics—1961.

Kovarik, Edward; B.M., B.M.E., M.M. (Northwestern), M.A. (Harvard). Assistant Professor of Music—1967.

Krause, Lucjan; B.Sc. (London, England), M.A., Ph.D. (Toronto), D.Sc. (London), F.Inst.P. Professor and Head, Department of Physics—1958.

Krause, Robert G.; B.A., M.A. (Windsor). Assistant Professor of Political Science—1970.

Kroeker, Bernard J.; B.Ed. (Alberta). B.S.W., M.S. W. (Toronto). Associate Professor of Social Work—1969.

Kubota, Akira; B.A. (Tokyo), M.A., Ph.D. (U. of Michigan). Associate Professor of Political Science—1970.

Kulisek, Larry Lee; B.S. (Northwest Missouri State), M.A. (Omaha). Lecturer in History—1968.

LaFave, Lawrence Edward; B.A. (Minnesota), M.A. (North Dakota), Ph.D. (Oklahoma). Professor of Psychology—1968.

LaGaipa, John; B.A. (Hobart College), M.A. (U. of Michigan), Ph.D. (American U.). Professor of Psychology—1968.

Lall, Amrit; B.A., M.A. (Panjab), Ph.D. (Indiana). Associate Professor of Geography—1967.

Lanz, Barbara Ann; B.Sc., M.S. (Stout State). Lecturer in Home Economics—1971.

LaValle, Placido D.; B.A. (Columbia), M.A. (Southern Illinois), Ph.D. (State U. of Iowa). Associate Professor of Geography—1969.

Law, William C.; B.F.A. (Atlanta School of Art), M.F.A. (Tulane). Lecturer in Fine Arts—1970.

Layne, Neville W.; B.A. (West Indies), M.A., Ph.D. (California). Assistant Professor of Sociology—1968.

Leddy, John Francis; M.A. (Sask.), B.Litt. D. Phil. (Oxon.), D.Litt. (St. Francis Xavier), D. es L. (Laval), D.Lit. (Ottawa), LL.D. (Assumption, Hanyang [Korea], Notre Dame [Nelson], Sask., Toronto), D.C.L. (St. Mary's). President and Vice-Chancellor—1964. Professor of Classical Studies—1970.

LeDuc, Lawrence W. Jr.; B.A. (Windsor), M.A. (Wayne State), Ph.D. (Michigan). Associate Professor of Political Science—1967.

Leiter, Darryl; B.S., M.S. (Georgia Tech), Ph.D. (Brandeis). Associate Professor of Physics—1970.

Lemieux, Gerard A.; B.A. (Laurentian), M.A. (Laval). Assistant Professor of French Language and Literature—1967.

Lemire, Francis William, B.Sc. (Windsor), M.Sc., Ph.D. (Queen's). Associate Professor of Mathematics—1970.

Lewis, John Underwood; A.B. (North Texas State). Ph.D. (Marquette). Associate Professor of Philosophy—1964.

Libby, William L.; A.B. (Harvard). M.B.A., Ph.D. (Chicago). Associate Professor of Psychology—1970.

Lin, Che-shung; B.Sc., M.Sc. (National Taiwan), Ph.D. (Saskatchewan). Associate Professor of Chemistry—1967.

McCarthy, Lillian Margaret; B.A., M.A., Ph.D. (Toronto). Professor of French Language and Literature—1958.

McCaskill, David G.; B.Sc., M.A. (Manitoba). Assistant Professor of Philosophy—1969.

M'Closkey, Robert T.; B.A. (U.C.L.A.), M.A. (California State), Ph.D. (U. of California). Assistant Professor of Biology —1970.

McConkey, John William; B.Sc., Ph.D. (Queen's University of Belfast). F. Inst. P. Professor of Physics—1970.

McCrone, Kathleen E.; B.A. (Saskatchewan), M.A., Ph.D. (New York). Assistant Professor of History—1968.

McCurdy, Howard Douglas; B.A. (Western Ontario), B.Sc. (Assumption), M.Sc., Ph.D. (Michigan State). Professor of Biology—1959.

McDermott, Phyllis; B.Sc. (Nazareth College), M.S. (Michigan State). Associate Professor and Head, Department of Home Economics—1959.

McDonald, James F.; B.S., Ph.D. (Wayne State). Associate Professor of Mathematics—1967.

McFarlane, Sheila (Mrs.); B.Sc.N. (Western Ontario). Reg. N. Lecturer in Nursing—1970.

McGuigan, William Gerard; L.G.S.M. (Guildhall School of Music and Drama). Assistant Professor of Voice and Speech—1968.

McIntosh, John McLennan; B.Sc. (Queen's), Ph.D. (M.I.T.). Assistant Professor of Chemistry—1968.

McIntyre, Paul P.; Mus.Bac., Mus.Doc. (Toronto). Professor and Head, Department of Music—1970.

McIsaac, James Albert; B.A., B.S.W., M.S.W. (Toronto). Associate Professor of Social Work—1969.

McKay, Linda (Mrs.); B.A. (North Carolina), M.S. (Maryland). Assistant Professor of Home Economics—1968.

MacKendrick, Louis King; B.A., M.A. (Western), Phil.M., Ph.D. (Toronto). Assistant Professor of English—1971.

McKenney, Donald J.; B.Sc., M.Sc. (Western Ontario), Ph.D. (Ottawa). Associate Professor of Chemistry—1964.

MacLeod, Alistair; B.A., B.Ed. (St. Francis Xavier), M.A. (New Brunswick), Ph.D. (Notre Dame). Assistant Professor of English—1969.

McNamara, Eugene Joseph; B.A., M.A. (DePaul), Ph.D. (Northwestern). Professor of English—1959.

McPhail, Gerard; B.Sc., M.Sc. (Queen's). Assistant Professor of Mathematics—1969.

Mady, Diane Marie; B.A. (Assumption). Assistant Professor of Dramatic Art—1970.

Majhanovich, Ljubo D.; B.A., M.A. (Toronto). Lecturer in Russian—1970.

Malley, Rev. Eugene R., C.S.B.; B.A., M.A. (Toronto), S.T.L., S.T.D. (Angelicum). President of Assumption University. Vice-Dean, Division of Humanities and Languages; Professor of Theology—1964.

Malone, John Alphonse; B.A. (Western Ontario), M.A. (Toronto), Ph.D (Fordham). Professor of Psychology—1959.

Manley, Paul L.; B.Sc., M.Sc. (Alberta). Assistant Professor of Mathematics—1967.

Martin, Sue G.; B.A., M.A., Ph.D. (Wayne State). Assistant Professor of Dramatic Art—1971-72.

Mauch, Robert K.; B.M. (Michigan), M.M. (New York U.). Assistant Professor of Music—1969.

Meadley, Cyril Keith; B.Sc. (Western Ontario), M.Sc. (Laval), Ph.D. (Manchester). Associate Professor of Mathematics—1968.

Mehmet, Ozay; B.Sc. (L.S.E.), M.A., Ph.D. (Toronto). Associate Professor of Economics—1969.

Officers of Instruction

Mehta, Mahesh; B.A., M.A., LL.B., Ph.D. (Bombay). Assistant Professor of Asian Studies—1969.

*Mendels, Roger P.; B.Comm., M.A. (McGill), M.Sc., Ph.D. (Wisconsin). Associate Professor of Economics—1969.

Meyer, Benjamin S.; B.A. (City College of N.Y.), M.A. (Buffalo). Assistant Professor of Economics—1970.

Milton, Helen I.; B.A. (Queen's), S.T.B., M.Th., D.Th. (Trinity College, Toronto). Associate Professor of Theology—1967.

Milton, Mavis T.; B.Sc., B.Ed., M.Sc. (Manitoba). Assistant Professor of Home Economics—1971.

Miner, Brother Bonaventure; B.A. (Toronto, London), M.A. (Toronto), Ph.D. (London). Associate Professor of History—1967.

Minton, Henry L.; B.A. (New York), M.A. (Southern Illinois), Ph.D. (Pennsylvania State). Associate Professor of Psychology—1970.

Mitra, Juliana Carmen T. (Mrs.); B.Sc.N. (Philippine Women's U.), M.Sc.N (Western Ontario). Reg. N. Assistant Professor of Nursing—1969.

Molloy, Mary Elizabeth; B.A., M.Sc.(N) (Western Ontario), Dip. P.H.N. (Toronto). Reg.N. Associate Professor of Nursing—1963.

Moore, Stewart; B.A., M.A., M.S.W. (Wayne State). Associate Professor of Social Work—1968.

Morf, Martin E.; B.A. (Acadia), M.A. (Dalhousie), Ph.D. (Western Ontario). Assistant Professor of Psychology—1969.

Morrow, Harry M.; B.A., B.S.W., M.S.W. (British Columbia). Professor and Director, School of Social Work—1966.

Mouratides, Anastasio Isaac; B.Comm., M.A., Ph.D. (McGill). Associate Professor of History—1964.

Mukkur, T.K.S.; B.V.Sc. (Punjab), M.V.Sc. (Indian Vet. Inst.), Ph.D. (Florida). Assistant Professor of Biology—1971.

Mulvihill, Rev. Daniel Joseph, C.S.B.; B.A. (Western Ontario), M.A., Ph.D. (Michigan). Professor of History—1942.

Murrah, Charles Clay; B.A. (Chicago), M.A., Ph.D. (Harvard). Associate Professor of English—1970.

Namikas, Gediminas A.; B.A. (Northwestern), M.Sc., Ph.D. (Wisconsin). Associate Professor of Psychology—1968.

Neilson, George L.; Dip. in Drama and Speech (Glasgow), M.F.A. (Georgia). Associate Professor of Drama and Speech—1967.

Nelson, David L.; B.A. (Augustana College), Ph.D. (Waterloo). Assistant Professor of Chemistry—1971-72.

Nelson, Ralph Carl; B.A., M.A. (DePaul), Ph.D. (Notre Dame). Professor of Political Science—1961.

Nicholas, Cyrus B.; B.A., M.A. (Ohio State). Lecturer in Fine Arts—1970.

*On leave.

X

Nielsen, Harry A.; A.B. (Rutgers), M.A. (Connecticut), Ph.D. (Nebraska). Professor of Philosophy—1968.

Nolan, Brian P.; B.A., M.A. (Windsor). Lecturer in History—1969.

O'Donoghue, Rev. John Michael Curtis, C.S.B.; B.A., M.A. (Toronto), A.M. (Harvard). Associate Professor of Hispanic and Italian Studies—1959.

O'Farrell, John Kevin Anthony; B.A., M.A. (Western Ontario), Ph.D. (Ottawa), F.R.S.A. Associate Professor of History—1962.

Ogata, Hisashi; B.S. (Tokyo College of Science). M.S. (Tokyo U. of Education), Ph.D. (Western Reserve). Associate Professor of Physics—1965.

Oguchi, Noriyoshi; B.A., M.A. (International Christian U., Tokyo). Assistant Professor of Economics—1971.

Okey, Allan B.; B.Sc. (Wisconsin), M.S., Ph.D. (Southern Illinois). Associate Professor of Biology—1967.

O'Meara, Rev. John Patrick, C.S.B.; B.A. (Toronto), M.A. (Wayne State), Ph.D. (Ottawa). Professor of History—1959.

Orona, Angelo R.; B.A., M.A., Ph.D. (California at Los Angeles). Assistant Professor of Anthropology—1969.

Orr, Robert R.; B.A. (Valparaiso), M.A., Ph.D. (Iowa). Assistant Professor of Psychology—1969.

Palmer, David John; B.Mus., M.Mus. (Michigan). Assistant Professor of Music—1970.

Pappert, Edward Cecil, C.S.B.; B.A. (Toronto), M.A. (Detroit), Ph.D. (Ottawa). Dean of Extension and Continuing Education. Assistant Professor of English—1950.

Paul, Roy Vance; B.A. (Northern Michigan), M.A. (Michigan State). Assistant Professor of Drama and Speech—1967.

Pazik, Rev. Ronold Stanly, C.S.B.; B.A. (Western Ontario), M.A. (Toronto), Cert. Est. del Doct. (Madrid). Associate Professor and Head, Department of Hispanic and Italian Studies—1955.

Peebles, Christopher S.; A.B. (Chicago), M.A., Ph.C. (California at Santa Barbara). Assistant Professor of Anthropology—1970.

Pemberton, Ian Cleghorn; B.A. (Bishop's), M.A. (Toronto). Lecturer in History—1968.

Perez-Soler, Vincente; Dr. en F. y L. (Valencia). Associate Professor of Hispanic and Italian Studies—1966.

Petras, Michael Luke; B.Sc. (Assumption), M.Sc. (Notre Dame), Ph.D. (Michigan). Professor of Biology—1956.

Philip, Brother Roger, F.S.C. (William James Overend); B.A., M.A. (Toronto), Ph.D. (Catholic U. of America). Professor Emeritus, Department of Psychology—1956.

Phillips, Timothy; B.Sc., M.Sc. (Windsor). Assistant Professor of Chemistry—1971-72.

Phillips, William Gregory; B.A., M.A., Ph.D. (Toronto). Dean of Arts and Science; Professor of Economics—1950.

Pillay, Dathathry T. N.; B.Sc. Ag. (Osmania, India), M.S., Ph.D. (Cornell). Professor of Biology—1963.

Pinto, Robert Charles; B.A., M.A. (Toronto). Assistant Professor of Philosophy—1963.

Plante, Homer Frederick; B.A. (Western Ontario), M.A. (Toronto). Associate Professor of English—1956.

Pradhan, Mahesh Chandra; B.A. (Agra), M.A., LL.B. (Lucknow), Ph.D. (London). Professor of Anthropology—1970.

Price, Richard G.; B.A. (Florida State), M.A. (Wayne State). Assistant Professor of Political Science—1969.

Price, Stanley James Whitworth; B.A., M.Sc. (British Columbia), Ph.D. (Edinburgh). Professor of Chemistry—1959.

Price, Trevor; B.Sc. (London School of Economics), M.A. (Windsor). Assistant Professor of Political Science—1968.

Primorac, Berislav; B.A. (Assumption), M.A. (Middlebury). Assistant Professor of Hispanic and Italian Studies—1968.

Pryke, Kenneth G.; B.A. (Carleton), M.A., Ph.D. (Duke). Associate Professor of History—1963.

Pufahl, John K. Jr.; B.F.A. (Illinois Wesleyan), M.A., M.F.A. (Northern Illinois). Assistant Professor of Fine Arts—1967.

Querbach, Carl W.; B.A., B.D., S.T.M. (Concordia), M.A., Ph.D. (Michigan). Assistant Professor of Classical Studies—1966.

Querbach, Mrs. Carlyn A.; A.B. (Mount Holyoke), M.A. (Michigan). Assistant Professor of Classical Studies—1966.

Quinn, Rev. Joseph A., C.S.B.; B.A., M.A. (Boston College), S.T.B. (St. Basil's) Ph.D. (Purdue). Assistant Professor of English—1965.

Raby, Stewart; B.A. (Oxford), M.Sc. (Alberta), Ph.D. (Wales). Associate Professor of Geography—1970.

Ramcharan, Subhas; B.A., M.Sc. (U. of the West Indies). Lecturer in Sociology—1971.

*Ransome, Jack C.; A.B., M.A. (Toledo); M.A., Ph.D. (Harvard). Professor of Geography—1966.

Record, Rev. Maurice Adrian, C.S.B.; B.A. (Western Ontario), M.A. (Toronto). Associate Professor of Psychology—1952.

Reynolds, David V.; A.B. (Massachusetts), Ph.D. (Stanford). Associate Professor of Psychology—1969.

Romanow, Walter I.; B.A., M.A. (Windsor), Associate Professor of Communication Arts—1965.

Romsa, Gerald H.; B.Sc. (Manitoba), M.A. (Waterloo), Ph.D. (Florida), Assistant Professor of Geography—1970.

*Ross, David P.; B.A., M.A. (Alberta), Ph.D. (Duke). Associate Professor of Economics—1968.

*Rourke, Byron Patrick; B.A. (Windsor), M.A., Ph.D. (Fordham). Associate Professor of Psychology—1965.

*On leave.

Rozsnyai, Imre; M.M., M.M.A. (Yale). Assistant Professor of Music—1970.

Rubin, Kenneth Howard; B.A., (McGill); M.A., Ph.D. (Pennsylvania State). Assistant Professor of Psychology—1971.

Rumfeldt, Robert Clark; B.Sc. (Loyola, Montreal), Ph.D. (Alberta). Associate Professor of Chemistry—1965.

Rumscheidt, H. Martin; B.A., B.D., S.T.M., Ph.D. (McGill). Assistant Professor of Theology—1970.

Ruth, Rev. Norbert Joseph, C.S.B.; B.A., M.A. (Toronto). Professor of Physics and Special Lecturer in Philosophy of Science—1951.

Rutherford, Kenneth Gerald; B.A. (Western Ontario), Ph.D. (Wayne State). Professor of Chemistry—1958.

Sabina, Leslie Robert; A.B. (Cornell), M.S., Ph.D. (Nebraska). Professor of Biology—1965.

Sanders, Leta Grace, Reg. N.; Cert. in Teaching and Supervision (Western Ontario), B.S., M.A., M.Ed. (Columbia). Associate Professor of Nursing—1960.

*Sanderson, Marie Elizabeth (Mrs. R. M.); B.A. (Toronto), M.A. (Maryland). Ph.D. (Michigan). Associate Professor and Acting Head, Department of Geography (1971-72)—1965.

Sarkar, Kalyan Kumar; B.A., M.A. (Calcutta), Doctorat (Paris). Associate Professor of Asian Studies—1970.

Sautter, Udo; B.Phil., St.E. 1st and 2nd, Ph.D. (U. of Tuebingen). Associate Professor of History—1969.

Schlesinger, Mordechay; M.Sc., Ph.D. (Jerusalem). Professor of Physics—1968.

Schmidt, Donald E.; B.Sc. (Iowa State), Ph.D. (Cal. Inst. of Tech.). Assistant Professor of Chemistry—1969.

Schneider, Frank W.; B.A. (Wesleyan), M.S. (Ohio), Ph.D. (Florida). Associate Professor of Psychology—1968.

Seale, Ronald G.; B.A., M.A. (Alberta). Lecturer in Geography—1969.

Selby, Michael Allen; B.Sc. (Manitoba), M.A., Ph.D. (Cornell). Assistant Professor of Mathematics—1970.

Selby, Stuart; B.A. (Hamilton College, N.Y.), M.A., Ed.D. (Columbia). Associate Professor and Head, Department of Communication Arts—1970.

Sharma, Deoki Nandan; B.A., M.A. (Agra). Assistant Professor of Asian Studies—1969.

Shklov, Norman; B.A. (Manitoba), M.A. (Toronto). Professor of Mathematics—1967.

Signorile, Vito; B.A., M.A. (Catholic U.), Ph.D. (Maryland). Associate Professor and Head, Department of Sociology and Anthropology—1969.

Singh, Ripu Daman; B.A., M.A. (Lucknow), M.A., Ph.D. (Oregon). Associate Professor of Anthropology—1970.

Skakoon, Walter Sylvester; B.A. (Western Ontario), M.A. (Toronto). Associate Professor of French Language and Literature—1962.

*On leave.

Smedick, Lois Katherine; B.A. (Wilson), M.S.L. (Pontif. Inst.), Ph.D. (Bryn Mawr). Associate Professor of English—1963.

Smith, Alexander Cormac; B.Sc., M.Sc., Ph.D. (Dublin). Professor of Mathematics—1963.

Smith, Alfred Arthur; B.A., M.A. (Queen's), Ph.D. (McGill). Professor of Psychology—1959.

Smith, Joyce C. (Mrs.); B.A. (Syracuse), M.A. (Wisconsin). Associate Professor of English—1967.

Smith, Raymond J.; B.A., M.A., Ph.D. (Wisconsin). Professor of English—1964.

Smith, Terence E.; B.Sc., Ph.D. (Wales). Associate Professor of Geology—1969.

Smith, Vernon A.; B.A. (Alberta), M.A., Ph.D. (Florida). Assistant Professor of Geography—1969.

Snyder, Sally; B.A., Ph.D. (Washington). Associate Professor of Anthropology—1971.

Soderlund, Walter C.; B.A. (Connecticut), M.A., Ph.D. (Michigan). Associate Professor of Political Science—1968.

Solomon, Hassim M.; B.A. (U. of South Africa), M.A., Ph.D. (Southern Illinois). Assistant Professor of Sociology—1969.

*Sonnenfeld, Peter; Matura (Berlin), Absolut. Rer. Nat. (Bratislava), Dr. Rer. Nat. (Prague). Professor and Head, Department of Geology—1966.

Spellman, John W.; B.A. (Northeastern), Ph.D. (London). Professor and Head, Department of Asian Studies—1967.

Starr, Meyer W.; B.A., (Toronto), M.A. (Princeton). Associate Professor of Psychology—1961.

Stebelsky, Ihor; B.A., M.A. (Toronto), Ph.D. (Washington). Associate Professor of Geography—1968.

Stephenson, Marylee; B.A. (California), M.A. (Essex). Lecturer in Sociology—1971.

Stevens, Peter; B.A. (Nottingham), M.A. (McMaster), Ph.D. (Saskatchewan). Associate Professor of English—1969.

Stewart, Donald R.; B.A., M.A. (Wayne State). Assistant Professor of Sociology—1966.

*Stokes, Rev. Thomas J., C.S.B.; B.A., M.A., Ph.D. (Toronto). Assistant Professor of Philosophy—1966.

Stollman, Samuel S.; Rabbi (Yeshiva U.), B.Sc. (Columbia), M.A., Ph.D. (Wayne State). Associate Professor of English—1966.

Strick, John Charles; B.A. (Manitoba), M.A. (Assumption), Ph.D. (Alberta). Associate Professor of Economics—1965.

Subudhi, Purna; B.A. (Utkal), M.S.W. (Lucknow), Ph.D. (Wayne State), M.P.H. (Michigan). Associate Professor of Social Work—1968.

Sullivan, John Francis; B.S., M.A. (Detroit), Ph.D. (Michigan). Professor and Head, Department of English—1958.

Suttor, Timothy L.; B.A. (Maryland), M.A. (Sydney), Ph.D. (Australian National U.). Professor of Theology—1967.

*On leave.

Sydor, L. P.; B.A. (Western Ontario), Ph.D. (Princeton). Associate Professor of Economics—1972.

Symons, David T.A.; B.A.Sc. (Toronto), A.M. (Harvard), Ph.D. (Toronto). Associate Professor of Geology—1970.

Szamosi, Geza; Ph.D., D.Sc. (Budapest). Professor of Physics—1964.

Tamburini, James J.; B.Mus. (Curtis Inst.). Assistant Professor of Music—1969.

Taylor, C. Maurice; B.A. (Toronto), S.T.B. (U. of St. Michael's College), M.A. (Middlebury College, Mainz), M.A. (Windsor). Assistant Professor of German Language and Literature—1966.

Taylor, Patricia Ann (Mrs.); B.A. (Assumption), B.S.W., M.S.W. (Toronto). Assistant Professor of Social Work—1968.

Temelini, Walter J.; B.A., M.A., Ph.D. (Toronto). Assistant Professor of Hispanic and Italian Studies—1970.

Temple, Anna (Mrs.): B.Sc.N. (Windsor), M.N. (Wayne State) Reg. N. Assistant Professor of Nursing — 1971.

Tewari, Pansy C. (Mrs.); B.S.N., M.Sc., (McGill), Reg. N. Assistant Professor of Nursing—1970.

Theuws, Jacques Antoine; 1st and 2nd Lic. (Louvain), Doct. (Witwatersrand). Professor of Anthropology—1971.

Thibault, Albert A.; A.B. (Boston College), L.es L. (Paris), M.A. (Harvard), D. es L. (Laval). Professor of French Language and Literature—1953.

Thibert, Roger Joseph; B.A. (Western Ontario), M.S. (Detroit), Ph.D. (Wayne State). Professor of Chemistry—1953.

Thomas, Barbara Campbell (Mrs.); Dip.P.H.N., B.N.Sc. (Queen's), Reg.N. Lecturer in Nursing—1969.

Thomas, Donovan DesSauges; B.S. (Natal), M.S., Ph.D. (Florida). Assistant Professor of Biology—1968.

Thompson, Dorothy G.; B.A. (British Columbia), M.A. (Stanford). Lecturer in History—1971.

Thompson, Laurel; B.A. (Mount Allison), B.A., M.A. (York). Lecturer in English—1969.

Titiev, Janice G. (Mrs.); A.B., M.A. (Michigan). Assistant Professor of Spanish and Portuguese—1971-72.

Tracy, Derrick Shannon; B.Sc., M.Sc. (Lucknow), Sc.D. (Michigan). Professor of Mathematics—1965.

Traynor, Tim Eden; B.A., M.A. (Saskatchewan), Ph.D. (British Columbia). Assistant Professor of Mathematics—1971.

Trenhaile, Alan S.; B.Sc., Ph.D. (Wales). Assistant Professor of Geography—1969.

Trott, D. Merilee (Mrs.); B.A., M.A. (Western Ontario). Assistant Professor of Psychology—1968.

Turek, Andrew; B.Sc. (Edinburgh), M.Sc. (Alberta), Ph.D. (Australia National U.). Associate Professor of Geology and Chemistry—1971.

Vandall, Paul Ernest; B.A., M.A. (Western Ontario). Associate Professor of Geography—1952.

Officers of Instruction

Van Den Hoven, Adrian T.; B.A. (Assumption), M.A. (Windsor). Assistant Professor of French Language and Literature—1966.

van Wijngaarden, Arie; B.Sc., Ph.D. (McMaster). Associate Professor of Physics—1961.

Vincent, Rev. Claude L., C.S.B.; B.A. (Toronto), M.A. (Loyola). Assistant Professor of Sociology—1966.

Vuckovic, Milorad Nicolas; B.A., M.A. (Assumption), Ph.D. (McGill). Professor and Head, Department of History—1960.

Wagenberg, Ronald H.; B.A., M.A. (Assumption), Ph.D. (London). Associate Professor and Head, Department of Political Science—1964.

Wallace, Ronald W.; B.A. (St. Thomas), M.A. (New Brunswick). Lecturer in English—1971.

Wallen, Donald G.; B.Sc., B.Ed. (Dalhousie), M.Sc., Ph.D. (Simon Fraser). Assistant Professor of Biology—1970.

Warner, Alden Howard, B.A. (Maine), M.A., Ph.D. (Southern Illinois). Professor of Biology—1965.

Wassef, W. Youssef; B.A. (Cairo), M.S.W., M.A. (Washington), Ph.D. (St. Louis). Associate Professor of Social Work—1967.

*Watson, Edward A.; B.A. (Howard), M.A. (Chicago), Ph.D. (Toronto). Associate Professor of English—1966.

White, Terrence H.; B.S. (Wisconsin), M.A. (Michigan). Assistant Professor of Sociology—1971.

White, Walter LeRoy, D.F.C.; B.A. (Western Ontario), M.A. (Toronto), Ph.D. (Michigan). Professor of Political Science—1956.

Whitehurst, Robert N.; B.A. (Butler), M.S., Ph.D. (Purdue). Associate Professor of Sociology—1969.

Wieden, Fritz; B.A., M.A. (Western Ontario), Ph.D. (Toronto). Professor and Head, Department of Germanic and Slavic Studies—1968.

Wigley, Neil M.; B.A., Ph.D. (California). Associate Professor of Mathematics—1970.

Wilkinson, Rev. Peter Frederick; B.A., M.A. (Toronto), L.Th. (Wycliffe). Associate Professor and Head, Department of Philosophy—1962.

Wilson, Mrs. Margaret Baird; B.S.N. (British Columbia), M.N. (Washington), R.N. Associate Professor of Nursing—1968.

*Winner, John Michael; B.S., M.S. (Notre Dame), Ph.D. (Massachusetts). Associate Professor of Biology—1963.

Wong, Chi Song; B.S. (National Taiwan U.) M.S. (Oregon), M.S., Ph.D. (Illinois-Urbana). Assistant Professor of Mathematics—1971.

Wood, Gordon Walter; B.Sc., M.Sc. (Mount Allison), Ph.D. (Syracuse). Associate Professor and Acting Head, Department of Chemistry—1963.

Woodyard, H. Dale; B.A., M.A. (Roosevelt), Ph.D. (Florida). Assistant Professor of Psychology—1968.

Wurfel, David; B.A. (San Diego), M.A. (California), Ph.D. (Cornell). Professor of Political Science—1968.

*On leave.

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Zakon, Mrs. Batia; M.A. (University of Wilno). Associate Professor of Russian—1958.

Zakon, Elias; Mgr. Phil., Dr. jur. (Stefan Batory U., Wilno). Professor of Mathematics—1957.

Zischka, Kurt Anton; M.A. (Frankfort), D.Sc. (Darmstadt). Associate Professor of Mathematics—1966.

SESSIONAL, VISITING, AND PART TIME APPOINTMENTS

Agar, Joel W.; B.A. (Colgate), M.A., Ph.D. (Syracuse). Sessional Instructor, Department of Psychology—1971.

Asselstine, Harold S.; B.Sc., M.D. (McGill). Adjunct Professor of Chemistry—1969.

Baker, Georgina (Mrs.); Dip. P.H.N. (Toronto), Reg.N. Sessional Instructor in Nursing—1971.

Benson, John; Special Instructor in Dramatic Art—1970.

Bickle, Jack; Fellow, I.S.T.D. Special Instructor in Dramatic Art—1970.

Bowers, Robert; Special Instructor in Dramatic Art—1970.

Brown, Barbara (Mrs.); Dip. N.S.A. (Windsor), Reg.N. Sessional Instructor in Nursing—1971.

Callaghan, Morley; B.A. (Toronto), Visiting Writer in Residence—1971-72.

Carpenter, Patricia (Mrs.).; A.B. (Oberlin), B.S. (Western Reserve), M.A., Ph.D. (Wayne State). Adjunct Professor of Psychology—1969.

Comiskey, Lila Mae; Dipl. Pub. Health, B.Sc.N. (Western Ontario), Reg. N. Sessional Instructor in Nursing—1969.

Cosgrove, Brian D.; B.A. (Queen's, Belfast), B. Litt. (Oxon). Visiting Assistant Professor of English—1971.

Cundari, Emilia; B. Mus., B.A. (Marygrove). Special Instructor in Music—1971.

Daly, Joan F. (Mrs.); B.S., M.S. (Loyola). Assistant Professor of Psychology—1967.

Davis, Mary W. (Mrs.); B.S. (Michigan State). Sessional Instructor in Geology—1971.

Dingler, Daniel W.; B.F.A. (Layton School of Art), M.F.A. (Cranbrook Academy of Art). Sessional Instructor in Fine Art—1971.

Draisey, Thomas F.; M.B., Ch.B. (Bristol). Adjunct Associate Professor of Chemistry—1969.

Duce, Graciela; B.A. (Tulane), M.A. (Columbia). Visiting Assistant Professor of Sociology—1971-72.

Felver, Eleanor; L.R.A.M. (Royal Academy of Music, London). Special Instructor in Music—1968.

Gold, Susan B. (Mrs.); B.A., M.A. (Wayne State). Sessional Instructor in Fine Arts—1970.

Harder, Helga; B.A. (Western Ontario), M.A. (British Columbia). Sessional Instructor in English—1970.

Hauptman, Susan A.; B.F.A. (Michigan), M.F.A. (Wayne State). Sessional Instructor in Fine Arts—1971.

Henderson, Grace; A.T.C.M. (Toronto). Special Instructor in Music—1971.

Hyde, Trevor; M.B., Ch.B., M.D. (Liverpool), M.C. Path. (United Kingdom). Adjunct Assistant Professor of Chemistry—1969.

Irwin, Joyce (Mrs.); B.Sc.N. (Windsor), Reg. N. Sessional Instructor in Nursing—1968.

Klinck, Sharon Joy (Mrs.); B.Sc.N. (Western Ontario), Reg. N. Sessional Instructor in Nursing—1969.

Leach, Mary (Mrs. J.); B.H.Sc. (Guelph), R.P.D.T. Special Instructor in Home Economics—1970-71.

Linton, Margaret (Mrs.); B.Sc.N. (Western Ontario), Reg. N. Sessional Instructor in Nursing—1971.

Long, Kenneth; B.A., M.A. (Windsor). Sessional Instructor in English—1968.

McElhone, Dorothy (Mrs.); B.Sc.N. (Windsor), Reg.N. Sessional Instructor in Nursing—1971-72.

Magee, Joan; B.A. (Western Ontario), B.L.S., M.L.S. (Toronto). Sessional Lecturer in Scandinavian Studies—1972.

Makowski, Raymond; B.Ed. (Toledo), M.Ed. (Wayne State). Special Instructor in Music—1971.

Masterson, Patrick; B.Comm. (Windsor), M.A. (Wayne State). Sessional Instructor in Communication Arts—1971.

Mitchell, Patricia J. (Mrs.); B.F.A. (Illinois Wesleyan), M.A. (Iowa). Sessional Instructor in Fine Art—1971.

Miller, James; Ph.D. (Wayne State). Special Instructor in Dramatic Art—1970.

Monoghan, Stanley; B.A. (Windsor), M.S.W. (Carleton). Sessional Instructor in Social Work—1971.

Myers, Robert J.; B.S. (Western Ontario), B.S.W. (Toronto), M.S.W. (British Columbia). Sessional Instructor in Social Work—1969.

Papiz, Carol A. (Mrs.); B.Sc.N. (Assumption), Reg. N. Sessional Instructor in Nursing—1969.

Philipp, Rudolph; B.A. (Sir George Williams), M.A. (McGill), Ph.D. (Queen's). Sessional Instructor, Department of Psychology—1971.

Poisson, Mary Lou (Mrs.); B.S.N. (Marillac, Missouri), Reg. N. Sessional Instructor in Nursing—1970.

Primorac, Emile; B.A., M.Comm. (Toronto), Ph.D. (London). Visiting Associate Professor of Economics—1971.

Radigan, Edith; B.Sc.N. (Windsor), Reg.N. Sessional Instructor in Nursing—1971.

Reavey, Marion; M.S.W. (Wayne State). Sessional Instructor in Social Work—1969.

Richards, Mary Helen; B.Mus. (Nebraska). Special Instructor in Music—1971.

Riffel, Pius A.; B.A. (Loyola), M.A., Ph.D. (Fordham). Adjunct Professor of Psychology—1969.

Rosenbaum, Janet (Mrs.); B.Sc.N., Reg. N. (Wayne State). Sessional Instructor in Nursing—1970.

Rozsnyai, Arlene (Mrs.); M. Mus. (Yale). Special Instructor in Music—1970.

Skimson, Carolyn (Mrs.); B.Sc.N. (Windsor), Reg.N. Sessional Instructor in Nursing—1971.

Officers of Instruction

Sweeney, Sister Fleurette; A.R.C.T. (Toronto). B.A. (British Columbia). Special Instructor in Music—1971.

Vandervaart, Robert B.; B.A. (Western Ontario). Sessional Instructor in German—1971.
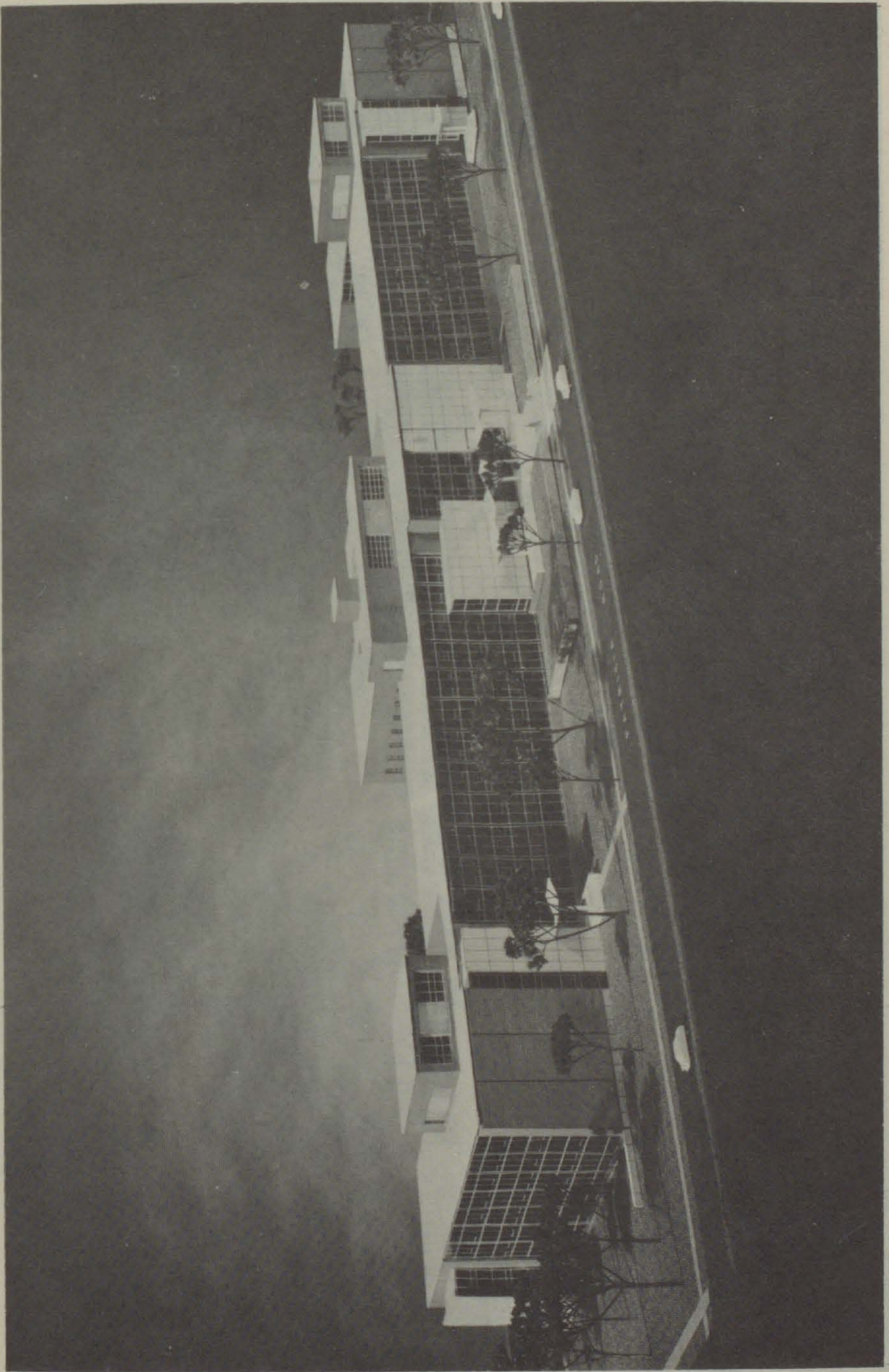
PART C

GENERAL INFORMATION

GENERAL INFORMATION

I. CAMPUS LIFE

At the University of Windsor, the curriculum is complemented by a program intended to give expression to the social, moral, and physical capabilities of students, giving everyone an opportunity to derive the maximum personal benefit from and to contribute to the University community.

The Office of Student Affairs, situated in Vanier Hall, supervises the co-curricular interests of students on campus through the complementary program, directing counseling, social and cultural activities, conduct and discipline, job placement, and temporary housing. The Student Affairs Office works with student organizations to insure their representation and to maintain an academic community governed by traditionally reasonable modes of conduct, dedicated to the development of a responsible, enlightened citizenry. Each year the Office of Student Affairs publishes a Student Handbook for general reference.

The University Centre and Vanier Hall

The University Centre, at the hub of the campus, provides facilities which include a cafeteria, lounges, and a snack bar on the main floor. The ground floor houses a bank, the student radio station, women's locker rooms, and a commuters' lunch area known as 'The Grotto'. On the second floor are the Students Administrative Council Office, and the Student Press.

The University Library

The university library system consists of the General Library, the Paul Martin Law Library, an autonomous, associated library situated in the Faculty of Law Building; and the Education Library, a branch of the General Library, housed in the Faculty of Education Building. The principal objectives of the university library system are to develop sound and balanced collections in support of instructional and research programs, and to provide reference and information services to assist the university community in making maximum use of materials available. A policy of open access to the collections affords the reader opportunity to browse at leisure, or to exploit the literature of his field of special interest in depth.

With the recent completion of the new University Library building, the combined facilities provide space for about 1,200,000 volumes. Seating is available for 2,150 readers in a variety of general seating facilities, open and closed carrels, and seminar rooms.

The University Bookstore, providing text book and a large selection of enrichment reading materials, and accessible through its own separate entrance, occupies the entire ground floor of the West Library Building.

In December 1971 the collections contained 525,000 volumes, growing at an annual rate of about 60,000 volumes. Over 9,000 current periodicals and serials are received, including important newspapers, both foreign and domestic. In addition, the University library system has extensive collections of Canadian federal and provincial government documents and publications of major international organizations, and participates with other academic libraries in the Windsor-Detroit area in a program of collective acquisitions, serving as the resource centre for Canadian materials for cooperating institutions, while Detroit libraries serve as resource centres for similar government publications of the United States and Great Britain. A complete range of photocopying and microform reading and copying facilities is available.

Through the General Library, the associated libraries are members of the Inter-University Transit System which enables them to provide relatively easy and rapid access to materials in other Ontario university libraries and, in turn, to make available their own resources to the larger Ontario academic community. On December 1, 1969, the academic libraries of the Province of Quebec inaugurated their own transit system which links up with the Ontario I.U.T.S. in Ottawa. As a result, the fourteen Ontario universities and the ten Quebec universities (soon to be increased in number as the newly-founded Universite de Quebec develops), plus the National Library and the National Science Library, both in Ottawa, freely exchange resources by rapid delivery service on a daily basis throughout the year.

A formalized orientation program consisting of video-taped and live lectures and demonstrations is provided to all first year students by the Coordinator of Library Orientation. Lectures on research resources and procedures are given by specially qualified members of the staff to upper-classmen and graduate students in a number of departments. These programs are designed to facilitate maximum usefulness of the collections to the university community as well as to provide a mechanism for feedback to the Library staff to evaluate the relevance of their operations, and to enable the library system to continuously improve its performance in the total educational and communication process.

Student Government

Student organizations and activities are a vital part of life at the University. The initiative in these organizations and the direction of their activities are in the hands of the students and are regulated mainly through student government which includes all students in its membership. The Students' Administrative Council works with all other organizations to maintain vitality and a constructive community life.

Clubs

Interest groups employ the facilities of the University Centre and Vanier Hall for their organizational base, presenting debates, ethnic interest programs and club meetings. The campus organizations provide social, religious, cultural and recreational opportunities and experiences. For students having special abilities and interests there are departmental clubs, national and local organizations, and inter-collegiate teams. None have restricted membership. Electa Hall provides space for extra curricular studies in arts and crafts for women students.

Campus Radio

The students operate a campus radio station airing music, news, sports and campus information. The station is on the ground floor of the University Centre and serves Electa, Cody, Huron and Macdonald residences, as well as the Centre. The station broadcasts twenty-four hours, seven days a week. The station offers live coverage of major away games of the football and basketball Lancers.

The Graduate Student Society

The Graduate Student Society was recognized on January 30th, 1964, and serves as the consolidating body for the views of the post-graduate students. An inter-disciplinary exchange encourages the gathering together of graduate students from the various faculties for educational and social activities making them aware of the full range of academic, cultural and social opportunities available through the University. The Society sponsors lectures by specialists in varied fields of graduate interest with the intention of promoting inter-disciplinary awareness and understanding. The office is located in Vanier Hall.

Athletics

Realizing the value of a balanced regimen of exercise and play as part of the total education process, the University fosters an athletic program which is both recreational and competitive. Approximately eighty per cent of the students participate in extensive intramural programs for both men and women involving some eighteen sports. While under the supervision of the Director of Athletics, these programs are operated by the students who participate. For those who excel athletically there is opportunity for competition within the Ontario-Quebec Athletic Association.

Special Events

Each year brings an increase in the variety and number of special events scheduled on campus or through campus organizations. The well-established Christian Culture Series, conducted by the federated Assumption University, brings outstanding lecturers and artists to the area throughout the academic year.

The Music Department and the School of Dramatic Art offer diverse programs to please students and members of the local community.

These programs include the University Band and Orchestra, the Pep Band, the University Players, the University Singers, and occasional experimental theatre. Further information can be obtained from the Head of the Music Department or the Director of the School of Dramatic Art.

II. STUDENT SERVICES

Counselling

To help in the achievement of fuller personal development, of intelligent career choices, and of intellectual freedom and satisfaction within the challenging educational framework, the University provides students with counselling services commensurate with their particular needs: educational, vocational, moral, social or religious.

Academic and Personal

Students are invited to consult the staff of the Office of Student Affairs for assistance in personal matters, and for counsel related directly to their University community and to their studies.

Financial

Consultation regarding financial assistance, with particular reference to awards, student loan funds, and the Canada Student Loan, may be obtained from the Awards Office. The University recognizes that some students must supplement their income by part-time employment during the academic year, but unless such employment is kept to a minimum both health and academic standing could suffer. In the event that a student is required to take a reduced study program, he might be better advised to postpone his higher education until he can afford to devote full time to the many facets of university life which contribute to a balanced educational pattern.

Religious

Although the University is non-sectarian in its support of campus religious life, it is aware of the importance of ethical and moral influences in the development of the individual. Students, therefore, have access to the spiritual counsel of chaplains representing various denominations.

Psychological Centre

The Psychological Centre provides professional services to individuals who wish to understand themselves better and to use their resources more effectively. The Centre offers programs in career planning, discussion groups, psychotherapy, reading and study skills, personal resource assessment, tension control, and a self help program.

The Centre is staffed with the equivalent of five Clinical Psychologists with a doctoral degree, and four Psychometrists and Counselors at the Masters level. Professionals from Psychiatry, Social Work, and other related fields provide consulting service.

Medical Facilities

Medical Office—The University has a medical office, with a physician to advise and counsel students who are in need of care, therapy or hospitalization. First-aid stations, for the treatment of minor injuries, are distributed throughout the University buildings. An infirmary is located in Cody Hall.

Health and Hospitalization—Students are required to submit a certificate of medical examination as part of the routine admissions procedure. Those students participating in athletics must also submit annual medical certificates. The University does not assume responsibility for expenses incurred as a result of injuries sustained by students on campus. Further information about the University's accident insurance plan may be obtained from the Office of Student Affairs.

Placement

Job-seekers, whether they need summer work, part-time work during the academic year, or permanent employment upon graduation, are assisted by the campus Placement Officer, who is appointed by the Canada Manpower Centre. During the year interviews with prospective employers from business, industry and education are arranged for students who are registered with the Placement Office.

International Students

The University's concern for the large overseas student population has prompted the establishment of an International Students' Organizat-ion, in cooperation with the Students' Administrative Council. The inter-cultural exchange has proven invaluable to all engaged in the development of the program. Over three hundred scholars are enrolled each year, representing nearly thirty countries.

In 1968, the International Centre was opened. This Centre, which is located in the middle of the campus, provides an educational and social milieu for overseas students.

III. RESIDENCE ACCOMMODATION

Traditionally the University residence halls house about one quarter of the University's student population which comes from outside the city, representing various regions across Canada, many overseas countries, and the United States. Such a cosmopolitan environment produces important cultural and social by-products enjoyed by all members of the University community.

Residence housing is administered by the Office of the Director of Residences.

Scholastic endeavour is particularly emphasised in the residence halls on campus, where the atmosphere is expected to contribute to personal and social expansion. It is recommended that all new students in their first year of study live in a residence provided by the University or by one of its federated or affiliated colleges.

Those interested in residence accommodation should note that fact on the University of Windsor academic form. When the student is accepted, the Admissions Office will send out a residence application which the student should return to the Office of the Director of Residence.

When the Office of the Director of Residence is notified that residence is required, the applicant will receive additional information concerning residence hall policies and will be notified of assignment status.

Off campus housing information is handled through the Office of the Director of Residences.

The University of Windsor and its affiliates own and/or operate a total of seven residences for men and women, plus a central food complex to service these residences. They are:

Electa Hall—Built in 1958 with a larger addition in 1963, this women's residence is located on the north side of the main campus and can accommodate 225 female students in double and single rooms.

Sir Wilfred Laurier Hall—This residence is part of the central residence complex located on the south side of the main campus and will accommodate 356 female residents.

Sir John A. Macdonald Hall—Similar in structure and location to Laurier Hall, this ten storey men's residence was completed in 1967 and is now entering its fifth year of operation. Both Laurier and Macdonald Halls are directly adjacent to Vanier Hall.

Cody Hall—This residence was built in 1962, and can accommodate up to 210 male residents in a five storey structure on the south side of the main campus.

Huron Hall—This residence, purchased in 1968, is located approximately one block from the main campus on the new south campus, and has a capacity of 210 male students in double rooms.

Tecumseh Hall—Radical in concept and design, this residence is situated directly west of Huron Hall. It was constructed in 1971 and can accommodate 186 students in forty-one units consisting of two, three and four bedroom apartments. Each apartment unit contains its own kitchen, living room, dining room, bathroom and bedrooms. Emphasis is on privacy and group living and may well begin a trend in University housing of the future.

Assumption University (a federated institution) provides space for 50 male graduate students in **St. Michael's Hall**. For information, write to: The Director of Residences (University of Windsor).

Canterbury College operates **Geoffrey Fisher Hall**, a residence for married students, and other houses for graduate and undergraduate students. For information, write to: The Bursar, Canterbury College, University of Windsor.

FEES

Fees are subject to change without notice. All fees are for the academic year, except where otherwise indicated. Fees listed are for Canadian students; for non-Canadian students, see below*.

FULL TIME - Undergraduate

Any undergraduate student (regular or special) taking four courses or more will be charged the fee for full time attendance.

The following schedule lists the **minimum** amounts payable, including registration, tuition, library, laboratory, examination, university centre, health service, insurance, student government and activities fees, and professional society fees.

Extra course fee: Any full time student who enrols in courses which are additional to the minimum requirements for his program as outlined in this calendar, will be charged the fee for each additional course at the rate for part time students (see below).

Preliminary Year	$580
Music, Fine Arts, Nursing, Communication Arts	550
(School of Nursing Advance Placement Examination Fee $10)	
Social Work	545
Dramatic Art	550
(Applicants for the B.F.A. program will be charged audition fee of $10)	
Arts (General, Honours, Makeup)	545
Science (General, Honours, Makeup)	555
(Students taking Geology 480c pay additional fee of $60 for Field Camp)	
Computer Science	555
Physical and Health Education	555
Commerce	545
Engineering	620
(Students taking C.E. 301 pay an additional fee of $40 for C.E. Camp)	
Law	560
Education	527.50

PART TIME—Undergraduate (Day or Extension)

Lectures:

Full course (3 or more hours a week)	$142.50
Half course (equivalent of one semester, 3 or more hours a week)	71.25
Full course (2 hours a week)	100.00
Half course (equivalent of one semester, 2 hours a week)	50.00

FULL TIME - Postgraduate (per annum) $530
(This includes tuition, and incidentals such as registration, library, laboratory, examinations, Graduate Student Society membership.)

PART TIME—Postgraduate (per course) 142.50
(In no case will the minimum **total fee** be less than $530 for each year of required residency)

If a student registers in the year beyond required residency under the Master's program on a **full time** basis, the minimum fee will be $142.50 plus $45 incidental fees on an annual basis. For **part time** Master's students registering beyond required residency the minimum fee is $142.50 plus incidental fees of $25 on an annual basis. For any doctoral year past the required residency period, the minimum tuition fee will be $150 plus $45 incidental fees per annum.

All courses taken in addition to the residency requirements in Master's and doctoral programs will be charged the appropriate fees.

NOTE: This is the graduate fee situation at the time of Calendar printing. It is subject to sudden change without advance notice in view of amendments resulting from the present study on graduate fee structure in the Province of Ontario.

MISCELLANEOUS FEES

Payable by all students as incurred.

Language laboratory fee $10.00
All other laboratory, clinical experience, seminar, tutorial and field work
 fees 30.00
Audition fee for First Year Dramatic Art students 10.00
Late Registration: Full-time $20.00
                  Part-time 5.00
Graduate Record Examination 12.50
Graduate Student Society Fee .... $5.00 yearly
Special and supplemental examination, per subject:
 Regular time and place 10.00
 Outside regular time and/or place 20.00
Change of course 5.00
Transcript of record (Official) 1.00
              (Unofficial) .... .50
Evaluation of documents 10.00
Graduation fee 8.00
 (Payable by students in their graduation year; this includes
 the purchase of gown, diploma and diploma case; and hood for
 all except doctoral candidates.)

*ADDITIONAL FEE FOR NON-RESIDENTS OF CANADA

(Applies to all foreign students. Needy students from overseas developing countries may request that this fee be waived; such requests should be made in writing, on application for admission, which is to be completed by July 1).

Full time students $100
Part time students .... $20 per subject

PAYMENT OF FEES

As a convenience, students may pay their fees at any time in advance of registration day. Fees are due and payable on the day of registration; they may, however, be paid in two instalments (except overseas students who must pay in one payment) in which case a carrying charge of $5.00 is made. The first instalment is due at the time of registration: the second instalment is due on or before January 16, 1973. A penalty of **$10.00** will be assessed students paying the second instalment after January 16, 1973, and an additional $5.00 a month for each month the fees are not paid.

Remit fees by certified cheque, money order or personal cheque drawn on your own bank and branch, payable to the University of Windsor in Canadian funds. Returned cheques are subject to a $5.00 penalty.

Students who wish to pay fees under the Ontario Student Award Plan (O.S.A.P.) must have their Certificate of Eligibility for registration day, or else pay the first instalment of their fees.

Scholarships and other awards made available by the University and paid to students through the Director of Finance Office will be credited to the student's account. A cheque for the remaining balance, if any, will be given to the student at the Cashier's Office:

  First instalment after November 15, 1972
  Second instalment after January 15, 1973

Income Tax certificates will be issued as of the end of January 1973 for the ACADEMIC fee only. These will cover the academic year, and should be kept for income tax returns. They will be distributed by mail by February 15, 1973.

A reduction is made in the tuition fees of brothers and sisters attending the University simultaneously as full-time students.

REGULATIONS REGARDING NON-PAYMENT OF FEES AND CHARGES

(a) All information concerning academic results of any student having an overdue debt owing to the University shall be withheld until the debt is settled.

(b) Any student who has an overdue debt owing to the University will not be permitted to re-register until the debt is settled.

(c) Any student who has an unresolved grievance concerning fees or other charges may file an explanatory letter to the Supervisor, Cashier's Office.

WITHDRAWAL AND REFUND POLICY

Students who are forced to withdraw from a course or from the University are required to **notify the Registrar in writing** and to give their reasons for withdrawal. The obligation of teaching and accommodating a student rests on the University on a yearly basis. Hence:

(1) **All tuition credits or refunds shall be made entirely at the discretion of the University.**

(2) Applications for credit or refund will be accepted only in the following cases:

  (a) where the student is compelled to withdraw on account of serious and continued personal illness (medical certification will be required);
  (b) where the student is compelled to withdraw for other personal reasons, with the approval of the Dean of the Faculty.

(3) Normally, the portion of the fee credited or refunded is determined by the date application for refund is received (NOT THE DATE OF WITHDRAWAL), according to the following schedule:

	Amt. of Credit or Refund
Withdrawal prior to the second week of classes	100% less $25
Withdrawal during the second week of classes	80%
Withdrawal during the third week of classes	60%
Withdrawal during the fourth week of classes	40%
Thereafter	No refund

The President may make adjustments to these regulations when unusual circumstances warrant such action.

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RESIDENCE FEES

Room and Board—Will vary with plan selected. Prices on application.

An extra charge of $5 for dining contract and $5 for room contract is made if the fee is paid in two instalments. In addition, each resident student must pay to the University prior to September 1, a caution fee of $30 which will be refunded if the reservation is cancelled before August 15.

The Residence Council has a right to place a levy against the caution fee for the social and miscellaneous needs of the residences. The remainder will be returned to the student at the end of the academic year providing additional assessments are not required.

A student who withdraws from residence during the academic year may receive a refund only when such withdrawal is occasioned by circumstances beyond the control of the student and has the prior approval of the Director of Residence.

UNDERGADUATE AWARDS AND FINANCIAL AID

1. AWARDS:

The term **"Award"** is a general designation applied to any citation, medal, gift or grant of money presented to a student.

The President's Roll of Scholars includes all those students who, in the preceding academic year have achieved First Class Honours or its equivalent. Such students receive Certificates of Merit.

Scholarships are awards made in recognition of academic excellence and general proficiency. They may take the form of a monetary allowance or a proficiency medal or in some cases both.

Prizes are awards made in recognition of outstanding scholastic achievement or proficiency in a specific area.

Bursaries and Grants are monetary awards made on the basis of satisfactory standing and financial need. Students who are experiencing financial need are advised to seek assistance through government aid plans.

2. LOANS:

Students who have satisfactory scholastic standing and who demonstrate financial need have access to loan funds to assist them with emergency financing. Loans are repayable according to the terms of a definite agreement. (See page C-28).

3. CLASSIFICATION:

The awards and other forms of aid that are listed below are organized into Sections A, B, and C.

Section A includes all awards administered by the University.
Section B lists several awards which, although not under the control of the University, are available to its students.
Section C lists loans and other forms of aid.

For further information on available awards the following sources are recommended:

1. Guidance Officers in Secondary Schools;

2. Awards Office of the University;

3. Dominion Bureau of Statistics publication "University Entrance Awards", copies of which are available in the University Library.

4. Director of Awards, Association of Universities and Colleges of Canada, 151 Slater Street, Ottawa 4.

4. APPLICATION FOR AWARDS

(a) Awards listed in Section A will be subject to the approval of the Senate of the University. Unless otherwise stated, no application for these, other than the application for admission to the University, is required. Students are encouraged to apply for admission as early as possible so that they will be considered when Entrance Awards are being assigned.

(b) For awards and other aid listed in Section B and C, students should obtain application forms from the administering agency indicated. The respective deadlines for applying are those required by the donors.

5. DECISIONS AND ANNOUNCEMENTS OF AWARDS:

The eligibility of a student for a University Entrance Award will be reviewed as soon as the application for admission is received. The decision of the Committee will be made in time to be included with the letter of acceptance to the student. Decisions on most other awards will be made prior to October 31 of the year in which the award is applicable.

6. PAYMENT OF FUNDS:

Awards under the jurisdiction of the University will ordinarily be paid or applied to academic fees in two instalments, one in each semester, provided that the recipients are continuing in their courses to the satisfaction of the University. If the work of the first term is unsatisfactory, payment for the second term may be withheld.

7. MULTIPLE AWARDS:

(a) The monetary benefits of awards administered by the University will be determined in relation to what is available to the student from government student aid plans and/or other awards which the student accepts. The University reserves the right to substitute all or part of its award by an equivalent award or awards.

(b) A student may be declared the winner of as many scholarships as he may win as a qualified candidate of merit, but, in case of awards involving a major financial amount, such student will normally receive only the largest among these major amounts.

(c) Winners of scholarships and prizes may resign the monetary value but retain the honour of such awards, and their names will be published as winners.

8. GENERAL:

(a) In order to be eligible to receive the monetary benefit of a University administered award, the student must satisfy the Awards Office that he is unable to receive a comparable amount of money from the Government Aid Plan in his province or state.

(b) A student who has received an award within the jurisdiction of the University will be expected to complete his course at this University, unless there are extenuating circumstances.

(c) Awards listed in Section A will be made by the Senate to qualified candidates of merit, and may be withheld if no candidate of merit presents himself.

(d) The University does not guarantee any award other than those created from the funds of the University. Those awards which are the gifts of outside donors are awarded only after the funds have actually been received.

(e) A student normally forfeits the monetary benefits of his award if he withdraws from the University before the end of the regular academic year. The Senate is given discretionary powers in the application of this regulation.

(f) Unless otherwise specifically stated, the term "satisfactory standing" shall be interpreted as meaning First Class Honours standing.

A. AWARDS ADMINISTERED BY THE UNIVERSITY

I. UNIVERSITY OF WINDSOR ENTRANCE AWARDS

The following regulations cover all University of Windsor Entrance Awards, except as otherwise indicated:

(i) Each applicant must have First Class Honours standing or the equivalent as determined by the University.

(ii) The student's secondary school record particularly in grades 11, 12 and 13, the Principal's confidential rating and the results of the Ontario Scholastic Aptitude Tests will form the basis for determining awards.

(iii) Each recipient must enroll in the University for the academic year immediately following the conferring of the award and must carry a full academic load according to the Calendar, or forfeit the award.

(iv) Some scholarships may be renewed for a maximum of four continuous academic years providing that the student carries a full academic load and maintains First Class Honours Standing.

(v) Since the University is now operating on a three semester system for some programs, an academic year will be defined as two consecutive semesters; continuous study will be defined as a minimum of two semesters out of three.

(vi) In the event that a recipient fails to meet these requirements or withdraws from the University for a year or more, he will lose the scholarship for the ensuing year, but he may regain it in a subsequent year.

The following is a list of Entrance Awards administered by the University.

University of Windsor Entrance Awards:

Several awards in amounts up to $600 or more are available to students entering First Year at the University. Some of these awards may be designated as renewable and will be renewed on the basis of the above regulations. The actual amount of the awards is determined on the basis of scholastic standing.

University of Windsor Alumni Scholarships:

Five or more scholarships having a maximum value of $500 each, renewable in amounts up to $500 according to the conditions stated above, awarded at entrance to students preferably from areas where Alumni Chapters exist.

Norah Cleary Entrance Awards:

Value: Tuition and all other fees except for room and board. (For details see Assumption University Awards, page C-18).

John B. Kennedy Memorial Entrance Awards:

Value: $300. (For details see Assumption University Awards, page C-18).

The General Motors Canadian Scholarship:

Total possible value $4,000.

An entrance scholarship valued at $1,000, renewable for three additional years or until graduation, whichever is the sooner, upon maintaining satisfactory standing (normally First Class Honours). To be awarded to a student of outstanding academic calibre who has demonstrated evidence of leadership and good social adjustment, and who shows a preference for a career in Business and Industry.

Steel Company of Canada Entrance Bursary:

Value $500 a year renewable for a maximum of four years, or until graduation, whichever is sooner. Recipient must be a permanent resident of Canada, must have completed the final year's work for university entrance in one school year and must have attained a minimum average of 66 per cent. Not tenable with other scholarships totalling in excess of $200.

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Association of Professional Engineers Entrance Scholarship:

$500, awarded by the Ontario Professional Engineers Foundation for Education on the recommendation of the Faculty Council, to the Grade 13 pupil entering the Faculty of Applied Science in an accredited engineering course, with the highest Grade 13 standing of all pupils entering accredited engineering courses in the Faculty.

II. IN COURSE AWARDS

The following is a list of individual awards under the control of the University. The majority are In Course Awards. They are organized into various categories for convenience.

SCHOLARSHIP MEDALS

The Governor-General's Medal:

Awarded annually to a graduating student chosen by the Senate, on the basis of academic performance and contribution to university activities.

The Board of Governors Medals:

Awarded annually to students graduating with the highest standing in each of several courses, and to the undergraduates with the highest standing in each year, regardless of course.

ASSUMPTION UNIVERSITY AWARDS

The following awards held in trust by Assumption University are available to all students of the University of Windsor who can meet the requirements. The recipients are selected by the Senate of the University of Windsor.

The Major H. P. Swan Prize in Philosophy:

A prize of $50 awarded annually to the student in III or IV Year of an Honours program in Philosophy with the highest Honours average, or in II or III Year of the General Program majoring in Philosophy with the highest average in the subjects of his major.
Endowed by the late Major H. P. Swan (1966).

Dr. Roy J. Coyle Memorial Prizes:

Prizes of $50 each are awarded annually to the students with the highest standing in Biology 110 and Physics 113. Endowed by the late Dr. Roy J. Coyle, Windsor, Ontario.

Helena M. Coyle, B.A., Prize:

$50 annually as a prize to the student with the highest standing in English 115.

J. C. McGuire Bursary: Value $450.

Dr. Roy Coyle Memorial Bursary: Value $300.

Fred H. Anderson Memorial Bursary: Value $250.

Edmund Girardot Memorial Bursary: Value $200 to a graduate of a Roman Catholic High School in Essex County.

D. S. McIntyre Bursary: Value $200 to a graduate of a Roman Catholic High School.

Frank McIntyre Memorial Bursary: Value $200 to a graduate of a Roman Catholic High School.

Msgr. F. X. Laurendeau Memorial Bursary: Value $150 to a graduate of a Roman Catholic High School in Windsor.

John B. Kennedy Memorial Entrance Awards:

Value: $300. Two awards are made annually; one to a graduate of a Canadian, and one to a graduate of an American high school.

Renewable annually, provided satisfactory standing (normally First Class Honours) is maintained, to a total possible value of $1,200. Tenable with other entrance awards.

Established in 1963 through the benefaction of the late John B. Kennedy, to Assumption University.

Norah Cleary Entrance Awards:

Value: Tuition and all other fees except fees for room and board.

One or more awards made annually to students who have been attending for at least two years Windsor and Essex County High Schools (with preference to students of Patterson and Kennedy Collegiates). Applicants must have completed the entrance requirements for the degree course of their choice with satisfactory standing and must show need of financial assistance.

Renewable annually, provided satisfactory standing (normally First Class Honours) is maintained.

Established in 1963 through the benefaction of the late Miss Norah Cleary to Assumption University.

GENERAL AWARDS

The Hydro-Electric Power Commission of Ontario:

Value $500. Awarded to a second year student proceeding to an honours degree in any of the following areas: applied science and engineering, mathematics, physics, business administration, and/or commerce.

Paul Martin Award:

Value $400. To an undergraduate or a graduate student who has shown an active interest in Political Science, Law, or International Relations.

The H. Joseph McManus Scholarship:

Value $600. Awarded annually at the discretion of the Committee on Student Awards to a deserving student. Established in 1954.

McManus Memorial Classics Prize:

An annual award of $40 to the best student in Latin 112. Donated in memory of the late Patrick McManus of St. Thomas, Ontario, by his descendants, of whom 11 are Alumni of Assumption University.

Dr. Alfred E. Thomas, Sr., Memorial Award:

Value: $300. Awarded annually on the basis of scholastic standing and financial need to a deserving student in any year of any degree program. Established in 1962 by the late Dr. Alfred E. Thomas, Jr., in memory of his father.

Sister Mary Electa Award:

Value: $250. Awarded to a woman student in residence on the basis of satisfactory standing and need. Sponsored by University of Windsor Alumni Association.

Frank D. Brockenshire Memorial Prizes in Creative Writing:

Prizes to the amount of $100 are awarded annually for original contributions in prose and poetry. Donated by Mrs. F. A. Brockenshire.

Ann Anderson Piggott Memorial Award:

Value $350. Awarded annually to a Canadian student, on the basis of academic standing and financial need.

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Beta Sigma Phi Sorority Award:

One or more awards valued at $150 to deserving female students who are residents of Windsor or Essex County and who have satisfactory academic standing.

American Women's Club of Windsor Award:

Value: $50. Awarded annually to a woman student, citizen of the United States, on the basis of scholastic achievement and financial need.

Gladys E. Campbell Memorial Fund Award:

$100 University of Windsor award to a female student. Established by the University of Windsor Women's Auxiliary.

Mitzvah Chapter B'nai B'rith Women Bursary:

Value $100. Awarded annually on the basis of scholastic ability and financial need to a student from Windsor or Essex County, in any course and any year.

University of Windsor Women's Auxiliary Bursary:

Value: $100. Awarded annually on the basis of financial need and scholastic ability, to a woman student.

Windsor Club Canadian Federation of University Women Scholarship:

Value $300. Awarded annually for scholastic excellence to a female student in an honours program, who has completed at least one year and is not enjoying a continuing scholarship.

Ronald M. Eisen Memorial Bursary:

Value $100. Awarded annually on the basis of scholastic ability or character or financial need or any combination of the foregoing according to the best judgment of the Committee on Student Awards to a deserving student in any year of any course. Established in 1969 by the employees of Mr. Nathan Tepperman of Windsor, Ontario, in memory of Ronald M. Eisen.

Nathan Tepperman Bursary:

Value: $150. Awarded annually on the basis of scholastic ability or character or financial need or any combination of the foregoing according to the best judgment of the Committee on Student Awards to a deserving student in any year of any course. Established in 1956 by employees of Mr. Nathan Tepperman of Windsor, Ontario.

Carson R. Elford Memorial Bursary:

Value: the annual interest on the Carson R. Elford Memorial fund. Awarded to a student with satisfactory scholastic standing and financial need. Established in 1964 by the family, friends and Ford Motor Company associates of Carson R. Elford.

James Howley Memorial Bursary:

Value: $50. To a deserving student resident at Macdonald Hall, based on academic standing and active participation in residence and university life.

A.T.A. Trucking Industry Educational Foundation Bursaries:

In-course bursaries for students who because of extenuating circumstances are deserving of financial assistance.

Atkinson Charitable Foundation Bursaries:

These awards are made to deserving students who are enrolled in a program leading to a degree, and show evidence of academic sincerity, future promise and financial need. Applicants must be residents of the Province of Ontario.

J. P. Bickell Foundation Bursaries:

A number of bursaries allocated annually to deserving students.

The Birks Family Foundation Bursaries:

A number of bursaries are awarded annually to deserving students with high academic standing.

I.B.M. Canada Thomas J. Watson Memorial Bursaries:

Value $100-$200. These bursaries are awarded annually to students who have completed at least one year of university studies with a B average, and who have financial need. The bursaries are made possible by an annual grant of $1,000 from International Business Machines Co. Ltd.

Proctor and Gamble Bursary Fund:

A number of bursaries, totalling $1,500., will be granted to needy students in any faculty or year who have good academic standing. Recipients must expect to maintain permanent residence in Canada.

Rotary Club of Windsor Bursaries:

Three bursaries of $150 each, awarded on the basis of at least second class honours and evidence of need, to candidates enrolled in any faculty in the University of Windsor, provided that the bursaries are not awarded in the same faculty.

Windsor Independent Insurance Agents Association Bursaries:

A number of awards with values up to $350 each to deserving students who are residents of Essex County.

Institute of World Affairs Award:

The student who represents the University at the Institute of World Affairs Seminar may apply for a waiver of tuition fees for the academic year immediately following the Seminar.

HUMANITIES AND SOCIAL SCIENCES

Rhea Bray Memorial Bursary:

Value: $150. Awarded annually, on the basis of academic merit and need, to a woman student (preferably a freshman) recommended by the Dean of Arts and Science and approved by the Committee on Student Awards. In rare cases may be assigned to the same recipient two years in succession.
Established in 1955 by the Zonta Club of Windsor.

Mary Gooderham Chapter I.O.D.E. Award:

Value $150. To the student who achieves highest standing in First Year English, and who is proceeding to an Honours program in English.

George F. MacDonald Chapter I.O.D.E. Bursaries:

One or more awards of $150 annually. To graduates of Essex County secondary schools who have successfully completed the First or Second Year of the Fine Arts Program.

Alex Pavlini Memorial Award:

Value $200. Awarded to a student in an arts course who has maintained a good scholastic record and who has participated actively in the radio and/or dramatic activities of the University.

Cedar Springs Hospital School Auxiliary Centennial Award in Social Work:

Awarded to an outstanding student enrolled in the honours program in Social Work who shows a particular interest in Children's Institutions and/or Mental Retardation. The minimum value of the award will be $150. with the maximum being dependent on a number of pertinent factors.

Raechel Slobasky Kaplan Social Work Bursary:

Value: $150. Awarded annually to a student enrolled in the School of Social Work.

MATHEMATICS, SCIENCE AND APPLIED SCIENCE

Allied Chemical Canada Limited Scholarship:

Value $750. To be awarded annually to one student not otherwise holding a scholarship, entering the final year of undergraduate studies in Chemical Engineering or in Honours Chemistry on the basis of academic and extracurricular achievement. Application forms are required and are available in the Awards Office by March 15. Deadline for submission of applications is May 15.

J. P. Bickell Foundation Scholarship:

Total value: $1500. Awarded to the student having the highest academic (but at least A) average entering the second year of a course in Chemical Engineering, Geological Engineering, Engineering Materials or Honours Geology. The sum of $500 is paid to the successful student at the beginning of the second year and further sums of $500 at the beginning of each of the third and fourth years provided he has maintained his A average.

Tonnie Kovinsky Memorial Scholarship:

Value: $250. To an outstanding student in course, registered in Applied Science.

The Reverend E. C. LeBel Award:

Value: $100. An annual award to a student who has completed the third year of any course in the Faculty of Applied Science with a good academic record and who has shown outstanding ability in English and the humanities. Established in 1963 by the Essex County Chapter of the Association of Professional Engineers of the Province of Ontario.

Association of Professional Engineers Undergraduate Scholarships:

$250 awarded by the Ontario Professional Engineers Foundation for Education on the recommendation of the Faculty Council to students in two of the first, second or third years of an accredited engineering program, who obtain the highest standing in the work of their respective year.

Professional Engineers Medal for Academic Achievement:

The Association of Professional Engineers of the Province of Ontario has established in the Faculty of Applied Science an Award in the form of a gold medal together with a gift of technical books valued at $50. awarded to the student of an accredited engineering program who, taking honours, obtains the highest standing in the graduating class.

The Society of Chemical Industry Merit Award:

A gold key and one year subscription to "Chemistry and Industry" awarded annually to the student standing highest in the final year of each of Honours Chemistry, and Chemical Engineering, provided he has an A average, and has completed his program in the normal number of years.

The Chemical Institute of Canada (Essex-Kent Section) Award:

Value: $100. Awarded annually on the basis of high standing in Chemistry and of good standing in the other sciences and in mathematics, to a student entering the second year of any of the honours programs in Chemistry, or Chemical Engineering.

Chemical Institute of Canada Prize:

Silver medal plus $25. Awarded to the student with the highest standing in the penultimate year of Honours Chemistry, Chemistry and Physics, or Chemistry and Biology.

Canadian Society for Chemical Engineering Prize:

Silver medal plus $25. Awarded to the highest student completing the penultimate year of Chemical Engineering.

The Odette Bursary in Engineering:

Value: $200. Awarded annually at the discretion of the Committee on Student Awards to a deserving student in Engineering. Established in 1955 in memory of L. L. Odette, Sr., of Tilbury, Ontario by his sons L. L. Odette and E. G. Odette.

Student Engineering Society Award:

Value: $100. Awarded annually on the basis of participation in Engineering Society activities, personal qualities, character, and social and athletic activities, to a student entering fourth year Engineering.

Engineering Institute of Canada Student Prize:

A prize of $100, awarded to a student member of the Institute in the year prior to the graduating year on the basis of the marks made in his academic year, and his activities in the student engineering organization or in the local branch of a recognized engineering society.

Alex Fraser Goldberg Memorial Award in Nursing:

Value: $200. To an outstanding student registered in a degree program in Nursing. Established by friends of Mr. Goldberg.

BUSINESS ADMINISTRATION

H. A. Scarff Memorial Prize:

A prize of $50. Awarded annually to the student with the highest standing in Business Administration 115. Established in 1957 by friends of the late Mr. H. A. Scarff, former member of the Senate.

Riddell, Stead & Company Award:

Value: $500 to be applied against university fees in the fourth year. Awarded to a student who has completed the third year of the Honours Bachelor of Commerce program with high standing who is proceeding to the fourth year, and who intends upon graduation to continue studying with a practising firm of Chartered Accountants. The award is made on the recommendation of the Dean of the Faculty of Business Administration.

Milton M. Kovinsky Memorial Scholarship:

Value: $250. To an outstanding student in course, registered in Business Administration.

Price Waterhouse and Co. Scholarship:

Value: $250. Awarded annually to a student who has completed the third year of the Business Administration program who has an outstanding academic record and ability, and whose interest is in public accounting as a career.

Clarkson, Gordon and Co. Scholarship:

Value: $200. Awarded annually to a student interested in a public accounting career who has completed the third year of the honours program in Business Administration, with a good overall average.

The William G. Danby Memorial Bursary:

Award of $100. to an outstanding Canadian student who is a permanent resident of Essex County; who is enrolled in the third year of the Honours Business Administration program, who shows a high aptitude for personnel administration and labour relations work. Presented by the Personnel Association of Windsor and District, Incorporated.

Ben Matthews Prize in Business Administration:

Value: $200. Awarded annually to the outstanding student in the graduating class in Honours Business Adminstration.

Cambridge Leaseholds Scholarship in Marketing:

Value: $250. Awarded annually to a student who has completed the third year of the Business Administration program and has an outstanding academic record and is interested in marketing as a career.

FACULTY OF LAW

Essex Law Association Prize:

Value: $150. To the student with the highest standing in First Year Law.

McTague Prize:

Value: $250. Divided among the students with the highest standing in Second Year Law.

Robert H. Wilson Prize:

Value: $250. Divided among the students with the highest standing in Third Year Law.

Thomson, Rodgers Prize:

Value: $150. To the second year student with the highest standing in Company and Commercial Law.

Thomson, Rodgers Prize in Corporate Finance:

Value: $150. To the third year student with the highest standing in Corporate Finance.

Canada Law Book Company Prizes:

Three book prizes of $50. awarded annually at the discretion of the Dean of the Faculty.

Carswell Book Prizes:

Three book prizes of $50. awarded annually at the discretion of the Dean of the Faculty.

C. C. H. Canadian Ltd. Book Prize:

A book prize awarded annually to the student with the highest standing in the Legal Writing program.

Phi Alpha Delta Book Prize:

A $25. book prize awarded annually to the student with the highest standing in the first term of the first year.

Alex Fraser Goldberg Memorial Award in Law:

Value: $200. To a deserving married student in the Faculty of Law. Established by Windsor Lodge 1011, B'nai B'rith.

PHYSICAL AND HEALTH EDUCATION

Fruehauf Trailer Company of Canada Bursaries:

To deserving students in the Faculty of Physical and Health Education. Made available by an annual $300 grant from the Fruehauf Trailer Company of Canada.

Mary O'Brien Memorial Scholarship:

Value: $250. Available annually to a student who is recognized by the Faculty Council as being an outstanding scholar and athlete. The student must have successfully completed two years of the undergraduate program and be enrolled in the kinesiology stream within the Faculty of Physical and Health Education.

DIVISION OF EXTENSION

Industrial Management Clubs of Canada Awards:

Value: the earnings of an investment of $2000. will be made available for one or more awards each year. The awards will be given to deserving students enrolled in credit courses in the **Division of Extension.** Applicants must be Canadian residents, full time employees in business, industry, government or one of the professions, and must not be a recipient of "tuition refund" aid. Application forms available in the Extension Office, Room 110, Windsor Hall.

B. OUTSIDE AWARDS

The following awards are not administered by the University of Windsor, but students of the University may apply for those for which they are eligible.

Ontario Scholarship Program:

The Province of Ontario awards Ontario Scholarships to all students who achieve an average of 80 per cent or better in subjects as required for the Ontario Secondary School Honour Graduation Diploma. These students are designated "Ontario Scholars" and receive an award of $150. No application is required.

Ontario Student Awards Program:

All students who are residents of Ontario and who satisfy the admission requirements of a Canadian university or an eligible post-secondary institution in Ontario may apply for an award under this Program. To receive an award a student must establish a need for assistance and enrol in an eligible institution in a course other than Divinity in the year of award.

An award under this program will be made to the extent of established need in a combination of a non-repayable grant and a Canada Student Loan. Application forms are available at all eligible post-secondary institutions.

Canterbury College Awards

The following four awards are administered by Canterbury College. Application for them should be made to the Principal of the College by June 1st.

(1) **Fred Musson Memorial Bursary:**

Value $100. To be awarded to an undergraduate or graduate student on the basis of ability and need.

(2) **Brotherhood of Anglican Churchman Prize:**

Value $100. To be awarded to the student in the Anglican section of First Year Theology obtaining the highest mark.

(3) **Guild Prize I:**

Value $50. To be awarded to the student in Canterbury College obtaining the highest overall average, in any course or year.

(4) **Guild Prize II:**

Value $50. To be awarded to the best all-round student in Canterbury College. The students shall nominate three; the winner to be chosen by the Principal of Canterbury College.

University of Windsor Alumni Association Student Activity Awards:

Several Alumni Awards to be assigned on the basis of contribution to co-curricular activities such as art, student government, clubs and activities, publications, writing, and athletics. Application forms are available at the Alumni Office.

Ellen Sullivan Memorial Bursary:

For graduates of Notre Dame High School, Chattanooga, Tennessee. The value of the bursary is the annual interest on Sullivan Bursary Fund (approx. $1,000) held in trust by Assumption University. Apply to The Principal, Notre Dame High School, Chattanooga, Tennessee.

North American Benefits Association Windsor Club 610 Bursaries:

Four awards annually to female undergraduates at the University of Windsor who are graduates of Windsor and Essex County secondary schools. Further information is available in the Awards Office.

Domforge Windsor Credit Union Bursaries:

Three awards annually, each valued at $150. Allocated to children of Credit Union members, or members in their own right, who are entering second year or beyond and have a minimum of 65 per cent in their qualifying year. Application forms are available in the Awards Office.

Dr. W. P. Percival Memorial Award:

Awarded annually to a student preferably in Medical Science or Archaeology, at the University of Windsor, on the basis of satisfactory standing and financial need. In memory of the late Director of Protestant Education in the Province of Quebec. Donated and presented personally by Dr. W. L. Percival.

I.O.D.E. Windsor & Essex County Municipal Chapter Centennial Award:

Value: $150. Available to students of Windsor and Essex County enrolled in any year beyond the First at the University of Windsor. No application is required.

Other qualifications being equal, preference will be given to students whose interests lie in the field of Commonwealth Relations, or Canadian History.

For further information apply to the Awards Office of the University.

The Champion Spark Plug Co. of Canada Ltd., Scholarships:

Two $500 scholarships, annually, renewable for three additional years or until graduation, whichever is sooner, on condition that the student achieves satisfactory standing, normally Second Class Honours, as well as maintaining the initial standards of qualification. Applicants must be enrolling in acceptable full-time programs at accredited colleges or universities and must be sons or daughters of active or pensioned employees of Champion Spark Plug Co. of Canada Ltd. Application forms may be acquired from the office of Champion Spark Plug of Canada Ltd., Windsor 14, Ontario.

Royal Arcanum of Windsor Coronation Council #2224 Bursaries:

A number of bursaries totalling $1,000. to be allocated to full-time students at the University of Windsor who are graduates of Windsor and Essex County high schools on the basis of academic standing (minimum of C average standing and financial need). Further information available in the Awards Office.

Chrysler Canada Scholarships:

Value: Amount based on academic achievement and determined annually by a board of Awards. For children of active, retired, or deceased employees of the Company, and Chrysler dealerships. Apply to Salaried Personnel Department, Chrysler Canada Ltd., Windsor, Ontario.

Hiram Walker & Sons Scholarship:

Value: $850 a year for sons or daughters of employees. Apply to Public Relations Department, Hiram Walker & Sons Ltd., Walkerville.

Imperial Oil Higher Education Awards:

Compulsory fees for children or wards of employees or annuitants of Imperial Oil Limited or its subsidiaries. Apply to Secretary, Committee on Higher Education, Imperial Oil Limited, 111 St. Clair Ave., W., Toronto 7, Ontario.

International Nickel Company Participating Scholarships:

The International Nickel Company of Canada, Limited provides fifty awards annually at Canadian universities to students who will enter the penultimate year of a baccalaureate program in science or engineering. Interested students should request application forms from the Awards Office at the University or write to the Administrator of Educational Affairs, The International Nickel Company of Canada, Limited, P.O. Box 44, Toronto-Dominion Centre, Toronto 111, Ontario.

G. Caboto Club Scholarships:

Aggregate value: $600. Two or more scholarships to Grade 13 students of Italian descent, residents of the County of Essex community, who are proceeding to a University.

Application forms may be obtained in the Windsor Secondary Schools.

V.O.N. Bursaries:

Value: $1,800. For nursing students only. Application to be made to the Victorian Order of Nurses, 5 Blackburn Avenue, Ottawa, Ontario.

Masonic Foundation of Ontario Bursaries:

A bursary fund provides money for a limited number of awards to students experiencing financial problems of an emergency nature. These are assigned without respect to race or creed, to residents of Ontario who are Canadian citizens or landed immigrants. For further information communicate with the Awards Office at the University.

Essex County Pharmacists' Association Bursary:

Value: $200. Apply to the Secretary of the Association.

Navy League of Canada Bursaries:

Value: $300. Apply to the Commanding Officers of Sea Cadet Corps.

Essex County Medical Society Bursary:

Value: $750. To a resident of Essex County who has completed the pre-medical course at a Canadian university and who has been accepted in Medicine at a Canadian University. Applicants must have a B average in the final pre-medical year and must have some financial need. Apply to: The Scholarship Award Committee, Essex County Medical Society, 1474 Ouellette Ave., Windsor, Ont.

St. John Ambulance Association of Canada Bursaries:

One or more bursaries of $1,000 from the Margaret MacLaren Memorial Fund will be awarded annually to experienced Registered Nurses for study at the Master's level. This fund may also be used to serve the needs of student nurse applicants with preference given to those with St. John Ambulance affiliation. Applications must reach the following address by May 1: Chairman of Bursary Funds, 321 Chapel St., Ottawa.

St. John Ambulance Association of Canada Bursaries:

Countess Mountbatten Bursaries of from $200 to $400. to student nurses in the basic and graduate programs. Awards are made according to academic qualifications, personal suitability and financial need. All factors being equal, special consideration will be given to those with St. John affiliation. Applications are to be forwarded not later than May 16, to the Chairman of Bursary Funds, St. John Ambulance National Headquarters, 321 Chapel Street, Ottawa 2, Ontario.

Ontario Department of Health Bursaries for Public Health Nursing:

Bursary assistance is available through Local Health Services Branch of the Ontario Department of Health, for study at diploma, certificate or degree level for preparation in public health nursing.

This assistance consists of monthly stipends during the course of studies as well as coverage of university fees. Acceptance carries a service commitment to public health nursing in a local official health agency in Ontario.

For further information contact: Senior Consultant, Public Health Nursing, Local Health Services Branch, Room SW 926, Hepburn Block, Queen's Park, Toronto, Ontario.

Windsor Utilities Commission Bursaries:

Two bursaries valued at $300. each. One bursary awarded to any student whose home is serviced by Windsor Utilities; the other awarded to a son or daughter of a Windsor Utilities employee. Written applications are to be forwarded to the Secretary-Treasurer of the Windsor Utilities Commission, 787 Ouellette Avenue, Windsor, Ontario by June 30th.

I.O.D.E. Windsor & Essex County Municipal Chapter Bursaries:

Two awards of $400 and $300 are given to students in post secondary education who are graduates of Windsor and Essex County Secondary Schools.

Apply to the Educational Secretary of the Windsor & Essex County Municipal Chapter I.O.D.E.

I.O.D.E. Chapter Bursaries:

A number of Primary I.O.D.E. Chapters offer bursaries to students who are graduates of local secondary schools.

For further information apply to the Educational Secretary of Windsor & Essex County Municipal Chapter I.O.D.E.

Lucy Morrison Memorial Fund - Provincial I.O.D.E.:

This fund provides money for awards to Canadian students who are experiencing financial problems of an emergency nature. Applications for assistance should be directed to: Provincial Education Secretary, 168 Jackson St. West, Hamilton, Ontario.

The Royal Canadian Legion and Ladies' Auxiliary Bursaries:

Available to persons eligible for membership in The Royal Canadian Legion or to children of deceased Veterans or to children of parents either of whom is eligible for membership in The Royal Canadian Legion.

The Donors are: (a) Dominion Command, (b) Ontario Provincial Command & Ladies' Auxiliary, (c) Legion Branches.

Enquiries regarding these bursaries may be directed to the local Zone Commander or to the principals of the secondary schools.

Windsor and District Labour Council Centennial Award:

Value: $150. One or more awards to be granted annually on the basis of scholarship, financial need and on interest displayed in social and economic problems and in extra curricular activities of a literary or organizational nature in secondary school or university. The student must be a son or daughter of a member of a Council affiliate who is a resident of Essex County and must be a Grade 13 graduate of an Essex County secondary school.

Application forms may be obtained from the Awards Office before July 31st.

Royal Canadian Engineers Memorial Scholarships:

Scholarships of up to $500. each are offered annually to male or female students who are attending any acceptable course in a post-secondary institution. Applicants must be children or grandchildren of a person in the various engineering branches of the Canadian Armed Forces. Further details and applications are available from the Awards Office, University of Windsor.

St. Elizabeth Visiting Nurses Association Bursaries:

Bursary assistance is available through the Association to students in their final year of study of Public Health Nursing, in the amount of $1,500. There is a working commitment of one year, following successful completion of their course.

German-Canadian Club Teutonia Entrance Award in German:

To a student obtaining the highest standing in Grade 13 German in the Windsor secondary schools. Value: $200.00. Apply through Windsor's secondary schools, or to the Teutonia Club, 55 Edinborough, Windsor 12, Ont.

Canadian-German Academic Exchange Association:

The Professor Hermann Boeschenstein Prize and the Dr. Wenzel Jaksch Prize, consisting of free return transportation to and from Germany, honoring the two co-founders of the Association's **Deutschlandprogramm**. Available to needy students wishing to study in Germany for a summer under the auspices of the Association. For details apply to the Department of Germanic and Slavic Studies, University of Windsor.

Further information on many of the awards listed above is available in the Awards Office.

C. LOANS AND OTHER FORMS OF AID

University of Windsor Emergency Loans:

The University operates an Emergency Loan Fund which is meant to support students through temporary periods of financial difficulty. Amounts up to $200 are available for periods of up to two months duration if satisfactory arrangements for repayment can be made.

A student is limited to two loans or a total of $200 per academic year and must have a minimum of "C" average standing in the previous academic year. Further information is available in the Awards Office.

Rotary Club of Windsor Student Loan Fund:

Interest free loans to graduates of Windsor Secondary Schools. Preference given to students nearing graduation.

Apply to Youth Services Committee, Rotary Club of Windsor.

The Harry F. Bennett Education Fund of the Engineering Institute of Canada:

Loans are available from this Fund to enable deserving students who have completed at least one year in engineering to complete their studies. Maximum amount for one year: $250; maximum for all years: $450. The loan is without interest until graduation; thereafter interest at 4% per annum is charged on the unpaid portion.

For details apply to Dr. Cameron MacInnis, E.I.C. faculty representative on campus.

Canada Student Loans Plan:

Full details of this Plan are available in a brochure issued by the Government of Canada which may be obtained at all eligible post-secondary institutions and secondary schools in Ontario. Students not eligible under the Ontario Student Awards Program may apply for a Canada Student Loan provided they are attending an institution in Canada or abroad which has been designated as eligible for Canada Student Loans only. The application form for the Ontario Student Awards Program is also used for the Canada Student Loans Plan.

Canadian Forces Medical Undergraduate Subsidization Plan:

This scheme is designed to assist those who wish to make a medical career in one of the Armed Forces. Free academic tuition during the last three years of training in a medical school and other benefits are provided. Although previous training in the services is not an absolute necessity, the application by those who have had training in the UNTD, COTC, or URTP will naturally be more favourably received than those who have not had any military experience. Further information may be obtained from Armed Forces representatives on campus.

The Children of War Dead (Education Assistance) Act:

Passed on July 1, 1953, this Act provides assistance towards an education beyond secondary level for sons and daughters of veterans whose deaths were attributable to service in World War I, World War II, the Korean operations or peace-time service. If the application is approved, the Department of Veterans Affairs will pay

(a) to the student, an allowance of $34 per month for the period during which he or she is pursuing a full time course, up to a maximum of 36 months, or four academic years;

(b) to the university, fees and other costs of tuition as described in the Act, up to a maximum of $800 per academic year.

For further details consult the local office of the DVA.

Department of National Defence:

Students may apply for training in Canada's Armed Forces (Reserve). Interested candidates are advised to enquire at the local Recruiting Centre about the available programs. The University will cooperate in those established by the Department of National Defence.

State Assistance for U.S. Students:

Several of the States operate student assistance programs which include the University of Windsor as an approved institution. These awards are based usually upon residence and financial need. Prospective students are advised to apply to the appropriate State Education Authority. Two such plans are outlined below:

Michigan Higher Education Assistance Authority:

Students resident in Michigan attending the university may apply for financial assistance through the M.H.E.A. Enquiry about the plan should be made through your bank or directly to Michigan Higher Education Assistance Authority, 906 Prudden Building, Lansing, Michigan.

New York Higher Education Assistance Corporation:

Students, resident of New York State, attending this University may apply for financial assistance through the N.Y.H.E.A.C. Loan applications may be requested through New York lending institutions, or by writing to N.Y.H.E.A.C., 159 Delaware Avenue, Delmar, New York 12054.

Student Aid Foundation of Michigan:

Students living in Metropolitan Detroit may recieve grants and loans for use at this University on the basis of academic record, character and financial need. Applicants should contact the Student Aid Foundation of Michigan, 2486 National Bank Building, Detroit 26, prior to December 14.

U.S. Veterans' Affairs Aid Program:

Under an agreement between the University and the Veterans' Administration, financial aid is available to servicemen or veterans of the United States Armed Forces. Enquiries should be addressed to the local representative of the Veterans' Administration nearest to the student's place of residence.

ACADEMIC INFORMATION
(UNDERGRADUATE)

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ACADEMIC INFORMATION

I. FACULTIES, DEGREES, AND DIPLOMAS

The academic work of the University is divided among seven Faculties, (each under the supervision of a Dean), and the autonomous School of Computer Science. The Schools of Dramatic Art, Nursing, and Social Work are included in the Faculty of Arts and Science. The Faculties, programs, and degrees are as follows:

(a) Faculty of Arts and Science:
Bachelor of Arts (B.A.)
General program in Arts leading to the B.A. degree.
Honours programs in Arts leading to the B.A. degree.
Bachelor of Fine Arts (B.F.A.)
Honours program leading to the B.F.A. degree in Fine Arts.
Bachelor of Music (B.Mus.)
Honours programs leading to the B.Mus. degree in History and Theory, or in School Music.
Bachelor of Science (B.Sc.)
General program in Science leading to the B.Sc. degree.
Honours programs in Science leading to the B.Sc. degree.
School of Dramatic Art
Honours program leading to the B.F.A. degree in Dramatic Art.
School of Nursing
Honours programs leading to the Bachelor of Science in Nursing Degree (B.Sc.N.)
Diploma program in Public Health Nursing.
School of Social Work
Honours program leading to the B.S.W. degree.
Certificate in Public Administration (by Extension only).
Certificate in Theology (by Extension only).

(b) School of Computer Science:
General and Honours programs in Computer Science leading to the B.C.S. degree.

(c) Faculty of Applied Science:
Bachelor of Applied Science (B.A.Sc.)
Honours programs in Chemical, Civil, Electrical, Geological, Industrial and Mechanical Engineering, and Engineering Materials, leading to the B.A.Sc. degree.

(d) Faculty of Business Administration:
Bachelor of Commerce (B.Comm.)
Honours program in Business Administration leading to the B.Comm. degree.
Certificate in Business Administration (by Extension only).

(e) Faculty of Education:
Bachelor of Education (B.Ed.)
Diploma in Elementary Teacher Education.
Program for elementary school teachers leading to certification by the Department of Education.

(f) Faculty of Physical and Health Education:
Bachelor of Physical and Health Education (B.P.H.E.)
Honours program leading to the B.P.H.E. Degree.

(g) Faculty of Law:
Bachelor of Laws degree (LL.B.).

(h) Faculty of Graduate Studies:
Master of Arts (M.A.);
Master of Science (M.Sc.);
Master of Applied Science (M.A.Sc.);
Master of Business Administration (M.B.A.);
Master of Physical Education (M.P.E.);
Master of Social Work (M.S.W.);
Doctor's Degree (Ph.D.).

In the face of the twentieth-century explosion of knowledge, it has become increasingly important for students to extend their knowledge beyond the Bachelor's degree. Indeed undergraduate education is now regarded by many students as the mere stepping-stone to the full development of their scholarly and professional capacities.

All graduate-level courses are offered through the Faculty of Graduate Studies. At present, programs leading to the Master's degree are offered in: business administration, creative writing, economics, English, French language and literature, geography, history, philosophy, political science, psychology, romance languages, sociology, theology, biology, chemistry, mathematics, physics, physical education, social work; in chemical, civil, electrical and mechanical engineering, and engineering materials. Doctoral programs are offered in: psychology, mathematics, biology, chemistry, physics; and in chemical, civil, electrical and mechanical engineering, and in engineering materials.

In addition to the above seven Faculties, there is the Faculty of Theology in Holy Redeemer College of Assumption University.

II. ATTENDANCE AND LENGTH OF COURSE

1. Regular Winter Session

Regular courses are offered in the winter session extending from September to May. In general, most courses are continuous throughout the year, but some half-year courses are also offered. Final examinations for half-year subjects of the first semester are written in December.

2. Other Sessions

Courses are offered through the Extension Division in evening classes during the Winter Session, and during the Intersession (late Spring) and Summer School. Courses given in these sessions carry the same credit as those in regular Winter Session; calendars are available on request.

3. Intramural Attendance and Length of Course

The number of years of attendance required for the attainment of any degree is as indicated in each program. This time may be reduced through the transfer of credit from another university. In each case attendance at intramural classes for at least one full academic year or the equivalent (three intersessions, summer sessions or winter sessions part time, or a combination of these) shall be required.

In the case of programs leading to undergraduate degrees, a candidate may be excused attendance for not more than one full academic year or the equivalent through the transfer of credit obtained by correspondence courses through another university.

A student may take courses for credit in Intersessions or Summer Schools conducted by this or other institutions. Such courses, if approved, may be counted towards degrees. Day students enrolled at the University of Windsor must be sure that their course selections are appropriate, and that they are eligible, if they wish to register at Intersession or Summer Session at the University of Windsor.

III. APPLICATION

A student who is attending a High School in Ontario should obtain application forms from his Principal or Guidance Officer. When the Ontario Secondary School student is notified by the University that he has been accepted, he will be required to send a deposit of $25 (non-refundable) on his tuition.

All other persons may obtain application forms by writing to:

The Admissions Office
The University of Windsor
Windsor 11, Ontario, Canada.

A $25.00 tuition deposit must be submitted with the application. The deposit will be refunded if the applicant cancels in writing before August 1 or if the application is not accepted. No refund will be allowed for applications which are incomplete after September 1. The deposit is not transferable and may be applied only to the applicant's tuition of the year for which admission is sought in his application.

All students are encouraged to apply as early as possible. No assurance is given that an application received after September 1 will be given consideration.

A student from outside continental North America must have his application complete and in the Admissions Office before July 1.

All applications **must** be complete by the last date of registration.

A student whose application is not complete by the regular registration period may be allowed to register provisionally (that is, allowed to attend classes while his application is still under consideration). If the file is not complete by the last day of registration, or if the student is not eligible for admission as a credit student, he will be allowed to continue on a non-credit basis only, as an **audit** student. (See p. D-10).

Former students of this University who have not been registered here during the preceding calendar year are required to apply for readmission through the Admissions Office before registering.

A student who wishes to apply for the second semester only, on a part-time basis, must have his application complete by December 15.

Transfer Student

An applicant who wishes to transfer (at any level) from another college or university must arrange for a complete transcript of his record and a statement of honourable dismissal to be sent to the Registrar directly by each institution previously attended.

Every student will be required to complete at least one full year or the equivalent at this University, including at least two courses in his major field, before qualifying for a degree.

Transient Student

A student who wishes to take a course for credit at this University, with the intention of transferring the credit to the university at which he was previously registered, must have the **written** permission of the Registrar of his home university in order to take the course. A transient student may, if he wishes, register in courses on proof of good standing at his home university (transcript or current grade report) provided that he does not expect to receive degree credit for the courses.

IV. ADMISSION

General Requirements For Admission

Admission requirements to any part of the University are based on the student's achievement and ability. All applicants will be considered on the basis of total evidence presented: academic records, principal's recommendation, aptitude tests, etc. In special circumstances an applicant may be asked to come to the campus for tests and interviews.

S.A.C.U. test scores will be part of the general requirements for admission to this University. If S.A.C.U. scores are not available, C.E.E.B. scores or equivalent will be accepted.

Advanced placement may be granted to superior applicants, for high school subjects taken above the normal high school graduation level.

Specific requirements for admission to the various faculties and programs are given with the description of these programs.

A student who satisfies the general admission requirements, but who lacks a specified subject required for admission to a particular program, will be considered for admission to the University, and, if admitted, may be required to do additional work or to take courses to remove the deficiency before being admitted to the subject for which it is a prerequisite.

Each applicant FROM ABROAD whose native language is not English is required to take an English Proficiency Test administered by either the English Language Institute of the University of Michigan, or "Test of English as a Foreign Language" (T.O.E.F.L.) as part of his requirements for application. If, after passing the test, the student still has difficulty with the language, he may be asked to do remedial work.

A. REGULAR ADMISSION

The following are the requirements for regular admission. (Students lacking regular requirements will be considered under special conditions; see "Special Admission", p. D-9).

1. To Preliminary Year

The University offers a Preliminary Year which consists of a full year of study equivalent to Grade 13 of the Ontario High Schools or to First Year of those universities which have a four-year General course. (For the program of courses and academic regulations, see "Preliminary Year", p. E-22).

(a) From Ontario Grade 12:

The general requirement for admission to the Preliminary Year is completion in not more than four years beyond Grade 8 of twenty-seven academic credits in a program oriented toward university studies (four complete years of Secondary School work through Grade 12); at least seven of the credits must be at the Grade 12 level; an average of 66% or more is required. The student must also receive a favourable recommendation from the Secondary School Principal.

It is strongly recommended that subjects taken include:

English
Another language
Mathematics (Grades 11 and 12)
History or Geography
Science (Grades 11 and 12)
One other acceptable option for the Graduation Diploma.

Applicants for the Science, Nursing and Applied Science programs must have completed Mathematics (Grades 11 and 12), Physics and Chemistry (or Agriculture). Applicants for the Commerce program and those who intend to major in Mathematics must have completed courses in Mathematics (Grades 11 and 12). A student who intends to take a major or honours program in a specific language should have that language to the Grade 12 level.

(b) From Outside Ontario:

An applicant who has completed High School work **in Canada outside of Ontario** should submit the Departmental or other official certificates (originals) to the Committee on Admissions for a decision regarding eligibility for entrance.

Graduation from a **United States High School** will admit to the Preliminary Year provided the applicant has completed at least 16 academic units (8 of which should be B grade or recommending grade), including 4 units in English, and sequences (at least 2 and preferably 3 units) in each of Mathematics, Science, Social Studies and one foreign language. In addition the applicant should have at least four academic subjects in Grade 12 with at least a B or recommending grade in three of them.

He must receive a favourable recommendation from his High School Principal, must obtain a score satisfactory to the Committee on Admissions on his aptitude tests, and should rank in the upper half of the class.

Highly qualified applicants from the United States will be given final acceptance after the first term marks of the final year of High School have been received, if the applicant meets the admission requirements at that time, provided that the graduation certificate is presented.

The General Certificate of Education of **Great Britain** (or an equivalent certificate from elsewhere in the Commonwealth) will admit to Preliminary Year provided it indicates satisfactory completion of five subjects at the Ordinary Level; English, Mathematics, another language, Science and Social Science will normally be required.

An applicant from **Latin America** must present a certificate showing satisfactory completion of the bachillerato necessary for admission to university in the applicant's own country.

2. To First Year

Admission to First Year of the University is obtained in one of the following ways:

(a) From Ontario Grade 13:

The general admission requirement is an average of 60% (or equivalent) on a full Grade 13 level program as approved by the Secondary School; and submission of satisfactory test results as scored by the Service for Admission to College and University.

It is strongly recommended that a student's Secondary School program at the Grade 11 and 12 levels include English (or Français), another language, Mathematics, Physics, Chemistry, and Geography or History.

The subjects required for admission to a particular program are shown with the specific admission requirements for each Faculty.

Early Admission

Admission of qualified students who have applied early will be decided in Spring on the basis of the total Secondary School performance, Grade 13 term and interim marks, and Principal's recommendations. In the case of students who have doubtful or borderline qualifications, decision on admission will be deferred until the Grade 13 final results are available. In any case, the student is expected to complete a full Grade 13 level program.

(b) From Preliminary Year

The satisfactory completion of the Preliminary Year prepares a student for admission to First Year of all undergraduate programs, provided the proper subjects are chosen and the appropriate average obtained.

(c) From Outside Ontario

An applicant who has completed High School work outside of Ontario should submit the Departmental or other official certificates (originals) to the Committee on Admissions for a decision regarding eligibility for entrance.

The General Certificate of Education of **Great Britain** (or an equivalent certificate from elsewhere in the Commonwealth) will admit to the First Year provided it indicates satisfactory completion of five subjects, with two at the Advanced Level appropriate to the course chosen, or four subjects with three at the Advanced Level appropriate to the course chosen. Applicants for the Bachelor of Science and Bachelor of Applied Science programs must have completed Chemistry, Physics and Mathematics at the Advanced Level.

B. SPECIAL ADMISSION

1. Probation

A student lacking the full admission requirements or a transfer student may be placed **on probation** by the Committee on Admissions. Students who show unsatisfactory progress may be placed on probation by the Committee on Academic Standing of their

Faculty. Probation is removed when the student passes his probationary period. The conditions for passing are the same as those for regular students. Should the student fail his year, he normally will not be allowed to repeat, but may be required to withdraw from the Faculty. For regulations pertaining to the possible readmission of students who have been required to withdraw, see regulations pertaining to each Faculty.

In the case of a student who is on probation in part-time, extension or summer session studies, the student's progress report will be referred to his Academic Standing Committee after the completion of two courses; if the student's progress is not satisfactory, he may be required to withdraw at that time.

2. Trial

A student may be accepted into a particular course program on trial; if such student shows unsatisfactory progress or fails his year, he will not be permitted to repeat the same course program.

3. Adult Student

A student who lacks the regular admission requirements, and who is twenty-one years of age by December 31 of the year of application, and who has been out of full time formal Secondary School studies for three years or out of Grade 13 for two years, may be admitted to the University on probation; prerequisites for a specific program are to be made up by additional courses or private study. The student's birth certificate must be submitted with his application. (For details concerning "Probation", see above). (Nursing students, see "School of Nursing".) Applicants from overseas are not eligible for consideration under the "Adult Student" clause.

4. Audit Student

An audit student in any course is one who attends that course without credit towards a degree or program, and who is not entered or registered on the official University records or lists, for purposes of academic or degree credit or transcript. Such a student will not be allowed to write examinations and cannot be graded in any way. He will normally pay the regular fees for the course(s) or program.

5. Transfer Student

A student may transfer from another college or university, but will be required to complete at least one full year or the equivalent at this University, including at least two courses in his major field, before qualifying for a degree. For details of applications, see p. B-6.

Applicants wishing to transfer into specialized programs are evaluated on an individual basis.

Students who achieve high standing in the three year program of the Ryerson Polytechnical Institute or a College of Applied Arts and Technology may be considered for admission to an appropriate

second year university program. Students who achieve high standing in two years of non-university post-secondary education may be considered for admission to an appropriate first year program.

6. Transient Student

A student may take courses for credit at this University, for the purpose of transferring the credit to the university at which he was previously registered. He must have the **written** permission of the Registrar of his home university in order to take the course. A transient student may, if he wishes, register in courses on proof of good standing at his home university (transcript or current grade report) provided that he does not expect to receive degree credit for the courses.

V. REGISTRATION

1. Counselling

A course consultant will be provided who will render the student every assistance in planning his program. **Nevertheless, the responsibility for familiarizing himself with the requirements for degrees and with academic regulations rests primarily with the student himself.** At registration, no student may take an **additional course,** or make any other exception to the approved program as outlined in the calendar without **written permission from his Dean.**

2. Time and Place of Registration

Each student must register at the beginning of each session at the time and place designated by the Registrar. Although the courses selected may be offered in different Faculties of the University, all students register through the Registrar's Office.

Students who fail to register at the time and place fixed by the Registrar will be required to pay a late registration fee (see p. C-11).

Registration will not be considered complete or official unless satisfactory fee arrangements have been concluded by the last day of late registration.

Unless there are exceptional reasons known in advance, no student will be permitted to register later than three weeks after the beginning of classes.

3. Provisional Registration

A student whose application is not complete by the regular registration period may be allowed to register provisionally. All required forms and documents must be submitted before the last day of registration. If the file is not complete by that date, or if the student is not eligible for admission as a credit student, he will be allowed to continue on a non-credit basis only, as an audit student (see above).

4. Change of Registration

Once a student has registered, he may not **change his course, or add or drop subjects** without **permission from his Dean,** or, in the

case of students in the Extension Division, without permission of the Dean of Extension.

If any change in fees, or refunds, are involved the student will also see the Cashier's Office. (See "Fees" p. C-10).

Any subject dropped without the permission of the Dean will be regarded as a failure.

Students who find it necessary to withdraw from the University or from a course must notify the Dean's office in writing, giving the reason for the withdrawal.

5. Classification of Students

A full-time student is one who is registered in four or more full undergraduate courses.

A regular student is one who has satisfied all the admission requirements and is pursuing the course program as outlined in the calendar.

A conditioned student is a student who, in any year, does not have standing in a required subject or subjects of a preceding year.

A special student is a student taking courses for credit but not proceeding to a degree at this University.

A probationary student is one who has been placed on probation at the time of his admission, or one who, subsequent to his admission, has shown unsatisfactory progress and has been placed on probation by the Committee on Academic Standing of his Faculty. (For particulars, see Probation", p. D-9).

6. General Regulations

No student who is employed full-time will be permitted to attempt more than three full courses in the winter session, nor more than one full course in the intersession or summer session.

Every student entering the University in Preliminary or First Year is required to complete satisfactorily a course in Library Orientation, except those who have completed similar work at Teachers' College.

Any student of any year who shows an unsatisfactory knowledge of spoken or written English must do additional assignments until his work satisfies his instructors.

VI. EXAMINATIONS

The following regulations apply to students in all faculties. For specific regulations regarding supplemental examinations for each Faculty, see the academic regulations pertaining to the respective Faculty.

For courses offered in one Faculty, exclusively for students of another, the regulations of the Faculty in which the student is

registered will apply. For courses taken by students of one Faculty in another, the regulations of the Faculty in which the course is offered will apply. In the event that special consideration is required for individual students in one Faculty concerning courses being taken in another, the Dean of the Faculty in which the student is registered shall make recommendations to the Dean of the Faculty in which the course is offered.

1. Regular Examinations and Term Work

The regular examinations will be held in December and April. If a student writes more than one examination in a course, the last mark he obtains shall be the only one considered for academic credit.

Term work in a course will not be credited to a student beyond the year in which the course is taken.

2. Supplemental and Special Examinations

For regulations governing supplemental and special examinations, see the "Academic Regulations" of the Faculty or School concerned.

3. Conduct of Students During Examinations

A candidate writing an examination will write on the paper provided for him; he may not talk to another candidate; he may not copy from another nor allow another to copy from him; he may not bring into the examination room any printed or written material (except such aids as may be specifically permitted for a candidate writing a particular subject).

Any violation of these rules will be regarded as a serious offence, and may lead to the cancellation of the paper(s) of the offending student and even to his expulsion from the University.

4. Failures

For information regarding failures, withdrawal and re-admission see specific regulations pertaining to each Faculty.

5. Appeals

(i) **Aegrotat Standing:** A student who wishes to receive consideration on account of serious illness or bereavement or other grave reason prior to or during the examination should communicate with the Registrar's Office before the close of the examination period and should submit supporting documents (e.g., a medical certificate) within one week of the date of the scheduled examination.

(ii) **Other Appeals:** While all papers in failed subjects are re-read before the grades are submitted to the Registrar's Office, and every care is taken to record marks accurately, any student who considers that some factor affecting the final mark on the

examination was not considered by the examiner, may appeal to have the subject reviewed. This request must be submitted in writing to the Registrar's Office, together with a fee of $10.00, no later than two weeks after the final mark has been released by the Registrar. In the event that the grade is changed to the student's benefit as a result of the appeal, the fee will be refunded.

Any appeal for special consideration must be submitted in writing to the Registrar's Office no later than two weeks after the final mark has been released by the Registrar.

VII. GRADUATION

Registration in any program does not constitute an application for a degree or diploma.

An official application for graduation must be filled out and filed in the Registrar's Office thirty days prior to the Convocation at which the applicant hopes to graduate.

In cases in which credit is sought for work done elsewhere, official transcripts or other documentary evidence required by the Registrar's Office, not already submitted, must be conveyed to the Registrar's Office prior to the same date. Failure to comply with these regulations will disqualify the student for graduation at the Convocation concerned.

See also the particular regulations for each Faculty.

VIII. ANNUAL MEDICAL REQUIREMENT

Athletes are required to attend annually upon their own physician and present to the University on the University's prescribed form, a certificate as to physical fitness.

PART E

THE FACULTY OF ARTS AND SCIENCE

UNIVERSITY CENTRE
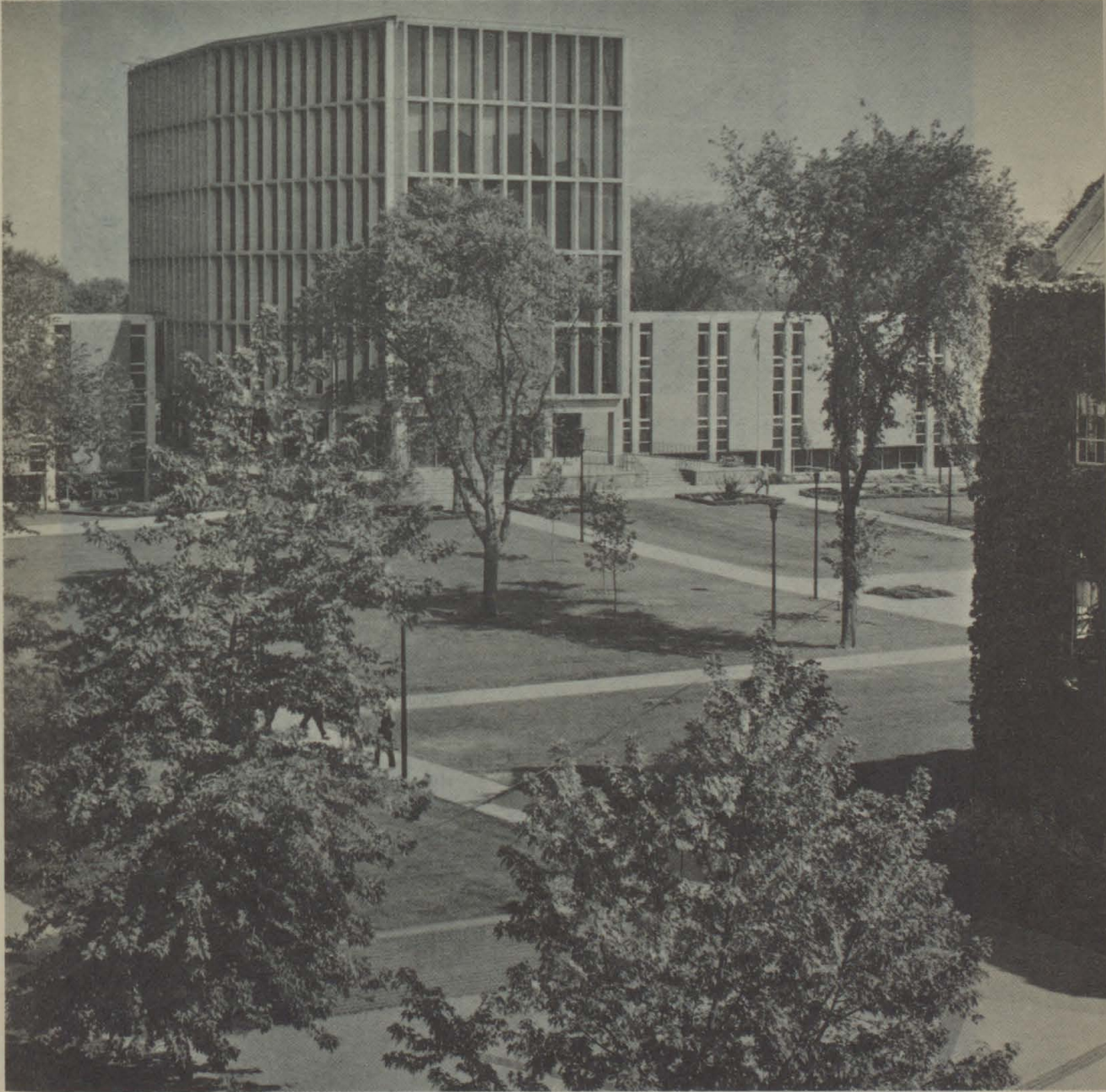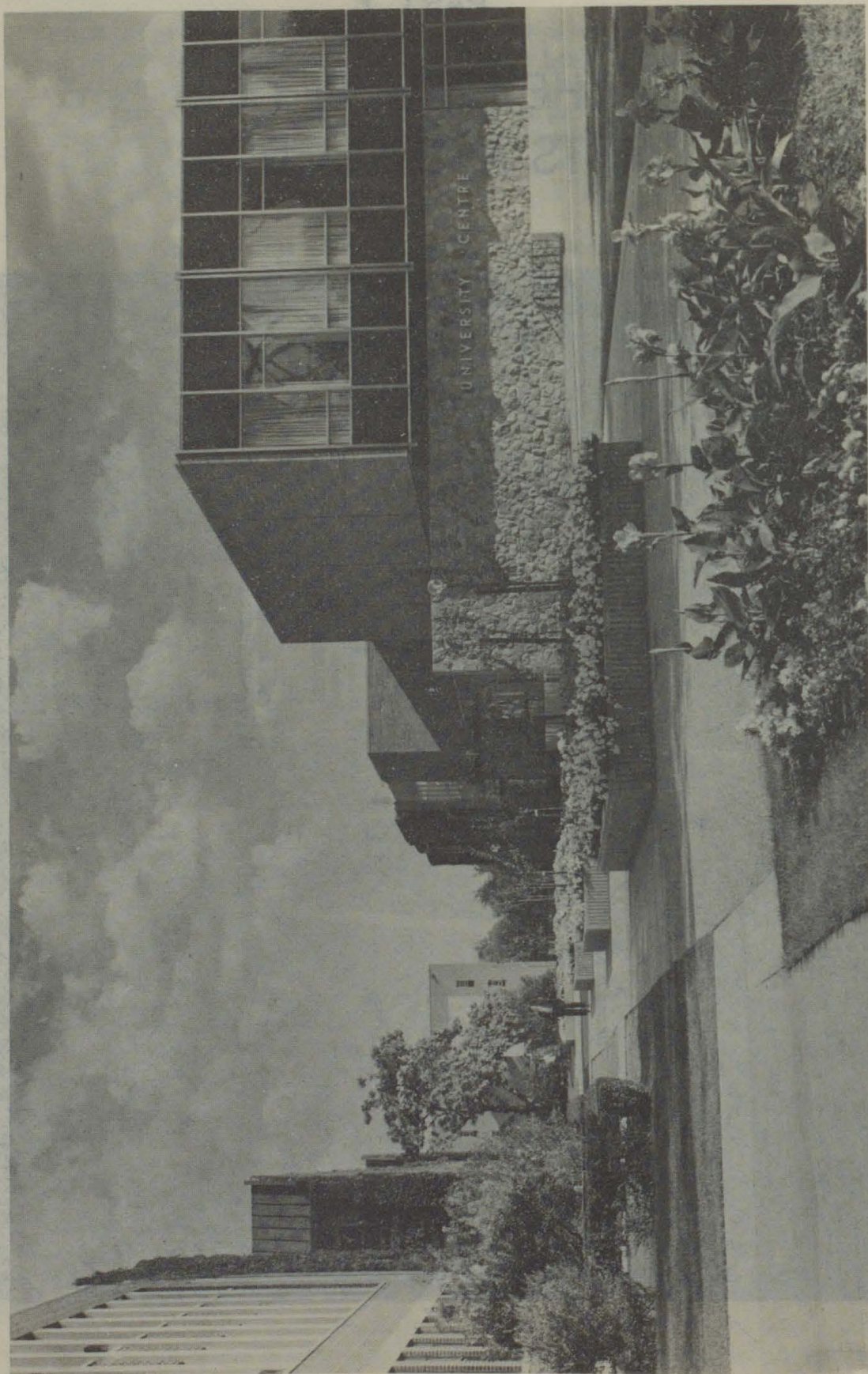
I. GENERAL INFORMATION

Programs

The Faculty of Arts and Science comprises the following programs:

a) General programs in Arts leading to the B.A. degree.
b) Honours programs in Arts leading to the B.A. degree.
c) Honours program in Dramatic Art leading to the B.F.A. degree.
d) Honours program in Fine Arts leading to the B.F.A. degree.
e) Honours programs in Music leading to the B.Mus. degree.
f) General programs in Science leading to the B.Sc. degree.
g) Honours programs in Science leading to the B.Sc. degree.
h) Certificate in Public Administration (by Extension only).
i) Certificate in Theology (by Extension only).
j) Honours programs in Nursing leading to the B.Sc.N. degree.
k) Diploma program in Public Health Nursing.
l) Honours program in Social Work leading to the B.S.W. degree.

For programs in Computer Science, see Section F.

The Preliminary Year

This year is taken by all students who enter the University from Grade 12. The subjects chosen will depend on whether the student intends to enter Arts, Science, Nursing, Commerce, Computer Science or Engineering. (See p. E-22).

The General Program

The General program in Arts or Science requires three years' work beyond Ontario Grade 13 or beyond Preliminary Year. This course is elected by the majority of students in the University. It provides a student with a broad background of liberal education, and at the same time allows for a field of concentration, called a **major field.** Majors are offered at the present time in the following fields:

In Arts: Anthropology, Art History, Asian Studies, Classical Civilization, Communication Arts, Comparative Literature, Drama, Economics, English, Fine Arts, French, Geography, German, Greek, History, Home Economics, Italian, Latin, Linguistics, Mathematics, Music, Philosophy, Political Science, Psychology, Russian, Sociology, Spanish, Theology.

This program may be arranged to suit the needs of students planning to enter law, teaching, social work, personnel work, theology, or any profession requiring a good, general background in the Liberal Arts.

In Science: Biology, Chemistry, Geology, Mathematics, Physics.

This program may be arranged to suit the needs of students planning to enter teaching, industry, dentistry, medicine, pharmacy, or any profession requiring a background in Liberal Arts with emphasis upon the natural sciences and mathematics.

Honours Programs

Honours programs require four years of work beyond Ontario Grade 13 or beyond Preliminary Year. They provide for a greater concentration in a given field of study than does the General program, and demand a higher level of achievement. Through these programs, students are prepared for graduate study, research positions, high school teaching, and several other professions. At the present time Honours programs are offered in the following fields: Anthropology, Art History, Asian Studies, Biology, Chemistry, Classical Studies, Communication Arts, Comparative Literature, Drama, Economics, English, Fine Arts, French, Geography, Geology, German, Greek, History, International Relations, Italian, Latin, Latin-American Studies, Linguistics, Mathematics, Music, Philosophy, Physics, Political Science, Psychology, Russian, Sociology, Spanish, Theology, and combinations of these. For other Honours programs, see also the School of Dramatic Art, School of Nursing and School of Social Work.

School of Dramatic Art

The School of Dramatic Art, the first of its kind in Canada, offers three programs leading to careers in the theatre and the allied arts. The Bachelor of Fine Arts Degree, which requires four years to complete, is intended for the student whose primary interest is in professional acting. The Bachelor of Arts Degree with Honours in Drama and English, also a four year program, may qualify a student for admission to courses leading to the Type A certificate in English and Drama at the Ontario Colleges of Education. The Bachelor of Arts Degree, which requires three years to complete, offers a variety of areas of specialization: acting, interpretation, creative dramatics, and so forth. There is a variety of extra curricular activities related to the theatre within the School.

School of Nursing

Two programs are offered for the Registered Nurse — a degree program and a diploma program in public health nursing. The program leading to the degree, Bachelor of Science in Nursing, requires three academic years. This program includes advanced clinical nursing, community nursing, teaching and administration.

The former two-year degree program is being phased out.

A four-year program for the high school graduate leading to the degree Bachelor of Science in Nursing, is based on the biological and social sciences and principles of nursing. Planned concurrent experiences in local hospitals and agencies provide opportunity for

students to apply scientific nursing principles. This is under the guidance and supervision of university faculty. Graduates qualify to write the provincial nurse registration examinations.

School of Social Work

The University of Windsor offers a four year undergraduate program leading to an Honours B.S.W. degree and a graduate program leading to a M.S.W. degree. Both the B.S.W. and the M.S.W. graduates will be prepared to enter professional social work employment at specific levels.

The undergraduate program is organized as a professional sequence and combines studies in the social sciences and the humanities with professional courses. During the fourth year students will be assigned to community agencies for field practice.

The graduate sequence prepares students for the M.S.W. degree. Students completing the B.S.W. requirements can complete the M.S.W. in one year. Candidates having a B.A. with suitable prerequisites in the social sciences and otherwise meeting the requirements for admission to the School of Social Work may be admitted to the B.S.W. program with advanced standing. The School of Social Work will gladly answer any inquiries regarding the programs and admission requirements.

EXTENSION COURSES

For students who are unable to attend day classes during the winter session, the University offers courses in evening and summer school, and intersession. These courses have the same content and standards as those offered in the regular day classes of the winter session. No correspondence courses are offered by this University. For complete programs available through Extension courses see the calendar for "Division of Extension".

PRE-PROFESSIONAL COURSES

Students intending to seek admission to graduate and professional schools should choose their options in accordance with the requirements for admission to these institutions.

a) Teaching

Students intending to enter the teaching profession through the Ontario Colleges of Education may qualify for the Ontario High School Assistant's Certificate either Type B or Type A.

1. Type B. The academic standing for admission to the course in the Ontario Colleges of Education leading to a High School Assistant's Certificate, Type B, is a degree in Arts, Science, Commerce, Applied Science or Household Science from a university and based upon courses approved by the Minister of Education.

A prospective High School teacher must include at least seven full subjects (twenty-one year credits) in at least two High School teaching subjects in his undergraduate curriculum as required by the Ontario Colleges of Education. It is further recommended that he major in a High School teaching subject to qualify for an endorsed certificate.

2. Type A. In the Honours programs, provision is made to satisfy the requirements for admission to the Ontario Colleges of Education for the High School Assistant's Certificate Type A. Some of the programs are approved by agreement with the Minister of Education, others have been designed to satisfy the minimum requirements by the proper choice of options. For specific details, see the note at the beginning of each Honours program.

Graduates in other Honours programs or in General programs who wish to obtain Type A standing in English, English and History, History, Mathematics, Mathematics and Physics, Science, Physics and Chemistry, Physics and Biology, Chemistry and Biology should consult the Registrar.

b) Pre-medicine

A student intending to apply for admission to a School of Medicine is advised to study carefully the requirements of the particular Medical School to which he seeks admission, as there is some variation, both with respect to choice of subjects and number of years' study required for entrance. The student should obtain counselling through the Department of Biology in order to design the most suitable program of study for meeting the usual admission requirements.

c) Pre-dentistry

A student intending to qualify for admission to the First Dental Year at the University of Toronto or the University of Western Ont. should complete the program for First Year Science including Biology 110, Chemistry 111z and Physics 113. Chemistry 103b is also desirable, and English 115 is a recommended Group A option.

d) Pre-medical Technology

A student intending to enter a **school of medical technology** will follow the same program as biology majors.

e) Pre-optometry

A student seeking to qualify for admission to **optometry** is advised to complete First Year Science with the following courses: Biology 110, Chemistry 111, Mathematics 115, Physics 110, Psychology 115, and one course from Group A.

f) Pre-pharmacy

A student intending to qualify for admission to Second Year Pharmacy should complete the program for First Year Science with the following courses: Biology 110, Chemistry 111z and 103b, Mathematics 111, Physics 113, Economics 101 or 102, and one option. (Students completing the program may transfer to Second Year Pharmacy at the University of Toronto, provided the requisite average has been attained).

II. ACADEMIC REGULATIONS

Admission Requirements to FIRST YEAR from Ontario Grade 13
(see also "Regular Admission", p. D-7).

DEGREES AND PROGRAMS	GRADE 13 SUBJECTS REQUIRED FOR SPECIFIC PROGRAMS An average of 60% on a full Grade 13 level program, including the subjects indicated below.
BACHELOR OF ARTS General program with majors in Anthropology, Art History, Asian Studies, Classical Civilization, Communication Arts, Comparative Literature, Drama, Economics, English, Fine Arts, French, Geography, German, Greek, History, Home Economics, Latin, Linguistics, Italian, Philosophy, Political Science, Psychology, Russian, Sociology, Spanish, Theology.	A full Grade 13 level program. (English is required for a major in English or Drama).
General program with major in Music	A full Grade 13 program including Music (Grade II Theory and Grade VIII Practical).
General program with major in Mathematics Honours Economics & Mathematics Honours Mathematics Honours Philosophy & Mathematics	A full Grade 13 level program including Mathematics 1. Math 2 and 3 are strongly recommended, and if lacking, additional hours will be required in First Year. (For Honours Mathematics, Physics is recommended).
Honours Economics	A full Grade 13 level program including Mathematics 1.
Honours Asian Studies Honours Drama and English Honours English Language and Literature Honours English & History Honours English & Spanish Honours English & Russian	A full Grade 13 level program including English.
Honours English and French	A full Grade 13 program including English and French
Honours English and German	A full Grade 13 program including English and German.
Honours English and Latin	A full Grade 13 level program including English and Latin.
Honours English and Philosophy (Language Option)	A full Grade 13 level program including English, & either French or Latin.
Honours French and German	A full Grade 13 level program including French and German.
Honours French and Comparative Literature Honours French and Linguistics Honours French and Spanish Honours French Language & Literature Honours French and Russian	A full Grade 13 level program including French.

DEGREES AND PROGRAMS	GRADE 13 SUBJECTS REQUIRED FOR SPECIFIC PROGRAMS
Honours French and Italian	A full Grade 13 level program including French and Italian.
Honours French & Latin Honours Philosophy & Latin	A full Grade 13 level program including French and Latin.
Honours German and History Honours German and Spanish Honours German and Russian	A full Grade 13 level program including German.
Honours Greek and Latin Honours Latin (Greek or Classical Civilization Option) Honours Latin and Spanish	A full Grade 13 level program including Latin.
Honours Psychology & Science	A full Grade 13 level program including Mathematics 1 and Physics. Math 2 & 3 are strongly recommended, and, if lacking, additional hours will be required in First Year.
Honours Spanish and Italian	A full Grade 13 level program, including Spanish and Italian.
Honours Anthropology Honours Anthropology and Psychology Honours Anthropology and Sociology Honours Art History Honours Classical Studies & Comparative Literature Honours Classical Studies & Linguistics Honours Communication Arts Honours Economics & History Honours Economics & Political Science Honours Economics & Sociology Honours Geography Honours Greek and Theology Honours History Honours History (Economics or Philosophy option) Honours History & Theology Honours International Relations Honours Latin American Studies Honours Philosophy Honours Philosophy & Psychology Honours Political Science Honours Political Science & History Honours Political Science & Sociology Honours Psychology Honours Psychology & Sociology Honours Sociology Honours Theology & Philosophy Honours Theology & Psychology Honours Theology & Sociology	A full Grade 13 level program. (Mathematics 1 is recommended for Psychology programs).
BACHELOR OF FINE ARTS Honours program in Fine Arts Honours program in Dramatic Art	A full Grade 13 level program (A successful audition is required for admission to the Dramatic Art program).

DEGREES AND PROGRAMS	GRADE 13 SUBJECTS REQUIRED FOR SPECIFIC PROGRAMS
BACHELOR OF MUSIC Honours program in History and Theory. Honours program in School Music For both programs we will need your original certificates which will be returned to you promptly by registered mail. Please indicate clearly whether you plan to enter the Honours degree program in Music or the General Bachelor of Arts program with a major in Music.	A full Grade 13 level program, and audition by the Music Department, to consist of performance and a written test on notation and the perception of musical patterns. (See p. E-70).
BACHELOR OF SCIENCE General program with majors in Biology, (appropriate for pre-medicine, pre-dentistry, pre-pharmacy) Honours Biology General program with majors in Chemistry, Geology, Mathematics, Physics and pre-optometry. Honours Biophysics Honours Chemistry Honours Chemistry & Biology Honours Chemistry & Physics Honours Geology Honours Mathematics Honours Physics	See p. E-59 ff.
BACHELOR OF SCIENCE IN NURSING	A full Grade 13 level program, including English; biology; chemistry. (See also p. E-72).
BACHELOR OF SOCIAL WORK Honours program	A full Grade 13 level program.

Grade 13 Mathematics subjects are defined in this calendar as follows: Mathematics 1, Functions and Relations; Mathematics 2, Calculus; Mathematics 3, Algebra.

The following certificates will be accepted in place of the one Grade 13 paper in Music: Grade IV Theory, OR Grade VIII Practical and Grade II Theory. In considering a candidate for admission, the Committee on Admissions will consider total evidence presented, e.g. examinations and grades, principal's recommendation, class standing, aptitude and ability tests, etc. For regulations concerning those who lack full admission requirements, see "Special Admission" (p. D-9).

If an applicant has spent one year in Grade 13 and lacks the minimum admission requirements, he may not be admitted to either the First Year or to the Preliminary Year, but must complete the entrance requirements for First Year by further high school work.

Registration

1. For regulations regarding application, see "Application" (p. D-5).

2. All applicants, when notified of their acceptance, are subject to the general regulations regarding registration (see "Registration", p. D-11).

Examinations and Grading

All students are subject to the general regulations pertaining to examinations (see "Examinations", p. D-12).

The grading for individual subjects in General and Honours programs is as follows:

A+, A, A—	= Excellent
B+, B	= Good
C+, C	= Fair
D+, D	= Pass
F, F—	= Failure

At the regular spring examinations all grades below D are considered failures. If a student is permitted a supplemental examination, it is so indicated.

A limited number of subjects is offered on a pass/non-pass basis.

Term Work

In all subjects, the ratio of term-work marks to examination marks is determined by the teaching staff of the Departments.

Term work in a course will not be credited to a student beyond the year in which the course is taken.

Ranking of Students

Students are ranked A, B, C or D, in order of merit according to the average grade in all subjects prior to supplementals.

REGULATIONS FOR GENERAL PROGRAMS

1. For a degree from the General program a student must satisfy the following requirement: a minimum of one full year (five courses) consisting of courses at the second or third year level and including at least two courses in the major.

2. **Additional Subjects:** A student who has a B average in Second Year may take an additional subject (additional to the prescribed program for that year) in Third Year. Other students may not carry additional subjects except with the written permission of the Dean. In each case the additional subject will be included in calculating the average for the year. (For extra course fee see p. C-10).

3. **Reduced Programs:** No full-time student in the General programs of Arts and Science will be permitted to take less than the prescribed program for his particular year unless for a sufficient reason he has been excused by the Dean. In no case will a full-time student be permitted to register in less than four full courses (see "Registration", page D-11 ff).

4. **Change of Registration:** Once a student has registered, he may not change his course, or add or drop subjects without the written permission of the Dean. (See p. A-9).

Any subject dropped without the permission of the Dean will be regarded as a failure.

Unless there are exceptional reasons, no student will be permitted to begin a new course later than the third week of lectures in the course concerned.

5. **Promotion and Graduation:** For promotion from year to year in the General program, a full-time student must fulfill the following conditions at the spring examinations:

a) Obtain a general average of at least D in all subjects;

b) Obtain a passing grade in at least four full courses;

c) Not fail in more than two full courses (or the equivalent in half courses);

d) A repeating student must obtain passing grades in all his subjects or an overall average of C;

e) A student in Second Year must, in addition to the above conditions, obtain a Grade C or better, in at least three full courses, **or an overall average of Grade C on his work for the year,** by the conclusion of the supplemental examinations.

Any student who does not fulfill the above conditions will be deemed to have failed his year and shall not be entitled to write supplementals but shall lose credit in all subjects of that year in which he has obtained less than B standing.

No student will be admitted to a Bachelor's degree who has not:

a) Obtained at least Grade D on all the prescribed and elective work of his program;

b) Obtained a Grade C or better in at least half of the courses in his senior year, or an overall average of at least Grade C on the work of his senior year;

c) Obtained an average of Grade C in all the courses in his major subject belonging to the Second and Third Years, exclusive of minor requirements.

(See also "General Regulations" re Graduation, p. D-14).

6. Failures

a) Failure of a subject:

To pass a subject a student must obtain a D standing.

If the mark obtained in a subject is an F, a student may be allowed to write a supplemental examination (see below).

A student who has been allowed to write a supplemental examination, and fails to obtain at least a D standing in it, will not be eligible for re-examination without a further year's attendance in the course in which he has failed.

A student who has failed a prescribed course, must repeat that course the year after failure, no matter what subject or subjects must be postponed.

A failed course may be repeated once only.

A student who has failed in the work of the preceding year will not be permitted to take subjects in the following year which depend on the work of that year.

b) Failure of a year:

A student who has failed to meet the requirements for promotion as listed above, has failed his year.

A student who has failed his year is not permitted to write any supplemental or special examinations on the work of that year, but will be allowed to retain credit in subjects in which he has obtained a B grade or better.

A student on probation who fails his year may not repeat the year but will be required to withdraw from the Faculty of Arts and Science.

A student who is required to repeat his year must obtain a passing grade in each individual subject of his approved registration or an overall average of C, at the following spring examinations. If he fails to meet this requirement he will be required to withdraw from the Faculty of Arts and Science.

A full time student in the General program who fails his year and who has already failed a year (either here or elsewhere) will be required to withdraw from the Faculty of Arts and Science.

c) Readmission of students who have been required to withdraw for academic reasons:

Students who have been required to withdraw from the Faculty of Arts and Science after either, 1) failing a probationary year in a General program or 2) failing a second time, will withdraw for one complete year from all regular and extension courses. They may then apply through the Admissions Office for readmission to a General program. The committee may refuse the petition for ad-

mission, admit to part-time day or extension courses only, or admit to full time. Such students if readmitted, will be subject to the regulations applying to repeating students.

Students who have been required to withdraw a second time, will not be eligible for readmission under any conditions.

7. Supplemental Examinations: All supplemental privileges are determined by the Dean in consultation with the Academic Standing Committee.

No student will be allowed to write supplemental examinations in more than two full courses, or the equivalent in half-courses, in any one year.

Supplemental grades will not be included in determination of the year's average.

If a student, who has been granted permission to write a supplemental examination in a subject, either does not write, or fails to obtain a D grade after the examination, he may not write further supplemental or special examinations in the course involved, but must repeat it in its entirety to obtain credit for it.

A student intending to write a supplemental examination must apply to the Registrar's Office by the date set by that office and pay the appropriate fee. (See also p. C-11).

REGULATIONS FOR HONOURS PROGRAMS

1. Admission: For admission to the Second Year of any Honours program, a student must have completed First Year of the General program with the subjects and grades specified for the particular Honours program he desires to enter.

2. Promotion and Failure: For promotion from year to year in an Honours program, a student must obtain at least C average, in the prescribed subjects of the year. Certain programs may have more stringent requirements. A student who does not fulfill these requirements will not be permitted to continue in Honours but will be required to repeat his year or transfer to the General program, subject to the regulations set forth above for the General program.

The year average of Honours students will be calculated as the average of all subjects.

A student who fails to attain D in one subject will be allowed to continue in Honours if his year average is C or better.

3. Comprehensive Examinations: In addition to the regular examinations, various departments have introduced **comprehensive examinations** for Honours students. These examinations, partly oral and partly written, are given at the end of the senior year and cover the broad aspects of the student's Honours program.

Students in the Fourth Year of certain Honours programs are required to write the Graduate Record Examinations for which they will be assessed a fee of $12.50.

4. **Transfer to General Program:** If a student at the end of II Year Honours transfers to the General program, he shall be required to take all subjects of III Year General.

If a student in III Year Honours transfers to the General program he will not be eligible for a degree unless he has completed all the required subjects of the General program.

A student in Fourth Year of an Honours program, who, at the final examinations, fails to obtain the average of C, will not be admitted to an Honours degree but may, on the recommendation of the Committee on Academic Standing, be awarded a degree in the General program provided he has obtained D in each course of his final year. The candidate may write subsequent examinations for the Honours degree.

GRADUATION

For the degree from an Honours program, the final year (or equivalent) must be taken at the University of Windsor.

For a degree from the General program, a student must take a minimum of one full year (five courses) consisting of courses at the Second or Third Year level, and including at least two courses in the major, at the University of Windsor.

For regulations pertaining to graduation, prospective graduates are referred to "General Regulations", p. D-14.

NOTE: The final dates for dropping courses are shown on p. A-9.

III CURRICULUM REQUIREMENTS

GROUP CHART

GROUP A

HUMANITIES

Asian Studies
Classical Civilization
Drama
English
Fine Arts
German 200
Linguistics
Music
Philosophy
Theology

GROUP B

SOCIAL SCIENCES

Anthropology
Communication Arts
Economics
Geography
History
Home Economics
#Philosophy
Political Science
Psychology
Sociology

GROUP C

LANGUAGES

*Asian Studies
French
German
Greek
Italian
Latin
Portuguese
Russian
Spanish

GROUP D‡‡

SCIENCE AND MATHEMATICS

Biology
Botany
Chemistry
§Geography
Geology
Mathematics
Microbiology
Physics
Zoology

NOTE: Courses are coded by number as follows: Preliminary Year level, 001-099; First Year level, 100-199; Second Year level, 200-299; Third Year level, 300-399; Fourth Year level, 400-499.

#Only Philosophy 122, 225, 439 will satisfy for Group B.

*Only Asian Studies 121, 221, 229, 261, 361 will satisfy for Group C.

§Only Geography 100, 220ab, 230y and 231y will satisfy for Group D.

‡‡Students fulfilling the major and minor requirements in Biology, Chemistry, Geology or Physics will be awarded a B.Sc. degree; students fulfilling requirements in Mathematics may be eligible for either the B.A. or B.Sc. depending upon the program selected; majors in other subjects lead to the B.A. degree. See "Details of Subjects" (p. E-82) for specific requirements.

Curriculum requirements:

1. The General program will consist of 16 courses (beyond the level of Grade 13 or Preliminary Year) selected from four groups of subjects:

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A — Humanities
B — Social Sciences
C — Languages
D — Science and Mathematics

</div>

as listed on the previous page.

2. Subjects in each year shall be selected as follows:

I Year — 6 courses from at least 3 groups:

For B.A.: at least 1 from group A
at least 1 from group B
at least 1 from group C or D

For B.Sc.: at least 1 from group A
at least 1 from group B or C
at least 1 from group D

II Year — 5 courses selected from at least 2 groups

III Year — 5 courses selected from at least 2 groups

3. Every program must include:

i) a major consisting of at least 5 courses and not more than 7 in one subject as specified by the department concerned,

ii) a minor consisting of at least 3 courses and not more than 5 in one subject as specified by the department concerned,

iii) electives to make up a total of 16 courses provided that not more than a total of 12 courses are selected from one group.

4. It is recommended that the subject in which a student intends to major be included in the six courses of I Year.

Students intending to major in Mathematics must take Mathematics 113 or 115, 120a or 121a, and 191b in I Year; students intending to major in Economics must take Economics 102; students intending to major in French are advised to take French 114.

5. For specific major and minor requirements for the various departments see "Details of Subjects", p. E-82.

Students intending to enter an honours program must take the subjects of I Year prescribed for admission to the II Year of that honours program.

6. a) Electives will be chosen in consultation with the department in which the student is majoring.

b) In any year a student may choose subjects from another year provided that prerequisites are satisfied and the subject is available without clash of time table.

c) Not more than 8 of the 16 courses may be selected from those numbered less than 200. Of those numbered below 100, no subject may be taken for credit with the exception of beginning language courses.

d) Electives may also be selected from Social Work, and courses outside the Faculty of Arts and Science, subject to the consent of the Faculty, Department or School concerned and the Head of the Department in which the student is majoring. Except for courses in Computer Science, where more than two electives may be taken, not more than **two** such courses may be credited towards a degree.

7. For special programs in Dramatic Art, Fine Arts, Music, Social Work, and Nursing, consult the appropriate description in the University calendar.

Extension students may receive necessary counselling at the Extension Office. If, however, a part-time student is registered in both the day and evening divisions, his counselling will be at the office of the Dean of his Faculty.

GUIDANCE CHART FOR GENERAL PROGRAM B.A. & B.Sc.

The following chart shows the departments in the Faculty of Arts and Science, the subjects in which a major field of concentration is offered, the subjects constituting a major, suggested minor fields to accompany a given major field and suggested options. The last two columns show the subjects constituting a minor and suggested options for those students majoring in another field. The chart is intended as a guide to students and their counsellors in planning a program in the general course.

	STUDENTS MAJORING IN:				MAJORING IN OTHER FIELDS:	
Department	Major Field	Major Reqmts. 5-7 Courses Must Include:	Recommended Minors	Suggested Options	Minor Reqmts. 3-5 Courses Must Include:	Suggested Options
ASIAN STUDIES		7 courses including 115; intermediate Asian language	Economics, Geography, History, Philosophy, Political Science, Sociology, Theology	Open	115	140, 220, 260
BIOLOGY	See p. E-60					
CHEMISTRY	See p. E-62					
CLASSICAL STUDIES	Classical Civilization	Open	Open	Open	Open	Class. Civ. 117, 118, 235, 330, 331
	Greek and Roman History	No major available			Open	Greek and Roman History 210, 221, 225
	Greek	111 or 112			Greek 111 or 112	Greek 104, 111, 112
	Latin	See p. E-98			Latin 104 or 112	Latin 112, 222, 224
COMMUNICATION ARTS		100; at least one of: 205, 210, 215; at least one of 220, 225, 240; two to four other C.A. courses, except 120	Open	Open	100; at least one of: 205, 210, 215; at least one of: 220, 225, 240	Open
DRAMATIC ART		Drama 111	Communication Arts English Fine Art	Dramatic Literature; Fine Arts 114; Music 220	111	Open
ECONOMICS		102, 222, 232	Asian Studies Geography Geology History Psychology Pol. Sc. Mathematics Sociology	Open	102	101 or 102, 262ab, 371, 381
ENGLISH		See p. E-111	Open	Open		

		STUDENTS MAJORING IN:			MAJORING IN OTHER FIELDS:	
Department	Major Field	Major Reqmts. 5-7 Courses Must Include:	Recommended Minors	Suggested Options	Minor Reqmts. 3-5 Courses Must Include:	Suggested Options
FINE ARTS	Fine Arts — Studio	110, 114ab; 3 of: 220, 230, 232, 233	Art History with permission of Department	Open	110	110, 114ab
	Art History	110, 114ab, and at least 3 full courses in consultation with the Department	Fine Arts — Studio, with permission of Department		114ab, and a sequence of at least 2 full courses	114ab, 225ab
FRENCH LANGUAGE AND LITERATURE	French	112, 114 and 200; and 1 of: 221, 222, 223	English History Mathematics Language Theology Latin Nat. Sc.	Open	114 or 200; 2 of: 112, 221, 222, 223	111, 112
	Comp. Lit.	(See p. E-125)			(See p. E-125)	
	Linguist.	101			101	
GEOGRAPHY		100, 130, 220ab, 230y, 231y, 250ab, any regional course			100 and 130	331, 370, any regional course
GEOLOGY		See p. E-64				
GERMANIC AND SLAVIC STUDIES	German	1 of: 111, 112	Open	Open	1 of: 111, 112	Open
	Russian	Consult Dept.			Consult Dept.	
HISPANIC & ITALIAN STUDIES	Italian	113, 220, 370 or 380	English French German History Latin Linguistics Mathematics Nat. Science Soc. Science Theology	Open	113, 220	
	Spanish	113 or 116; 232 and 242			113 or 116; 232 and 242	Open
HISTORY		115 plus 2 in each area (See p. E-140)	Asian Studies English Economics Geography Languages Philosophy Psychology Sociology Pol. Sc. Theology	Open	115 plus 1 in each area (See p. E-140)	Open
HOME ECONOMICS		6 or 7 courses including 110ab, 226, 227, and either 220 or 223	Biology Comm. Arts Fine Arts English History Languages	Open	Open	Open
MATHE-MATICS		See p. E-65				

STUDENTS MAJORING IN:					MAJORING IN OTHER FIELDS:	
Department	Major Field	Major Reqmts. 5-7 Courses Must Include:	Recommended Minors	Suggested Options	Minor Reqmts. 3-5 Courses Must Include:	Suggested Options
MUSIC		111, 118; 2 of: 110y, 210y, 310y, and at least three of 203, 221, 228, 303, 331, 338	Open	Physics 180	111, 118, and at least one of 221, 228, 331, 338	120, 220; 111, 118, 203, 221, 228, 303, 331, 338
PHILO-SOPHY		115 or 116 or 122; and 2 of 223, 224, 327, 331	Open	Open	Phil. 115 or 116 or 122 recommended	Open
PHYSICS		See p. E-67				
POLITICAL SCIENCE		100, 110	Economics History Philosophy Sociology	Economics History Philosophy Sociology	100	100, 110
PSYCHOLOGY		115, 228	Mathematics Nat. Sc. English Fine Art Social Sc.	Philosophy History Theology Fine Art	115	115, 222, 226ab, 231
SOCIOLOGY AND ANTHROPOL-OGY	Sociology	100, 335	Anthro. Psychology Pol. Sc. Economics Sociology Philosophy Linguistics	C.S. 100 Phil. 436	100	Open
	Anthrop.	6 or 7 courses including 110, 210, 212		Phil. 438 Psych. 340c	110	Open
THEOLOGY		1 from each of the following groups: (i) 100, 341, 342, 343; (ii) 270, 271; (iii) 200, 201, 320, 321, 344	Asian Studies Philosophy History English Social Action Sociology Psychology Language	Open	Open	Open

THE PRELIMINARY YEAR

Admission Requirements: see p. D-7.

Course Programs for Preliminary Year

a) **Arts:**

English 110 or 115, or one option from Group A. Library Orientation.

Elementary or Intermediate language course, or 1st year language course if student has Grade XIII equivalent.

Two options

Two of: Chemistry 001, Physics 101, Biology 101, Geology 119, Geography 100, Physics 180, Mathematics 010, Mathematics 020, Mathematics 030, Mathematics 190, option.

Students who intend to major in Mathematics in the Arts Program, must choose Mathematics 010 and 020. It is recommended that they choose Mathematics 030 as their option.

Students planning to major in Music in the general or Honours Bachelor of Music program should take Physics 180 and two music courses as options, the latter to be determined in consultation with the Department.

This prepares the student for admission to First Year Arts, leading to General and Honours B.A. degrees; to the Faculty of Physical and Health Education leading to an Honours B.P.H.E. degree; and to the School of Social Work leading to the B.S.W. degree.

Students planning to enter Honours Psychology and Science should take Preliminary Science (see below). Students planning to enter other Honours programs should consult the appropriate program for the prerequisites required.

A student in Preliminary Year who has obtained standing in a First Year subject in his major field is allowed to fulfill the major requirements for the Arts course by either (a) completing five additional courses in his major field, or (b) completing four additional courses in his major field, plus one option.

b) **Science:**

English 110 or 115 or option from Group A, B or C. (see page E-16). Library Orientation.

Mathematics 010

Any four of: Chemistry 001, Physics 010, Geology 100, Mathematics 020, Mathematics 030, option.

This prepares for admission to First Year Arts, Science, Social Work, and Physical and Health Education. For admission to First Year Science and Social Work a student must have an overall average of C.

c) **Nursing:**

English 110 or 115; Library Orientation
One of: Mathematics 010, 020, 030*
Chemistry 001
Biology 110
Physics 010 or option

*Option with permission of the School of Nursing.

For admission to First Year of the B.Sc.N. program a student must have an overall average of C.

d) **Engineering:**

English 110 or 115 or option from Group A, B, or C (see p. E-16);
Mathematics 010, Mathematics 020, Mathematics 030;
Any two of: Chemistry 001, Physics 010, Geology 100;
Library Orientation.

For admission to First Year Engineering, a student must have an overall average of C.

e) **Business Administration:**

English 110 or 115; Library Orientation
Mathematics 030
Four options (to be selected with the approval of the Faculty of Business Administration; it is recommended that one of the options be Mathematics 020).

The above program prepares the student for admission to the First Year of the Honours Bachelor of Commerce program.

f) **Computer Science:**

English 110 or 115 or option from Group A, B, or C (see p. E-16)
Mathematics 010, 020
Three options (Mathematics 030 is strongly recommended).

This prepares for admission to the First Year of the Computer Science program provided the student has an average of "C".

NOTE: Students of the Preliminary Year who successfully complete Library Orientation are not required to repeat this subject in First Year.

BACHELOR OF ARTS

GENERAL PROGRAM

Admission requirements: An average of 60% on a full Grade 13 level program; OR equivalent Preliminary Year. (See also General Admission Requirements, p. D-6). A student wishing to major in English or Drama must have English; a student wishing to major in Mathematics must have Mathematics 1; (Mathematics 2 and 3 are strongly recommended, and if lacking, additional hours will be required in First Year); a student wishing to major in Music must have Grade VIII Practical and Grade II Theory, or consent of the Department. Grade 13 Music does not fulfill this requirement. For transfer credit in Art from other institutions, see p. E-116.

First Year

> Six courses from at least three groups as shown on the "Group Chart" (p. E-16), including:
> > At least 1 from group A
> > At least 1 from group B
> > At least 1 from group C or D

Second Year

> Five courses from at least two groups.

Third Year

> Five courses from at least two groups.

Every program must include a **major** of at least five courses and not more than seven in one subject; a **minor** of at least three courses and not more than five in one subject; and **electives** to a total of sixteen courses, provided that not more than twelve courses are taken from one group. For specific major and minor requirements for the various departments, see "Details of Subjects" (p. E-82 ff) or "Guidance Chart" (p. E-19). For other regulations governing choice of courses, see "Curriculum Requirements" (p. E-16).

NOTE: Students of the Preliminary Year who successfully complete Library Orientation are not required to repeat this subject in First Year.

HONOURS ANTHROPOLOGY

Admission requirements: A full Grade 13 level program; or equivalent "Preliminary Year".

For course descriptions, see p. E-181.

First Year:

Anthropology 110; one course from Group A; one course from Group C or D; three options; Library Orientation.

For admission to Second Year Honours, an overall average of B is required, and B in Anthropology.

Second Year Honours

Anthropology 210, 212, and one other Anthropology course; two options.

Third Year Honours

Two area half courses; Anthropology 250, and one other Anthropology course; two options.

Fourth Year Honours

Anthropology 410 or 490; one other Anthropology course; three options.

Note:

In each year students must choose their courses, including options, in consultation with the Department. Most options are expected also to be relevant to the major. Students are expected to abide by all Departmental regulations with respect to prerequisites.

HONOURS ANTHROPOLOGY AND PSYCHOLOGY

Admission requirements: A full Grade 13 level program; OR equivalent Preliminary Year.

For course descriptions, see pp. E-170 and E-181.

First Year

Anthropology 110; Psychology 115; one course from Group A; one course from Group C or D; two options; Library Orientation.

For admission to Second Year Honours, an overall average of B is required, and B in each of Anthropology 110 and Psychology 115.

Second Year Honours

Anthropology 210, 212; Psychology 222, 228; one option.

Third Year Honours

Anthropology 250, two area half-courses; Psychology 329, 334; one option.

Fourth Year Honours

Anthropology 385, and either 410 or 490; one other Anthropology; Psychology 344, and one of: 231, 353, 455; one option.

HONOURS ANTHROPOLOGY AND SOCIOLOGY

Admission requirements: A full Grade 13 level program; or equivalent Preliminary Year.

For course descriptions, see pp. E-177 and E-181.

First Year
Anthropology 110, Sociology 100, one course from Group A, one course from Group C or D, two options; Library Orientation.

For admission to Second Year Honours an overall average of B is required, and B in each of Anthropology 110, and Sociology 100.

Second Year Honours
Anthropology 210, 212; three full-year (or equivalent) courses in Sociology at the 200-level; one option.

Third Year Honours
Anthropology 250; two area half courses in Anthropology; one other course in Anthropology at the 300-level; Sociology 327, 335; one option.

Fourth Year Honours
Anthropology 410 or 490; one other Anthropology course; Sociology 410, 411; one option.

HONOURS ART HISTORY

Admission requirements: A full Grade 13 level program; or equivalent Preliminary Year. For transfer credit from other institutions, see p. E-116.

(For Bachelor of Fine Arts program in Fine Arts, see p. E-69).

For course descriptions, see p. E-116.

Students are expected to abide by all Departmental regulations with respect to prerequisites.

First Year
Fine Art 110, 114ab; one course from Group B; one course from Group C; two options; Library Orientation.

Second Year
One Fine Arts studio course; one course from Group C; one course from History 257, 336, 350, 352, or one from Roman History 221, 225; two full courses in Art History.

Third Year
One Fine Arts studio course; one course from History 257, 336, 350, 352, or from Roman History 221, 225; two and a half courses in Art History; one option.

Fourth Year
One course from History 257, 336, 350, 352; two and a half courses in Art History, including Fine Arts 453c and 455c; one option.

HONOURS ASIAN STUDIES

Admission requirements: A full Grade 13 level program, including English; or equivalent Preliminary Year.

For course descriptions, see p. E-82.

First Year

Asian Studies 115, and five other courses in consultation with the Department; Library Orientation.

Second Year Honours

Five courses, in consultation with the Department, at least three of which should be in Asian Studies including one Asian language or acceptable substitute.

Third Year Honours

Five courses in consultation with the Department including Asian Studies 319 and an Asian language.

Fourth Year Honours

Five courses in consultation with the Department, including Asian Studies 419.

HONOURS CLASSICAL STUDIES AND COMPARATIVE LITERATURE

Admission requirements: A full Grade 13 level program; OR equivalent Preliminary Year.

For course descriptions, see pp. E-96 and E-125.

First Year

Comparative Literature 210; one of the following: Greek 104, Latin 104, Latin 112, Classical Civilization 117 or 118; one course from Group A; one course from Group B or D; 2 options; Library Orientation.

Second Year

Any three courses in Comparative Literature (other than those also listed as courses in Classical Studies); two courses chosen from Greek, Latin or Classical Civilization; one option.

Third Year

Any two courses in Comparative Literature (other than those also listed as courses in Classical Studies); two courses chosen from Greek, Latin or Classical Civilization; one option.

Fourth Year

Any two courses in Comparative Literature (other than those also listed as courses in Classical Studies); two courses chosen from Greek, Latin or Classical Civilization; one option.

HONOURS CLASSICAL STUDIES AND LINGUISTICS

Admission requirements: A full Grade 13 level program; OR equivalent Preliminary Year.

For course descriptions, see pp. E-96 and E-125.

First Year

Linguistics 101; one course from Group B or D; Greek 104 and one of Latin 104 or 112; two options; Library Orientation.

Second Year

Linguistics 201 or 301; two of Linguistics 305, Philosophy 200, English 275, 280; two Greek or Latin courses.

Third Year

Anthropology 351 or Psychology 344; one of Spanish 315, Russian 345, German 363, French 320; two Greek or Latin courses; one option.

Fourth Year

Philosophy 400; one full course in Linguistics program; two Greek or Latin courses; one option.

HONOURS COMMUNICATION ARTS

Admission requirements: A full Grade 13 level program, or equivalent Preliminary Year.

For course descriptions, see p. E-100.

First Year

Communication Arts 100, one course from Group A; one course from Group C or D; three options; Library Orientation.

For admission to Second Year Honours, an overall average of C is required, and a B in Communication Arts 100.

Second Year Honours

One of either C.A. 210 or 215; two of C.A. 220, 225, 240; one other Communication Arts course; two options.

Third Year Honours

One of either C.A. 330 or 335; one additional 300 level C.A. course; one other Communication Arts course; two options.

Fourth Year Honours

Three Communication Arts 400 level courses; two options (one of which may be a Communication Arts 300 level course).

NOTE:

(1) In each year, students must choose their courses, including options, in consultation with the Department. Most options are expected to be relevant to the major.

(2) In one of his fourth year courses, the Honours student is required to submit a major research project which is in addition to the normal study requirement of that course. The presentation of the research may be made in any appropriate medium.

HONOURS DRAMA AND ENGLISH

Admission requirements: A full Grade 13 level program, including English; OR equivalent Preliminary Year.

By the proper choice of subjects a student completing the following program with a B average may qualify for admission to courses leading to the Type A certificate in English and Drama at the Ontario Colleges of Education.

For course descriptions, see pp. E-103 and E-111.

First Year
English 110 or 115; Drama 101, 111; one course from Group B; one course from Group C or D; one option; Library Orientation.

For admission to Second Year Honours, an overall average of at least C is required, with at least B in English and Drama.

Second Year Honours
Drama 208 and one of 202, 205 or 209; one English core course and one other English course; two options.

Third Year Honours
Drama 305; either Drama 303 or 309; two English core courses and one other English course; one option.

Fourth Year Honours
One or two Drama courses from Drama 403, 405, 409, 425; two or three English courses, of which at least one is to be a studies course (two if the student is taking nine Drama courses, three if taking eight Drama courses).

Options may be taken in Drama at the discretion of the Director of the School of Dramatic Art.

HONOURS ECONOMICS

Admission requirements: A full Grade 13 level program, including Mathematics A OR equivalent "Preliminary Year". This course prepares the student to proceed to a Type A Certificate in Economics at the Ontario Colleges of Education.

For course descriptions, see p. E-107.

First Year
Economics 102*; Political Science 100; Mathematics 110 or Language 112 or Science**; one course from Group A; two options; Library Orientation.

For admission to Second Year Honours, an overall average of C is required, and B in Economics 102.

Second Year Honours
Economics 212ab or 218; Economics 222, 232, 262ab; Mathematics 120a and 130b, or option**; Political Science 110 or Business Administration 115.

Third Year Honours
Four of: Economics 300, 318, 340, 352ab, 360ab, 372, 382; Mathematics 321 or option**; one option.

Fourth Year Honours
Economics 422, 432, 460; two of: Economics 412, 416, 420, 440, 452ab, 490, or any Third Year course in Economics not previously taken; one option.

*Students who have taken Economics 101 may be accepted into Second Year Honours with permission of the Head of the Department.

**Option other than Mathematics may be selected only with the permission of the Head of the Department.

HONOURS ECONOMICS AND HISTORY

Admission requirements: A full Grade 13 level program; OR equivalent "Preliminary Year". This program includes sufficient credits to satisfy the requirements for admission to courses leading to the Type A Certificates in Economics or History at the Ontario Colleges of Education.

For course descriptions, see pp. E-107 and E-140.

First Year

Economics 102*; History 115; Political Science 100; Mathematics 110 or Language 112 or Science; two options; Library Orientation.

For admission to Second Year Honours, an overall average of at least C is required with at least B in each of Economics 102 and History 115.

Second Year Honours

Economics 212ab or option; Economics 222, 232, 262ab; two History courses numbered in the 200's.

Third Year Honours

Two of: Economics 300, 318, 340, 352ab, 360ab, 372, 382; three History courses numbered in the 300's; one option.

Fourth Year Honours

Economics 460; one of: Economics 412, 416, 420, 422, 432, 440, 452ab, 490; three History courses numbered in the 400's; one option.

*Students who have taken Economics 101 may be accepted into Second Year Honours with permission of the Head of the Department.

HONOURS ECONOMICS AND MATHEMATICS

Admission requirements: A full Grade 13 level program, including Mathematics 1. It is recommended that all 3 Mathematics subjects of Grade 13 be taken; if any are lacking extra lectures will be required in First Year. OR equivalent "Preliminary Year".

For course descriptions, see pp. E-107 and E-146.

First Year

Economics 102, Mathematics 113 or 115; 120a or 121a; 191b; C.S. 100; one subject from Group A; one option; Library Orientation.

For admission to Second Year Honours, an overall average of at least C is required, and at least B in Economics and in Mathematics.

Second Year Honours

Economics 222, 232; Mathematics 210, 211, 220, 240a, 253c.

Third Year Honours

Economics 204b, 302ab; two of: Economics 340, 352ab, 360ab, 372, 382; Mathematics 340ab, 350, 381c; one of: Mathematics 452b, 454b.

Fourth Year Honours

Economics 460; Mathematics 450; and **either** two of: Economics 420, 422, 432, 440, 490, 540, and two full courses from Mathematics 290b, 440, 450, 452b, 454b, 480; **or** three of the specified Economics courses and one of the Mathematics courses.

HONOURS ECONOMICS AND POLITICAL SCIENCE

Admission requirements: A full Grade 13 level program; OR equivalent "Preliminary Year".

By the proper choice of subjects, a student completing the following program with a B average, may qualify for admission to courses leading to Type A Certificates in Economics and Political Science, in Economics, or in Political Science, at the Ontario Colleges of Education.

For course descriptions, see pp. E-107 and E-166.

First Year

Economics 102*; Political Science 100 and 110; Mathematics 110 or Language 112 or Science**; one course from Group A; one option; Library Orientation.

For admission to Second Year Honours, an overall average of C is required, with B in Economics 102 or Economics 101*, and in Political Science 100 and 110. One of the Political Science courses of II, III or IV Year must be one of Political Science 250, 350, 355, 450.

Second Year Honours

Economics 212ab or Political Science 270ab; Economics 222, 232; any two Political Science courses at the 200-level; Economics 262ab or option.

Third Year Honours

Six courses (one of which must be Economics) from those offered in the third year in Economics and/or Political Science (one fourth year course may be substituted for a third year course, with the consent of the Departments).

Fourth Year Honours

Economics 460; four courses from those offered in the fourth year in Economics and/or Political Science (one third year course may be substituted for a fourth year course, with the consent of the Departments); one option.

*Students who have taken Economics 101 may be accepted into Second Year Honours with permission of the Head of the Department.

**Students who intend to emphasize Economics in their program are advised to select Mathematics 110.

HONOURS ECONOMICS AND SOCIOLOGY

Admission requirements: A full Grade 13 level program; OR equivalent "Preliminary Year".

By the proper choice of subjects, a student completing the following program with B average may qualify for admission to courses leading to the Type A Certificate in Economics at the Ontario Colleges of Education.

For course descriptions, see pp. E-107 and E-177.

First Year

Economics 102*; Sociology 100; Mathematics 110 or Language 112 or Science**; Anthropology 110; one course from Group A; one option; Library Orientation.

For admission to Second Year Honours, an overall average of C is required, with B in each of Economics 102, Sociology 100, and Anthropology 110.

Second Year Honours

Economics 212ab or 218; Economics 222, 232, 262ab; two full year courses (or equivalent) in Sociology at the 200 level.

Third Year Honours

Three of: Economics 300, 318, 340, 352ab, 360ab, 372, 382; Sociology 335; two full year courses (or equivalent) in Sociology at the 300 level.

Fourth Year Honours

Economics 460; two of: Economics 412, 416, 420, 422, 432, 440, 452ab, 490; Sociology 410, 411; one option.

*Students who have taken Economics 101 may be accepted into Second Year Honours with permission of the Head of the Department.

**Students who intend to emphasize Economics in their program are advised to select Mathematics 110.

HONOURS ENGLISH LANGUAGE AND LITERATURE

Admission requirements: A full Grade 13 level program, including English; OR equivalent Preliminary Year.

This program is accepted by the Ontario Department of Education as academic qualification for admission to High School Assistant's Certificate, Type A, English.

Honours English Language and Literature students are required to take 10 English courses (including English 115). These must satisfy the Group requirements as outlined below; an 11th or 12th course may be chosen from all courses offered by the Department.

For course descriptions, see p. E-111.

First Year

English 110 or 115; History 224 or option; one course from Group B; one course from Group C or D; two options; Library Orientation.

For admission to Second Year Honours, an overall average of at least C is required, with at least B in English 115.

Second Year Honours

Three English courses, at least two from core groups (English 200 is recommended); and EITHER two options and an additional English course, OR three options.

Third Year Honours

Three English courses, at least one from core groups; one option and an additional English course, or two options.

Fourth Year Honours

Three English courses, at least one of which is a studies course; core requirements should be completed as necessary; two options.

CORE COURSES

Group I:
- 205 (Chaucer)
- 210 (Renaissance)
- 215 (Shakespeare)
- 220 (Restoration and 18th Century)

Group II:
- 225 (Romantics)
- 230 (Victorian)
- 240 (Transition)
- 245 (North American 19th Century)

Group III:
- 255 (Modern)
- 260 (Modern Canadian)
- 265 (Modern American)

Group IV:
- 275 (Linguistics)
- 280 (History of the English Language)

HONOURS ENGLISH AND FRENCH

Admission requirements: A full Grade 13 level program, including English and French; OR equivalent Preliminary Year.

By the proper choice of subjects, a student completing the following program with a B average may qualify for admission to courses leading to the Type A certificate in English and French at the Ontario Colleges of Education.

For course descriptions, see pp. E-111 and E-121.

First Year
> English 110 or 115; French 112; one course from Group B or D; three options, or two options and French 114; Library Orientation.

For admission to Second Year Honours, an overall average of at least C is required, with at least B in English and in French.

Second Year Honours
> Two English core courses and one other course; French 114 or 200; two of French 221, 222, 223.

Third Year Honours
> One English core course and one other course; French 200 or 300; one of French 221, 222, 223; two options.

Fourth Year Honours
> **Five courses, selected as follows:**
> Two or three English courses, at least one studies (two if the student is taking nine French courses; three if he is taking only eight French courses); French 300 or option; one full course credit in French.

Options may be taken in French at the discretion of the Head of the French Department.

Students excused French 112 will take one more full course credit in French literature, and each year may take one literature course a year earlier than is here set out.

Students excused French 114 will take one linguistic training course beyond 300, and may take each linguistic training course a year earlier than is here set out.

HONOURS ENGLISH AND GERMAN

Admission requirements: A full Grade 13 level program, including English and German; OR equivalent Preliminary Year.

This program is accepted by the Ontario Department of Education as academic qualification for the High School Assistant's Certificate, Type A, English and German.

For course descriptions, see pp. E-111 and E-133.

First Year
> English 110 or 115; German 111, or 112; one course from Group B or D; three options; Library Orientation.

For admission to Second Year Honours, an overall average of C is required, with B in English and in German.

Second Year Honours
> Two English core courses and one other English course; any three courses in Germanic Studies.

Third Year Honours
> One English core course and one other English course; any three courses in Germanic Studies.

Fourth Year Honours
> Two or three English courses, at least one studies; any two or three courses in Germanic Studies.

HONOURS ENGLISH AND HISTORY

Admission Requirements: A full Grade 13 level program, including English; OR equivalent Preliminary Year.

This program is accepted by the Ontario Department of Education as academic qualification for the High School Assistant's Certificate, Type A, English and History.

For course descriptions, see pp. E-111 and E-140.

First Year

English 110 or 115; History 115; one course from Group B; one course from Group C or D; two options; Library Orientation.

For admission to Second Year Honours, an overall average of at least C is required, and B in each of English, and History.

Second Year Honours

Two English core courses and one other English course; two History courses numbered in the 200's.

Third Year Honours

One English core course and one other English course; three History courses numbered in the 300's.

Fourth Year Honours

Two or three English courses, at least one studies (two if the student is taking nine History courses; three if he is taking only eight History courses); two or three History courses numbered in the 400's.

HONOURS ENGLISH AND LATIN

Admission requirements: A full Grade 13 level program including English and Latin; OR equivalent Preliminary Year.

By the proper choice of subjects, a student completing the following program with a B average, may qualify for admission to courses leading to the Type A Certificate in English and Latin at the Ontario Colleges of Education.

For course descriptions, see pp. E-98 and E-111.

First Year

English 110 or 115; Latin 104 or 112; French 112 or another language; one course from Group B; two options; Library Orientation.

For admission to Second Year Honours, an overall average of at least C is required, and B in each of English 115 and Latin 104 or 112.

Second Year Honours

Two English core courses and one other English course; two Latin courses in the 200's or 300's; Theology or option.

Third Year Honours

One English core course and one other English course; two full courses and a half course in Latin; Roman History 221 or 225.

Fourth Year Honours

Three English courses, at least one studies; Latin 440, and one other Latin course.

HONOURS ENGLISH AND PHILOSOPHY (Language Option)

Admission requirements: A full Grade 13 level program, including English, and either French or Latin; OR equivalent Preliminary Year.

This program is accepted by the Ontario Department of Education as academic qualification for admission to High School Assistant's Certificate, Type A, English.

For course descriptions, see pp. E-111 and E-159.

First Year

English 110 or 115; Philosophy 115 or 116; French 112 or Latin 112; Psychology 115; two options; Library Orientation.

For admission to Second Year Honours, an overall average of at least C is required, and B in each of English 115, Language 112 and Philosophy 115 or 116.

Second Year Honours

Two English core courses and one other English course; Philosophy 224; and either two Second Year French courses, or Latin 222, 225.

Third Year Honours

One English core course and one other English course; Philosophy 334, 436; Latin 227 or a French course in the 300's.

Fourth Year Honours

Three English courses, at least one studies; Philosophy 331; Latin 450 or a French course in the 400's.

HONOURS ENGLISH AND RUSSIAN

Admission requirements: A full Grade 13 level program, including English; OR equivalent Preliminary Year.

For course descriptions, see pp. E-111 and E-135.

First Year

English 110 or 115; Russian 040 (or Russian 111 or 130, if the student has Grade 13 standing in Russian); one course from Group B or D; three options; Library Orientation.

Second Year Honours

Two English core courses and one other English course; Russian 111 (or another Russian course if Russian 111 has been taken in First Year); Russian 130 or 230; option.

Third Year Honours

One English core course and one other English course; Russian 337 or 338 and any other Russian course; option.

Fourth Year Honours

Two or three English courses, at least one studies (two if the student is taking eight Russian courses, three if he is taking only seven Russian courses); any two or three senior Russian courses.

HONOURS ENGLISH AND SPANISH

Admission requirements: A full Grade 13 level program, including English; OR equivalent Preliminary Year.

This program is accepted by the Ontario Department of Education as academic qualification for the High School Assistant's Certificate, Type A, English and Spanish.

For course descriptions, see pp. E-111 and E-138.

First Year

English 110 or 115; Spanish 113 or 116; Latin 112 or another language; one course from Group B or D; two options; Library Orientation.

For admission to Second Year Honours, an overall average of at least C is required, and at least B in each of English and Spanish.

Second Year Honours

Two English core courses and one other English course; Spanish 232 and 242; one option.

Third Year Honours

One English core course and one other English course; Spanish 310y, 311y; one other III Year Spanish course; one option.

Fourth Year Honours

Two English courses, at least one studies; Spanish 424 and one other III or IV Year Spanish course; option, which may be additional English or Spanish course.

HONOURS FRENCH LANGUAGE AND LITERATURE

Admission requirements: A full Grade 13 level program, including French; OR equivalent Preliminary Year.

This program is accepted by the Ontario Department of Education as academic qualification for the High School Assistant's Certificate, Type A, in French.

For course descriptions, see p. E-121.

First Year

French 112 and 114; one course from Group A; one course from Group B or D; two options; Library Orientation.

For admission to Second Year Honours, an overall average of at least C is required, and at least B in French 112 and 114.

Second Year Honours

French 200, 221, 222, 223; two options.

Third Year Honours

Two full course credits in French, or French 300 and one full course credit in French; three options, of which one may be French.

Fourth Year Honours

Two full course credits in French, or French 300 and one full course credit in French; three options, of which one may be in French.

Students excused French 112 will take one more full course credit in French literature, and each year may take one literature course a year earlier than is here set out. Students excused French 114 will take one linguistic training course beyond 300 and may take each linguistic training course a year earlier than is here set out. Further options may be taken in French Studies at the discretion of the Head of the Department. Students deciding to enter this program after the First Year may take 114 in the Second Year, 200 in the Third Year and 300 in the Fourth Year. They will thus have one less option after the First Year. With the permission of the Department students may substitute for French 221, 222, 223, half courses covering the same area.

HONOURS FRENCH AND COMPARATIVE LITERATURE

Admission requirements: A full Grade 13 level program, including French; OR equivalent Preliminary Year.

For course descriptions, see pp. E-121 and E-125.

First Year
Comparative Literature 210; one course from Group B or D; French 114 or 200; French 112; Linguistics 101; Library Orientation. One option.

Second Year
Any 2 courses in the Comparative Literature program (other than those listed also as French courses); French 200; two of French 221, 222, 223; one language option.

Third Year
Any 3 courses in the Comparative Literature program (other than those listed also as French courses); French 300; one of French 221, 222, 223; one option.

Fourth Year
Any 2 courses in the Comparative Literature program (other than those listed also as French courses); 2 full courses in French; one option.

A student pursuing a combined Honours Program in Comparative Literature is strongly urged to select courses for his minor which will provide him with a knowledge of a least ONE language other than English and the student's native tongue.

HONOURS FRENCH AND GERMAN

Admission requirements: A full Grade 13 level program, including French and German; OR equivalent Preliminary Year.

This program is accepted by the Ontario Department of Education as academic qualification for the High School Assistant's Certificate Type A, French and German, provided that German 363 is included.

For course descriptions, see pp. E-121 and E-133.

First Year
French 112; German 111, or 112; one course from Group A; one course from Group B or D; two options, or one option and French 114; Library Orientation.

For admission to Second Year Honours, an overall average of at least C is required, and at least B in each of French and German.

Second Year
French 114 or 200; two of French 221, 222, 223; and three German courses.

Third Year
French 200 or 300; one of French 221, 222, 223; any two or three German courses; two options.

Fourth Year
French 300 or option; one full course credit in French; any two German courses; one option.

Options may be taken in French at the discretion of the Head of the Department of French.

Students excused French 112 will take one more full course credit in French literature, and each year take one literature course a year earlier than is here set out.

Students excused French 114 will take one linguistic training course beyond 300, and may take each linguistic training course a year earlier than is here set out.

HONOURS FRENCH AND ITALIAN

Admission Requirements: A full Grade 13 level program including French and Italian OR equivalent Preliminary Year.
For course descriptions, see pp. E-121 and E-137.

First Year

French 112; Italian 113; one course from Group A; one course from group B or D; two options; Library Orientation.

Second Year

French 114 or 200; two of French 221, 222, 223, Italian 220 and another Italian course; one option.

Third Year

French 200 or 300; one of French 221, 222, 223; Italian 370 or 380 and one other Italian course; one option.

Fourth Year

French 300 or option; one full course credit in French; any two Third or Fourth year Italian courses; one option.

HONOURS FRENCH AND LATIN

Admission requirements: A full Grade 13 level program, including French and Latin; OR equivalent Preliminary Year. Above average standing in Latin 104 may compensate for the Grade 13 Latin requirement.

By the proper choice of subjects, a student completing the following program with a B average, may qualify for admission to courses leading to the Type A Certificate in French and Latin at the Ontario Colleges of Education.

For course descriptions, see pp. E-98 and E-121.

First Year

French 112; Latin 112 or 104; one course from Group A; one course from Group B or D; two options or one option and French 114; Library Orientation.

For admission to Second Year Honours, an overall average of at least C is required, and at least B in each of French 112 and Latin 112 or 104.

Second Year Honours

French 114 or 200; two of French 221, 222, 223; two Latin courses in the 200's or 300's.

Third Year Honours

French 200 or 300; one of French 221, 222, 223; two full courses and one half course in Latin; one option.

Fourth Year Honours

French 300 or option; one full course credit in French; two Latin courses; one option.

Students excused French 112 will take one more full course credit in French literature, and each year may take one literature course a year earlier than is here set out.

Students excused French 114 will take one linguistic training course beyond 300, and may take each linguistic training course a year earlier than is here set out.

Options may be taken in French at the discretion of the Head of the French Department.

HONOURS FRENCH AND LINGUISTICS

Admission requirements: A full Grade 13 level program, including French; OR equivalent Preliminary Year.

For course descriptions, see pp. E-121 and E-125.

First Year

French 112; Linguistics 101; one course from Group A; one course from group B or D; two options, or one option and French 114; Library Orientation.

Second Year

French 114 or 200; two of French 221, 222, 223; Linguistics 201; Philosophy 200; one of English 275, English 280 or linguistic option.

Third Year

French 200 or 300; one of French 221, 222, 223; Linguistics 301 or 305; Anthropology 351 or Psychology 344; two linguistic options.

Fourth Year

French 300 or option; one full course credit in French; Philosophy of language 400; one of French 320, Italian 311, Spanish 315, Russian 345 or German 363; one linguistic option.

A student pursuing a combined Honours program in Linguistics is strongly urged to select courses for his minor which will provide him with a knowledge of at least ONE language other than English and the student's native tongue.

HONOURS FRENCH AND RUSSIAN

Admission requirements: A full Grade 13 level program, including French; OR equivalent Preliminary Year.

For course descriptions, see pp. E-121 and E-135.

First Year

French 112; Russian 040 (or Russian 111 or 130, if the student has Grade 13 standing in Russian); one course from Group A; one course from Group B or D; two options, or one option and French 114; Library Orientation.

Second Year

French 114 or 200; two of French 221, 222, 223; Russian 111 or 130 (or another Russian course, if Russian 111 or 130 has been taken in First year); Russian 230.

Third Year

French 200 or 300; one of French 221, 222, 223; Russian 338 and any other Russian course; one option.

Fourth Year

French 300 or option; one full course in French; any two senior Russian courses; one option.

Options may be taken in French at the discretion of the Head of the Department of French.

Students excused French 112 will take one linguistic training course beyond 300, and may take each linguistic training course a year earlier than is set out.

HONOURS FRENCH AND SPANISH

Admission requirements: A full Grade 13 level program, including French (Latin is recommended); OR equivalent Preliminary Year.

By the proper choice of subjects, a student completing the following program with a B average, may qualify for admission to courses leading to the Type A Certificate in French and Spanish at the Ontario Colleges of Education.

For course descriptions, see pp. E-121 and E-138.

First Year

French 112; Spanish 113 or 116; one course from Group A; one course from Group B or D; two options or one option and French 114; Library Orientation.

For admission to Second Year Honours, an overall average of at least C is required, and at least B in each of French and Spanish.

Second Year

French 114 or 200; two of French 221, 222, 223; Spanish 232, 242; one option.

Third Year

French 200 or 300; one of French 221, 222, 223; Spanish 310y, 311y; one other Third Year Spanish course; one option.

Fourth Year

French 300 or option; one full course credit in French; Spanish 424; one other Third or Fourth Year Spanish course; one option.

Options should be chosen in consultation with either Department. They may be taken in French at the discretion of the Head of the French Department.

Students excused French 112 will take one more full course credit in French literature, and each year may take one literature course a year earlier than is here set out.

Students excused French 114 will take one linguistic training course beyond 300, and may take each linguistic training course a year earlier than is here set out.

HONOURS GEOGRAPHY

Admission requirements: A full Grade 13 level program; OR equivalent Preliminary Year.

By the proper choice of subjects, a student completing the following program with a B average, may qualify for admission to courses leading to the Type **A** Certificate in Geography, at the Ontario Colleges of Education.

For course descriptions, see p. E-126.

First Year

Geography 100 and 130; one course from Group A or C; three options; Library Orientation.

For admission to Second Year Honours an overall average of at least C is required and at least B in Geography 100 and 130.

Second Year Honours:

Geography 220ab; 230y and 231y; Geography 250ab; three options.

Third Year Honours:

Geography 301a; 301b or 340c; 331 or 370; Any regional Geography course; two options.

Fourth Year Honours:

Geography 446, three other Geography courses from third or fourth year level; one option.

All options to be selected in consultation with the Departmental Counsellors.

HONOURS GERMAN AND HISTORY

Admission requirements: A full Grade 13 level program, including German; OR equivalent Preliminary Year.

For course descriptions, see pp. E-133 and E-140.

First Year

German 111, or 112; History 115; one course from Group A; three options; Library Orientation.

For admission to Second Year Honours, an overall average of at least C is required, and at least B in German and History.

Second Year

Any three courses in Germanic Studies; two courses in History numbered in the 200's.

Third Year

Any two courses in Germanic Studies; History 356; any two courses in History numbered in the 300's.

Fourth Year

Any two or three senior courses in Germanic Studies; any two or three courses in History numbered in the 400's, to a total of five courses.

HONOURS GERMAN AND RUSSIAN

Admission requirements: A full Grade 13 level program, including German; OR equivalent Preliminary Year.

For course descriptions, see pp. E-133 and E-135.

First Year
German 111, or 112; Russian 040 (or Russian 111, or 130 if the student has Grade 13 Russian); one course from Group A; three options; Library Orientation.

For admission to Second Year Honours, an overall average of at least C is required, and at least B in German and Russian.

Second Year
Any three courses in Germanic Studies; Russian 111 or 130 (or any other Russian course, if Russian 111 or 130 have been completed in first year); Russian 230.

Third Year
Any two or three courses in Germanic Studies; Russian 338 and any two senior Russian courses.*

Fourth Year
Any two courses in Germanic Studies; any three senior courses in Russian.*

*Students should include Russian 465 in Third or Fourth Year.

HONOURS GERMAN AND SPANISH

Admission requirements: A full Grade 13 level program, including German (Spanish is recommended); OR equivalent Preliminary Year.

For course descriptions, see pp. E-133 and E-138.

First Year
German 111, or 112; Spanish 113 or 116; one course from Group A; one course from Group B or D; two options; Library Orientation.

For admission to Second Year Honours, an overall average of C is required, and B in German and Spanish.

Second Year Honours
Any three German courses; Spanish 232 and 242; one option.

Third Year Honours
Any two or three German courses; Spanish 310y, 311y; one other Third Year Spanish course; one option.

Fourth Year Honours
Any two German courses; Spanish 424; one other Third or Fourth Year Spanish course; one option.

Options should be chosen in consultation with either Department.

HONOURS GREEK AND LATIN

Admission requirements: A full Grade 13 level program, including Latin; OR equivalent Preliminary Year. Above average standing in Latin 104 may compensate for the Grade 13 Latin requirement.

For course descriptions, see p. E-97 ff.

First Year

Greek 104; Latin 104 or 112; one course from Group A; one course from Group B or D; two options; Library Orientation.

For admission to Second Year Honours, an overall average of C is required, and B in each of Greek 104 or Latin 104 or 112.

Second Year Honours

Greek 112; one other Greek course numbered in 200's or 300's; two Latin courses in 200's or 300's; Roman History 221 or 225; option.

Third Year Honours

Philosophy 224, two courses in Greek; two full courses and one half course in Latin.

Fourth Year Honours

Two Greek courses; two Latin courses; one option.

HONOURS GREEK AND THEOLOGY

Admission requirements: A full Grade 13 level program; OR equivalent Preliminary Year.

For course descriptions, see pp. E-97 and E-184.

First Year

Greek 104; Theology 100; one course from Group B; three options; Library Orientation.

For admission to second year honours, an overall average of C is required and B in each of Greek 104 and Theology 100.

Second Year

Greek 111 or 112 and one other Greek course; Theology 271, and any two other Theology courses; one option.

Third Year

Two Greek courses; Theology 351, and any two other Theology courses; one option.

Fourth Year

Two Greek courses; two Theology courses at the 400 level, and one other full course in Theology.

HONOURS HISTORY

Admission requirements: A full Grade 13 level program; OR equivalent Preliminary Year.

By the proper choice of subjects, a student completing the following program with a B average may qualify for admission to courses leading to the Type A Certificate in History at the Ontario Colleges of Education.

Note: Students in this program must have counselling from the Department. See also under "Details of Subjects—History", p. E-140 ff.

Although courses are numbered sequentially, students in Third and Fourth Years may select one History course either of higher or lower sequence respectively.

For course descriptions, see p. E-140.

First Year
History 115; English 110 or 115 or option; Political Science 100 or option; one course from Group C or D (preferably a language); two options; Library Orientation.

For admission to Second Year Honours, an overall average of C is required, and B in History 115.

Second Year Honours
Three History courses numbered in the 200's; two options.

Third Year Honours
Three History courses numbered in the 300's; two options.

Fourth Year Honours
Three History courses numbered in the 400's; two options.

HONOURS HISTORY (Economics Option)

Admission requirements: A full Grade 13 level program; OR equivalent Preliminary Year.

This program is accepted by the Ontario Department of Education as academic qualification for the High School Assistant's Certificate, Type A, History.

For course descriptions, see pp. E-107 and E-140.

First Year
History 115; Economics 102#; Political Science 100 or option; one course from Group C or D; two options; Library Orientation.

For admission to Second Year Honours, an overall average of C is required, with B in each of History 115 and Economics 102.

Second Year Honours
Three History courses numbered in the 200's; Economics 232; Geography 100 or 130; one of: Philosophy 225, 226, 330 or 439.

Third Year Honours
Three History courses numbered in the 300's; Economics 360ab; Theology or Philosophy 122.

Fourth Year Honours
Three History courses numbered in the 400's; one of: Economics 460, Political Science 350; one of: Political Science 337, Political Science 331; Geography 410.

#Students who have taken Economics 101 may be accepted into Second Year Honours at discretion of the Department.

HONOURS HISTORY (Philosophy Option)

Admission requirements: A full Grade 13 level program; OR equivalent Preliminary Year.

This program is accepted by the Ontario Department of Education as academic qualification for the High School Assistant's Certificate, Type A, History.

For course descriptions, see pp. E-140 and E-159.

First Year

History 115; Philosophy 115 or 116; Psychology 115 or option; one course from Group C or D; two options; Library Orientation.

For admission to Second Year Honours, an overall average of C is required, with B in each of Philosophy 115 or 116 and History 115.

Second Year Honours

Three History courses numbered in the 200's; two of: Philosophy 224, 226, 330, 439; Geography 100.

Third Year Honours

Three History courses numbered in the 300's; Philosophy 334; Geography 130; one option.

Fourth Year Honours

Three History courses numbered in the 400's; Philosophy 331; Theology or Philosophy 122 or option; Political Science 100.

HONOURS HISTORY AND THEOLOGY

Admission requirements: A full Grade 13 level program; OR equivalent Preliminary Year.

By the proper choice of subjects, a student completing the following program with a B average, may qualify for admission to courses leading to the Type A Certificate in History at the Ontario Colleges of Education.

For course descriptions, see pp. E-140 and E-184.

First Year

History 115; Theology 100; one course from Group B; one course from Group C or D; two options; Library Orientation.

For admission to Second Year Honours, an overall average of C is required, and B in each of History 115 and Theology 100.

Second Year Honours

Two History courses numbered in the 200's; Theology 250, and any two other courses in Theology.

Third Year Honours

Three History courses numbered in the 300's; Theology 345, and any other Theology course.

Fourth Year Honours

Three History courses numbered in the 400's; two Theology courses at the 400 level, and one other Theology.

HONOURS INTERNATIONAL RELATIONS*

Admission requirements: A full Grade 13 level program; OR equivalent Preliminary Year.

For course descriptions, see p. E-82 ff.

First Year

Six courses, including Economics 102, one course from Group A, and one course from Group C or D; Library Orientation.

For admission to Second Year Honours, an overall average of C is required, and B in Economics 102.

Second Year Honours

Political Science 270ab or Economics 212ab; at least one additional course in each of History, Economics and Political Science; two options.

Third Year Honours

Six courses, with at least one in each of International Politics, International Economics, and Diplomatic History.

Fourth Year Honours

Six courses considered relevant to international studies by the Departments concerned, including at least two in Political Science, and at least one in each of Economics and History. During this year students are expected to specialize in Soviet Studies, Commonwealth Studies, Latin American Studies, or Asian Studies by taking a unit of three courses consisting of one History, one Political Science, and one Economics in the area of their choice.

*In each year students must choose their courses, including options, in consultation with the Departments concerned. Most options are expected also to have an international orientation, though they might well be taken in Sociology, Anthropology, Geography, Languages, or Asian Studies. Students are expected to abide by all Departmental regulations with respect to prerequisites.

HONOURS LATIN (Classical Civilization option)

Admission requirements: A full Grade 13 level program, including Latin; OR equivalent Preliminary Year. Above average standing in Latin 104 may compensate for the Grade 13 Latin requirement.

For course descriptions, see pp. E-96 and E-98.

First Year

Latin 104 or 112; Classical Civilization 117 or 118; one course from Group A; one course from Group B or D; two options; Library Orientation.

For admission to Second Year Honours, an overall average of C is required, and B in Latin 104 or 112 and Classical Civilization 117 or 118.

Second Year Honours

Two Latin courses in the 200's or 300's; Roman History 221 or 225; one other Classical Civilization course; two options.

Third Year Honours

Two full courses and one half course in Latin; any Classical Civilization course not previously taken; two options.

Fourth Year Honours

Three Latin courses; two options.

HONOURS LATIN (Greek option)

Admission requirements: A full Grade 13 level program, including Latin; OR equivalent Preliminary Year. Above average standing in Latin 104 may compensate for the Grade 13 Latin requirement.

For course descriptions, see p. E-97.

First Year

Latin 104 or 112; Greek 104; one course from Group A; one course from Group B or D; two options; Library Orientation.

For admission to Second Year Honours, an overall average of C is required, and B in Latin 104 or 112 and Greek 104.

Second Year Honours

Two Latin courses in the 200's or 300's; Greek 112; Roman History 221 or 225; two options.

Third Year Honours

Two full courses and one half course in Latin; one Greek course; two options.

Fourth Year Honours

Three Latin courses; two options.

HONOURS LATIN AND SPANISH

Admission requirements: A full Grade 13 level program, including Latin; OR equivalent Preliminary Year. Above average standing in Latin 104 may compensate for the Grade 13 Latin requirement.

For course descriptions, see pp. E-98 and E-138.

First Year

Latin 104 or 112; Spanish 113 or 116; one course from Group A; one course from Group B or D; two options; Library Orientation.

For admission to Second Year Honours, an overall average of C is required, and B in Latin 104 or 112 and in Spanish 113 or 116.

Second Year Honours

Two Latin courses in the 200's or 300's; Spanish 232 and 242; Roman History 221 or 225; one option.

Third Year Honours

Two full courses and one half course in Latin; Spanish 310y, 311y; one other Third Year Spanish course; one option.

Fourth Year Honours

Two Latin courses; Spanish 424; one other Third or Fourth Year Spanish course; one option.

HONOURS LATIN AMERICAN STUDIES

Admission requirements: A full Grade 13 level program; or equivalent Preliminary Year.

For course descriptions, see p. E-82 ff.

First Year

Geography 130; History 115; Spanish 113 or 116; two of: Anthropology 110, Economics 101 or 102, Political Science 100, Sociology 100; one option; Library Orientation.

Second Year Honours

Geography 280; History 235; Political Science 239; Spanish 242; two full courses from: Anthropology 233c, 238c, 242c, 270c, Economics 222, 232, Political Science 230, 260, Sociology 224.

Third Year Honours

Spanish 359; Portuguese 309; two of: Anthropology 390, Economics 340, 372, Geography 370, History 352, Political Science 349, 369, Sociology 330c/331c, Spanish 232; one option.

Fourth Year Honours

Spanish 470; Portuguese 490; two full courses from: Anthropology 440c, Economics 422, 432, 442, Geography 446, 449, History 410, 438, Political Science 390, 395, 450, Sociology 412; #Seminar in Latin American Problems 400; one option.

#This course is listed in the Department of Hispanic and Italian Studies. It is, however, an interdisciplinary and interdepartmental course. It will be given as a series of seminars organized by the Departments of Economics, Geography, Hispanic and Italian Studies, History, Political Science, Sociology and Anthropology.

Graduates from the Latin American Studies Honours program who intend to pursue graduate work should see programs announced in the Graduate Faculty. In the Departments of Economics, Geography, History, Hispanic and Italian Studies (under Romance Languages), Political Science and Sociology, many specialized area programs are offered at the Graduate Level.

HONOURS MATHEMATICS (ARTS)

Admission requirements: A full Grade 13 level program, including Mathematics 1. (It is recommended that all three Mathematics subjects of Grade 13 be taken. If any are lacking, extra lectures will be required in First Year). OR equivalent Preliminary Year.

This program is accepted by the Ontario Department of Education as academic qualification for the High School Assistant's Certificate, Type A, Mathematics.

For course descriptions, see p. E-146.

First Year

Mathematics 115 (113), Mathematics 120a (121a), Mathematics 191b; Computer Science 100; One course from Group A; One course from Group B; One option; Library Orientation.

For admission to Second Year Honours, the student must obtain an average of B in the Mathematics subjects of First Year, and an overall average of C.

Pure Mathematics Option

Second Year Honours

Mathematics 210, 212ab, 220, 253c; either Mathematics 290b or Computer Science 201a; two options.

For admission to Third Year, the student must obtain an average of B in the Mathematics subjects of Second Year, and an overall average of C.

Third Year Honours

Mathematics 310, 312a, 314c, 320, 334c, 360b; one full course from Mathematics 330b, 332a, 340a, 340b, 350, 362c, 381c, 430b; one option.

Fourth Year Honours

One option; and five courses numbered in the 400's. (With the permission of the Department two of these courses may be selected from the optional subjects of Third year).

Statistics Option

Second Year Honours

Mathematics 210, 212ab, 220, 253c; one of Mathematics 240a, 290b, Computer Science 201a; two options.

For admission to Third Year, the student must obtain an average of B in the Mathematics subjects of Second Year, and an overall average of C.

Third Year Honours

Mathematics 310, 320, 340a, 350; one of Mathematics 452b or 454b; one course from options listed below: one option.

Fourth Year Honours

Mathematics 440, 450; one of 452b, 454b; two and a half courses from options listed below; one option.

Optional Mathematics Subjects

Mathematics 312a, 314c, 330b, 340b, 334c, 360b, 381c, 400, 410, 420, 430b, 432, 436, 480, any approved Computer Science courses.

HONOURS PHILOSOPHY

Admission requirements: A full Grade 13 level program; OR equivalent Preliminary Year.

For course descriptions, see p. E-159.

First Year

Philosophy 115 or 116; one course from Group C or D; four options; Library Orientation.

For admission to Second Year Honours, an overall average of C is required, and B in Philosophy 115 or 116.

Second Year Honours

Philosophy 221, 224, 328; *three options.

Third Year Honours

Philosophy 223, 327, 334, 436; *two options.

Fourth Year Honours

Philosophy 331, 337, 435; one other Philosophy numbered in the 300's or in the 400's; *two options.

*Options must not be taken at random, but in sequence and with the approval of the Department of Philosophy.

HONOURS PHILOSOPHY AND LATIN

Admission requirements: A full Grade 13 level program, including Latin; OR equivalent Preliminary Year. Above average standing in Latin 104 may compensate for the Grade 13 Latin requirement.

For course descriptions, see pp. E-98 and E-159.

First Year

Philosophy 115 or 116; Latin 104 or 112; Roman History 221 or 225; English 115 or French 112 or Greek 104; one course from Group B or D; one option; Library Orientation.

For admission to Second Year Honours, an overall average of C is required, and B in each of Philosophy 115 or 116; Latin 104 or 112; and English 115 or French 112 or Greek 104.

Second Year Honours

Philosophy 224, 328; Two Latin courses in the 200's or 300's; one of: French 221, English 215, Greek 112; option.

Third Year Honours

Philosophy 327, 334; two full courses and one half course in Latin numbered in the 200's, 300's, or 400's; one of: French 339a/340b, English 225, Greek 222.

Fourth Year Honours

Philosophy 331, 337, 439; two Latin courses in the 200's, 300's, or 400's; one of: French 345a/450b, English 230, Greek 331.

HONOURS PHILOSOPHY AND MATHEMATICS

Admission requirements: A full Grade 13 level program, including Mathematics 1. It is recommended that all 3 Mathematics subjects of Grade 13 be taken; if any are lacking extra lectures will be required in First Year. OR equivalent Preliminary Year.

By the proper choice of subjects, a student completing the following program with a B average, may qualify for admission to courses leading to the Type A Certificate in Mathematics at the Ontario Colleges of Education.

For course descriptions, see pp. E-146 and E-159.

First Year

Philosophy 115 or 116; Mathematics 113 or 115; 120a or 121a; 191b; one course from Group B or C; two options; Library Orientation.

For admission to Second Year Honours, an overall average of C is required, and B in each of Philosophy 115 or 116, and the First Year Mathematics courses.

Second Year Honours

Mathematics 210, 212ab, 220; Philosophy 328; one of: Philosophy 224, 327.

Third Year Honours

Any three even-numbered courses in Mathematics on the 300 level; Philosophy 334, 438.

Fourth Year Honours

Mathematics 400; two other even-numbered courses in Mathematics numbered in the 300's or higher; Philosophy 229, 331; one other course in Philosophy numbered in the 300's or the 400's.

HONOURS PHILOSOPHY AND PSYCHOLOGY

Admission requirements: A full Grade 13 level program (Mathematics 1 is recommended); OR equivalent Preliminary Year.

By the proper choice of subjects, a student completing the following program with a B average, may qualify for admission to courses leading to the Type A Certificate in Mathematics at the Ontario Colleges of Education.

For course descriptions, see pp. E-159 and E-170.

First Year

Philosophy 115 or 116; Psychology 115; one course from Group C or D; three options; Library Orientation.

For admission to Second Year Honours, an overall average of C is required, and B in each of Philosophy 115 or 116, and Psychology 115.

Second Year Honours

Philosophy 224, 338; Psychology 228, 231; two options.

Third Year Honours

Philosophy 334, 436; Psychology 230, 334; Political Science 100; option.

Fourth Year Honours

Philosophy 331 and either 337 or 435; two of: Psychology 327, 329, 431, 455; two options.

HONOURS POLITICAL SCIENCE

Admission requirements: A full Grade 13 program; OR equivalent Preliminary Year.

For course descriptions, see p. E-166.

First Year

Political Science 100, 110; Economics 101; Sociology 100 or Psychology 115; one course from Group A; one course from Group C or D; Library Orientation.

For admission to Second Year Honours, an overall average of C is required, with B in Political Science 100 and 110.

Second Year Honours

Political Science 270ab; one other Second Year Political Science course; History 115; Economics 222 or 232; two options.

Third Year Honours

Three Political Science courses from those offered in Third Year; two options.

Fourth Year Honours

Three Political Science courses from Third or Fourth Year courses; two options.

Students must include at least one of Political Science 250, 350, 355, or 450 in their program.

HONOURS POLITICAL SCIENCE AND HISTORY

Admission requirements: A full Grade 13 level program; OR equivalent Preliminary Year.

This program includes sufficient credits to satisfy the requirements for admission to courses leading to the Type A Certificate in History or Political Science at the Ontario Colleges of Education.

For course descriptions, see pp. E-140 and E-166.

First Year

History 115; Political Science 100, 110; Economics 101; one course from Group C or D; one option; Library Orientation.

For admission to Second Year Honours, an overall average of C is required, with at least B in each of Political Science 100 and 110 and History 115.

Second Year Honours

Political Science 270ab and two other Second Year Political Science courses; two History courses numbered in the 200's.

Third Year Honours

Three Third Year Political Science courses; three History courses numbered in the 300's.

Fourth Year Honours

Two Political Science courses from Third and Fourth Year courses; three History courses numbered in the 400's.

Students must include at least one of Political Science 250, 350, 355, or 450 in their program.

HONOURS POLITICAL SCIENCE AND SOCIOLOGY

Admission requirements: A full Grade 13 level program; OR equivalent Preliminary Year.

By the proper choice of subjects, a student completing the following program with a B average, may qualify for admission to courses leading to the Type A Certificate in Political Science at the Ontario Colleges of Education.

For course descriptions, see pp. E-166 and E-177.

First Year

Political Science 100, 110; Sociology 100; Economics 101; one course from Group A; one course from Group C or D; Library Orientation.

For admission to Second Year Honours an overall average of C is required, and B in each of Political Science 100, 110 and Sociology 100.

Second Year Honours

Political Science 270ab and one other Political Science course; three full year (or equivalent) courses in Sociology at the 200 level; option.

Third Year Honours

Two Third Year Political Science courses; Sociology 327, 335 and one other full year (or equivalent) Sociology course at the 300 level.

Fourth Year Honours

Three Third or Fourth Year Political Science courses; Sociology 410, 411.

Students must include at least one of Political Science 250, 350, 355 or 450 in their program.

HONOURS PSYCHOLOGY

Admission requirements: A full Grade 13 level program (Mathematics 1 is recommended); OR equivalent Preliminary Year.

By the proper choice of subjects, a student completing the following program with a B average, may qualify for admission to courses leading to the Type A Certificate in Psychology and Sociology at the Ontario Colleges of Education.

For course descriptions, see p. E-170.

First Year

Psychology 115; one course from Group A; one course from Group C or D; three options; Library Orientation.

For admission to Second Year Honours, an overall average of at least B is required, and B in Psychology 115.

Second Year Honours

Psychology 228, 230; two of: Psychology 222, 334, 425, cognate field option; two options.

Third Year Honours

Psychology 353; three full courses from: Psychology 222, 231, 320, 327, 329, 332, 333, 334, 340c, 341c, 342, 344, 353, 384, 425, cognate field option; two options.

Fourth Year Honours

Psychology 451; three of: Psychology 231, 320, 327, 329, 333, 340c, 341c, 342, 353, 384, 410, 420, 422, 431, 450, 452, 453, 454, 455, cognate field option; one option.

NOTE: 1. The four main areas of psychology represented by the Honours program are Experimental Psychology, Social-Personality Psychology, Clinical Psychology, and Developmental Psychology. Four courses are common requirements for all of these areas, viz.: Psychology 228, 230, 353 and 451. Specific requirements for each of the four areas may be had from the Department.

2. In each of the Second and Third Years there are two free options available and one in Fourth Year. These options should be selected to fit the plans of the individual student.

3. An outside option in a cognate field may be selected in place of one Psychology option in any or all of Second, Third or Fourth Years, with permission of the Department. The outside option may be in:
   (a) Natural Science (physics, chemistry, biology)
   (b) Social Science (sociology, anthropology, economics, political science)
   (c) Mathematics
   (d) Philosophy
   (e) Other cognate fields which may fit into the particular student's requirements.

4. It is recommended that students entering any Honours Psychology program have Ontario Grade 13 Mathematics 1, or equivalent.

HONOURS PSYCHOLOGY AND SCIENCE

Admission requirements: A full Grade 13 level program, including Mathematics 1 and Physics. It is recommended that all 3 Mathematics subjects of Grade 13 be taken; if any are lacking, extra lectures will be required in First Year. OR equivalent "Preliminary Year."

By the proper choice of subjects, a student completing the following program with a B average, may qualify for admission to courses leading to the Type A Certificate in Psychology and Sociology at the Ontario Colleges of Education.

For course descriptions, see p. E-170.

First Year
> Psychology 115; Physics 110; Mathematics 113 or 115; 120a or 121a; 191b; one course from Group A; one option; Library Orientation.

For admission to Second Year Honours, the student must obtain B in each of Psychology, Mathematics and Physics of First Year, and an overall average of B.

Second Year Honours
> Psychology 228, 231; Mathematics 211; Physics 222; Biology 101; one of: Philosophy 435, Sociology 100, option.

Third Year Honours
> Psychology 230, 334; Mathematics 217c, 381c; Physics 223; two full courses from: Theology, Mathematics 210, Anthropology 110, Zoology 222 or Biology 304, option.

Fourth Year Honours
> Psychology 333, 353, 451; Mathematics 321; Physics 334; one full course from: Mathematics option, Philosophy 436, Biology 304 or Zoology 222, option.

HONOURS PSYCHOLOGY AND SOCIOLOGY

Admission requirements: A full Grade 13 level program (Mathematics 1 is recommended); OR equivalent Preliminary Year.

This program includes sufficient credits to satisfy the requirements for admission to courses leading to the Type A Certificate in Psychology and Sociology at the Ontario Colleges of Education.

For course descriptions, see pp. E-170 and E-177.

First Year
> Psychology 115; Sociology 100; Anthropology 110; one course from Group A; one course from Group C or D; one option; Library Orientation.

For admission to Second Year Honours, an overall average of B is required, and B in each of Psychology 115, Sociology 100 and Anthropology 110.

Second Year Honours
> Psychology 222, 228, 231; two full courses (or equivalent) from Sociology at the 200 level; one option.

Third Year Honours
> Psychology 334, 353; Sociology 335; two other full courses (or equivalent) in Sociology at the 300 level; one option.

Fourth Year Honours
> Psychology 329, 425; Sociology 410, 411; one option.

HONOURS SOCIOLOGY

Admission requirements: A full Grade 13 level program; OR equivalent Preliminary Year.

For course descriptions, see p. E-177.

First Year

Sociology 100; Anthropology 110; one course from Group A; one course from Group C or D; two options; Library Orientation.

For admission to Second Year Honours, an overall average of B is required, and B in Sociology 100.

Second Year Honours

Four full courses or equivalent in Sociology at the 200 level; two options.

Third Year Honours

Sociology 327, 335; one full course or equivalent in Sociology at the 300 level; three options.

Fourth Year Honours

Sociology 410, 411; two full courses or equivalent in Sociology at the 400 level; one option.

HONOURS SPANISH AND ITALIAN

Admission Requirements: A full Grade 13 level program including Italian and Spanish OR equivalent Preliminary Year.

For course descriptions, see p. E-137.

First Year

Italian 113; Spanish 113 or 116; one course from Group A; one course from group B or D; two options; Library Orientation.

Second Year

Italian 220; and one other Italian course; Spanish 232; Spanish 242; two options.

Third Year

Italian 370 or 380 and one other Italian course; Spanish 310y, 311y and one other Third Year Spanish course; one option.

Fourth Year

Any two Third or Fourth year Italian courses; Spanish 424 and one other Fourth year Spanish course; one option.

HONOURS THEOLOGY AND PHILOSOPHY

Admission requirements: A full Grade 13 level program; OR equivalent Preliminary Year.

For course descriptions, see pp. E-159 and E-184.

First Year

Theology 100; Philosophy 115 or 116; one course from Group B; one course from Group C or D; two options; Library Orientation.

For admission to Second Year Honours, an overall average of C is required, and B in each of Theology 100 and Philosophy 115 or 116.

Second Year Honours

Theology 242, and any two other Theology courses; Philosophy 224, 328; one option.

Third Year Honours

Theology 341, and any two other Theology courses; Philosophy 327, 334; one option.

Fourth Year Honours

Two Theology courses at the 400 level, and one other full course in Theology; Philosophy 331, 436.

HONOURS THEOLOGY AND PSYCHOLOGY

Admission requirements: A full Grade 13 level program (Mathematics 1 is recommended); OR equivalent Preliminary Year.

By the proper choice of subjects, a student completing the following program with a B average, may qualify for admission to courses leading to the Type A Certificate in Psychology and Sociology at the Ontario Colleges of Education.

For course descriptions, see pp. E-170 and E-184.

First Year

Theology 100; Psychology 115; one course from Group C or D; three options; Library Orientation.

For admission to Second Year Honours, an overall average of at least B is required, and B in each of Theology 100 and Psychology 115.

Second Year Honours

Theology 222 or 243, and any two other Theology courses; Psychology 222, 231; one option.

Third Year Honours

Theology 346, and any two other Theology courses; Psychology 332, 334; one option.

Fourth Year Honours

Two Theology courses at the 400 level and one other Theology course; two of: Psychology 329, 450, 455.

HONOURS THEOLOGY AND SOCIOLOGY

Admission requirements: A full Grade 13 level program; OR equivalent Preliminary Year.

By the proper choice of subjects, a student completing the following program with a B average, may qualify for admission to courses leading to the Type A Certificate in Psychology and Sociology at the Ontario Colleges of Education.

For course descriptions, see pp. E-177 and E-184.

First Year

Theology 100; Sociology 100; one course from Group C or D; three options; Library Orientation.

For admission to Second Year Honours, an overall average of C is required, and B in each of Theology 100 and Sociology 100.

Second Year Honours

Theology 222 or 243, and one other Theology course; three full courses (or equivalent) in Sociology at the 200 level; one option.

Third Year Honours

Theology 321, and any two other Theology courses; Sociology 327, 335; one option.

Fourth Year Honours

Two Theology courses at the 400 level and one other Theology course; Sociology 410, 411.

BACHELOR OF SCIENCE

GENERAL AND HONOURS PROGRAMS

- Biology, Pre-Medicine
  Pre-Pharmacy, Pre-Dentistry
- Pre-medical Technology
- Biophysics
- Chemistry
- Chemistry & Biology
  (Biochemistry)

- Chemistry & Physics
- Geology
- Mathematics
- Physics
- Pre-optometry

Admission Requirements: An average of 60% on a full Grade XIII program with an appropriate background in Science and Mathematics. Recommendations are listed on the following pages for individual programs. Equivalent Preliminary Year Science will also grant admission.

Program Alterations:

It is recognized that many students may not have decided on their final career goals prior to entering University or may wish to change their programs within the Division of Science and Mathematics after the first year. In order to facilitate such changes many of the programs have been designed with common core courses to allow students to alter or change their programs to accommodate their individual objectives. It is strongly recommended that students consult with Departmental Counsellors prior to making their final choice of subjects available in the first and subsequent years of study.

By a proper choice of courses all Honours Programs in Science and Mathematics are accepted by the Ontario Department of Education for admission leading to the Type A Certificate at the Ontario Colleges and Faculties of Education. Students are advised to have their programs assessed by the Ontario College or Faculty of Education that they wish to attend.

Notes: (1) All programs require options from Groups A, B or C. For the courses listed in these groups see p. E-16.

(2) The total number of Science courses for a three year General degree will not normally exceed twelve.

(3) All options are to be selected in consultation with the Department in which the student is majoring.

(4) Those courses marked by an # in the "Details of Subjects" (see p. E-82 ff) may not be taken for credit as a major or minor towards a B.Sc. degree.

(5) By way of explanation for admission requirements, Grade XIII Mathematics subjects are defined in this calendar as follows:

Mathematics 1. Functions and Relations
2. Calculus
3. Algebra

For course descriptions, see page E-82 f.f.

BIOLOGY

GENERAL AND HONOURS BIOLOGY

Admission requirements: A full Grade 13 level program, including a Mathematics and at least two of: Biology, Chemistry, Geology, Physics and one other Mathematics. An average of 60% is required in Mathematics and Science subjects. Equivalent Preliminary Year Science will also grant admission.

The courses underlined below are strongly recommended as they form a central theme in biology with the purpose of introducing students to a variety of biological disciplines. However, except that Biology 110 is required, students are free to select any combination of courses with the understanding that the decision is their own responsibility.

It is possible to develop curricula in different subject areas within biology: general biology, cellular biology, organismic-developmental biology, population-environmental biology and microbiology. Recommended course sequences for major and minor requirements in these disciplines are available from departmental counsellors. In designing their programs, students should keep in mind that early specialization in biology may preclude certain career options.

Although the design of curriculum is the decision of the student, professional schools (medicine, dentistry, optometry, pharmacy) have minimum course requirements for admission to their respective programs. It is recommended that students who are planning to make application to professional schools upon graduation should include such courses in their university training. Students who are undecided regarding their post-graduate activities should maintain a generalized program in biology by selecting courses from diverse subject areas.

By the proper choice of subjects, a student completing the following program with a B average, may qualify for admission to courses leading to the Type A Certificate in Biology at the Ontario Colleges of Education. Minimum requirements are: 8 courses in Biology, 1 course in Mathematics, 5 courses in Chemistry, Physics or Mathematics, and 6 courses from groups A, B, C, or D (not including Biology).

For course descriptions, see p. E-86 ff.

First Year:

Biology 110 (required), Chemistry 103b, 111z; One of Math 111, Geology 100, Physics 113, one course from Group A and one course from Group B or C; Library Orientation.

Students intending to major in Biology, General Program, should obtain a "C" grade in Biology 110 and in the overall program. For admission to Honours Biology, the student must obtain a grade of B or better in Biology 110 and an overall average of C grade. Students are urged to consider carefully their choice of elective in Second Year as a lack of certain prerequisites will limit options in subsequent years.

Second Year:

Biology: two and one-half courses from Biology 228a, 229b, 237a, Botany 222a, 224b, Microbiology 226a, 226b, Zoology 222.
Minor: Chemistry 203a and 206b OR Mathematics 211.
Mathematics 111 (if not taken previously) OR 1 option from Group D. One option not from Group D.

Third Year:

Biology: three courses from Biology 330a, 338c and other courses from departmental offerings open to Biology majors.
Minor: Chemistry 306a or Mathematics 350 or 351.
Option: one course not from Group D.

For Graduation: General Program

Besides a Biology major of six to seven Biology courses, a minor sequence of a minimum of 3 courses in any one other field is required. Furthermore, the student must meet all regulations pertaining to promotion and graduation as set out on p. E-12.

Fourth Year Honours:

Four courses from departmental offerings open to Biology majors. One course from Group D 300 or 400 series (not including Biology).

For graduation: Honours Program

In order to graduate with an Honours degree in Biology, a student must maintain a C average in each of the four years and his program must include not fewer than ten Biology courses with at least a C grade in each course. A student not meeting honours requirements, but passing all courses and fulfilling all regulations pertaining to promotion and graduation as set out on p. E-12, may be granted a General Degree in Biology.

CHEMISTRY

GENERAL AND HONOURS CHEMISTRY

Admission Requirements: A full Grade 13 level program, including Mathematics 1 and preferably two or more of: Biology, Chemistry, Geology, Physics, additional Mathematics subjects. (Depending on Grade 13 mathematics courses offered for admission, some variation will be made in the Mathematics courses required in the University program.) An average of 60% is required in Mathematics and Science subjects. Equivalent Preliminary Year Science will also grant admission. The First Year program closely resembles that of Mathematics and Physics.

For course descriptions, see p. E-92.

GENERAL PROGRAM

First Year

Chemistry 111; Physics 110; Mathematics 113 or 115, 120a or 121a, 130b or 191b; one course from Group A*; one course from Group B or C*; Library Orientation.

Second Year

Chemistry 223, 224, 225ab; Physics 226ab; Mathematics 211.

Third Year

Chemistry 332ab, 334; one of Chemistry 333, 335ab, 336; two options from Group A, B or C*.

*Options may also be selected from Computer Science and other courses outside the Faculty of Arts and Science, subject to the consent of the Faculty, Department or School concerned and the Department in which the student is majoring. Note that at least one course from Group A and one course from Group B or C is required for graduation.

HONOURS CHEMISTRY

This program is accredited by the Chemical Institute of Canada. For course descriptions, see p. E-92.

First Year

Chemistry 111; Physics 110; Mathematics 113 or 115, 120a or 121a, 130 or 191b; one course from Group A; one course from Group B or C; Library Orientation.

For admission to Second Year Honours, the student must obtain B in Chemistry, C in each of Mathematics and Physics, and an overall average of C.

Second Year Honours

Chemistry 223, 224, 225ab; Physics 226ab; Mathematics 211; Option with permission of the Department.

Third Year Honours

Chemistry 332ab, 334; one of Chemistry 333, 335ab, 336; two options (one must be from Group A, B or C; one may be a full Mathematics course).

Fourth Year Honours

Chemistry 444, 447, 449, 450y; Chemistry 333 if not previously taken or, if previously taken, one of: Chemistry 335ab or 336; one of: Chemistry 432c, 433c, 434c, 435c, 446ax, 446bx.

HONOURS CHEMISTRY AND BIOLOGY

This program is accredited by the Chemical Institute of Canada. For course descriptions, see pp. E-86 and E-92.

First Year

Biology 110ab; Mathematics 111; Chemistry 111; Physics 113; one course from Group A; one course from Group B or C; Library Orientation.

For admission to Second Year Honours, the student must obtain B in Chemistry and in Biology, and an overall average of C.

Second Year Honours

Chemistry 223, 224, 225a, 332ab, 335bx; Biology 228a, 229b; one option from Group A, B, or C.

Third Year Honours

Chemistry 333, 334x, 336; Biology 237a, 330a; Microbiology 226ab.

Fourth Year Honours

Chemistry 444, 446ab, 450y; Zoology 430z; one of Botany 430b, Zoology 430b, 446b, Biology 448b; one option.

HONOURS CHEMISTRY AND PHYSICS

This program is accredited by the Chemical Institute of Canada. For course descriptions, see pp. E-92 and E-162.

First Year

Chemistry 111; Physics 110; Mathematics 113 or 115, 120a or 121a, 130b or 191b; one course from Group A; one course from Group B or C; Library Orientation.

For admission to Second Year Honours the student must obtain B in each of Chemistry and Physics, and an overall average of C.

Second Year Honours

Chemistry 223, 224, 332ab; Physics 222, 223, 255b; Mathematics 211.

Third Year Honours

Chemistry 334, 335ab; Physics 334, 336, 370/1; Mathematics 362c; one option from Group A, B or C.

Fourth Year Honours

Chemistry 333, 444, 447, 450y; one of: Chemistry 432c, 433c, 434c, 435c; Physics 466a, 467b; one option from Group A, B or C.

GEOLOGY

GENERAL AND HONOURS GEOLOGY

Admission Requirements: A full Grade 13 level program including a minimum of two of Biology, Chemistry, Geology, Mathematics 1, Mathematics 2, Mathematics 3, or Physics; OR equivalent Preliminary Year Science. (An average of 60% is required in Mathematics and Science subjects).

After gaining the appropriate number of years of practical geological experience, a graduate of this program may obtain registration as professional geologist, certified petroleum geologist, etc. By the proper choice of subjects, a student completing the following program with a B average, may also qualify for admission to courses leading to the Type A Certificate in Geology, or in Geology and Geography, or in Science (General), at the Ontario Colleges of Education.

For course descriptions, see p. E-130.

First Year

Geology 100; one course from Group A; one course from Group B or C; three of: Biology 110, Chemistry 111, Computer Science 100, one of Math 120a (121a)/130b or Math 115 (113), Phys. 113z. [Students with Grade 13 credit in Mathematics 3 may replace Math. 120a (121a) with Math. 251a]. Library Orientation.

Second Year

Five courses including at least three in Geology in the 200's or 300's. It is strongly recommended that those students who are opting for a four-year program choose their options in Sciences. A student with B-average may apply for permission to take an additional subject within or outside the Division.

Third Year

Five courses including at least three in Geology. It is strongly recommended that those students who are opting for a four-year program choose their options in Sciences. A student with B-average may apply for permission to take an additional subject within or outside the Division. For admission to Fourth Year a student will take Geology 480c at the end of Third Year.

For graduation:

Besides a Geology major of five to seven Geology courses, a minor sequence of a minimum of three courses in any one other field is required. Furthermore, the student must meet all regulations pertaining to promotion and graduation as set out on p. E-12.

Fourth Year Honours

Five courses including at least three in Geology in the 400's and Geology 499 (Thesis).

For graduation:

In order to graduate with an Honours degree in Geology a student must maintain a C average in each of the four years and his program must include not fewer than 11 Geology courses. (See also p. E-14). A student not meeting Honours requirements in any year, but passing all courses, may be granted a General degree in Geology.

All options are to be selected in consultation with the Department. Only approved selections carry credit.

For the Geological Engineering program, see p. G-15.

MATHEMATICS

GENERAL AND HONOURS MATHEMATICS

Admission requirements: A full Grade 13 level program, including Mathematics 1. It is recommended that all three Mathematics subjects of Grade 13 be taken. If any are lacking, extra lectures will be required in First Year OR equivalent Preliminary Year Science.

General Information:

If a student wishes to major in Mathematics or to take Honours Mathematics, in First Year he must choose Mathematics 115 (113), Mathematics 120a (121a) and Mathematics 191b. Computer Science 100 is required for all B.Sc. students and also for admission to any Honours program. The B.Sc. degree is granted to a Mathematics student taking a Science minor. In this case, in First Year he must choose two of: Biology 110, Chemistry 111, Geology 100, or Physics 110. Physics 110 must be chosen if a student intends to take Honours Applied Mathematics. If Chemistry and Physics are those chosen, the First Year program of Chemistry, Mathematics and Physics would be so similar that a student could change his field of specialization at the end of the First Year. In subsequent years, the student would have to pick one of these four Science subjects as his minor.

On the other hand, a B.A. degree is granted if a student wishes to take as a minor a subject in the Humanities or the Social Sciences. The most popular minor among most Mathematics students in this area seems to be Economics, but a minor in any Social Science or Humanities subject is quite acceptable. The recommended roster of courses for all First Year students is outlined below. Please note that all First Year General and Honour students take the same subjects.

First Year Subjects:

B.Sc. Students—Mathematics 115 (113) Mathematics 120a (121a),
　　　　　　　　Mathematics 191b,
　　　　　　　　Computer Science 100,

　　　Two of: Biology 110, Chemistry 111, Geology 100, *Physics 110,
　　　　　　　One course from Group A, B or C,
　　　　　　　Library Orientation.

*Physics 110 is required for entrance to the Honours Applied Mathematics program.

B.A. Students — Mathematics 115 (113), Mathematics 120a (121a),
　　　　　　　　Mathematics 191b,
　　　　　　　*Computer Science 100 or option
　　　　　　　One course from Group A
　　　　　　　One course from Group B
　　　　　　　One option
　　　　　　　Library Orientation.

*Computer Science 100 is required for entrance to any Honours Mathematics Program.

GENERAL PROGRAM:

If a student obtains a "C" average in the Mathematics subjects of First Year, he may enter Second Year as a Mathematics major. To graduate, such a student must take six or seven Mathematics courses as his major. Of these courses, one must be Math 211. He must also take three to five courses as his minor, and must take a total of sixteen courses of which four must be chosen from Group A, B and C. In order to graduate, at least one course from Group A must be chosen in some year. In choosing courses to make up the total of sixteen, the student may include two courses from Faculties other than Arts and Science.

HONOURS PROGRAM:

The Honours program is open to any student who obtains a "B" average in the Mathematics subjects of the First Year. However, generally speaking, it is more useful to enter the General program than the Honours program unless an "A" average in Mathematics is obtained in First Year. Honours programs are offered in Mathematics (Pure Mathematics); Mathematics (Applied Mathematics); Mathematics (Statistics); Honours Economics and Mathematics; Honours Philosophy and Mathematics; Honours Psychology and Science. A "B" average must be maintained in the Mathematics subjects in Second Year for admittance to Third Year. The Honours programs are described below:

Honours Mathematics (Pure Mathematics), B.A. degree or B.Sc. degree depending on the choice of option.

Second Year Honours
Mathematics 210, 212ab, 220, 253c; either Mathematics 290b or Computer Science 201a; two options.

Third Year Honours
Mathematics 310, 312a, 314c, 320, 334c, 360b; one full course from Mathematics 330b, 332a, 340a, 340b, 350, 362c, 381c, 430b; one option.

Fourth Year Honours
Five courses numbered in the 400's. (With the permission of the Department two of these courses may be selected from the optional subjects of third year); One option.

Honours Mathematics (Applied Mathematics), B.Sc. degree

Second Year Honours
Mathematics 210, 212ab, 220, 253c; Physics 223, 255b. Physics 222 may be substituted for Mathematics 210 but Mathematics 210 is required for admission to third year honours Mathematics.

Third Year Honours
Physics 355; Mathematics 312a, 332a, 360b, 362c, 364c, 381c; Mathematics 470 or 472. One option.

Fourth Year Honours
Mathematics 310, 460, 480; Mathematics 470 or 472; Physics 455 or Mathematics 314c and 474c. One option.

Honours Mathematics (Statistics), B.A. degree or B.Sc. degree depending on the choice of option.

Second Year Honours
Mathematics 210, 212ab, 220, 253c; one of Mathematics 240a, 290b, Computer Science 201a; two options.

Third Year Honours
Mathematics 310, 320, 340a, 350; one of Mathematics 452b or 454b; one course from options listed below: one option.

Fourth Year Honours
Mathematics 440, 450; one of 452b or 454b; two and a half courses from options listed below; one option.

Optional Mathematics Subjects

Mathematics 312a, 314c, 330b, 334c, 340b, 360b, 381c, 400, 410, 420, 430b, 432, 436, 480, and any approved Computer Science courses.

Honours Economics and Mathematics, B.A. degree (See page E-30).
Honours Philosophy and Mathematics, B.A. degree (See page E-51).
Honours Psychology and Science, B.A. degree (See page E-55).

PHYSICS

Admission requirements: A full Grade 13 program or equivalent Preliminary Year, including at least one credit in Mathematics. Additional credits in Mathematics and Science are strongly recommended. Candidates who have not obtained credit for Mathematics 1 in Grade 13, will be required to take Mathematics 010 in addition to the regular First Year program. Candidates deficient in Mathematics 2, or in Mathematics 3 will be required to attend additional lectures in the First Year.

The purpose of these requirements is to enable students, who have shown academic promise and interest in Physics, to proceed to degrees in Physics even though they may lack formal prerequisites for the First Year Mathematics courses, provided that they are prepared to make up the deficiencies.

DEGREE PROGRAMS IN PHYSICS

The Department of Physics offers programs of study leading to the **B.Sc. Honours Physics, B.Sc. Honours Biophysics** and the **General B.Sc.** degree with Major in Physics. The requirements for these degrees are summarized in the following table.

The First Year program in Physics resembles closely the First Year programs in Mathematics and in Chemistry, and it is possible for students to change their intended field of specialization after completion of the First year.

Physics as a Minor

Students proceeding to B.Sc. and B.A. degrees in subjects other than Physics may elect to minor in Physics. Such candidates should satisfy admission requirements appropriate to their major field of specialization, as well as requirements of prerequisites or corequisites (if any) which are specified in the descriptions of the Physics courses. The following are the recommended combinations of courses which constitute a Physics minor in a B.Sc. program.

    (a) Physics 110, 222, 223;

    (b) Physics 110, 226ab, 336;

Students who wish to increase the content of their Physics minor may select additional courses with the approval of the Department.

The Department also offers Physics courses especially designed for students proceeding to B.A. and professional degrees, (these courses are not available for credit towards the B.Sc.) Three to five of the following courses constitute a Physics minor in a B.A. program.

Physics 119, 180, 229, 339, 371.

Year	GENERAL PHYSICS	HONOURS PHYSICS	HONOURS BIOPHYSICS
1	1 Option from Group A; Physics 110, Chemistry 111, Mathematics 115, 120a, 191b; One option from Group B or C		Biology 110; Biology 228a and 229b, Physics 222 and 223, Mathematics 211 253c, Chemistry 223
2	Physics 222, 223 and 255b Mathematics 211 1½ options (at least one from Groups A, B or C)	a) with Mathematics: Physics 223, 255b, Math 212ab and 220 and Physics 222, Math 253c, Physics 222 and Either: Math 253c, Physics 222 and Comp. Sci. 300a; Or Math 210 and one of: Physics 222, Math 381c, option b) with Chemistry: Physics 223, 224, 332ab, Physics 222, 223, Chemistry 223, 224, 332ab, Physics 222, 223, 255b, Mathematics 211 (see notes below)	Biology 330a, Microbiol. 226a, Physics 331, 334, 336, 370/1, Chemistry 336, Mathematics 362c
3	Physics 331, 334, 336, 370. Two options (at least one from Groups A, B or C)	Mathematics 312a, 362c, Physics 331, 334, 336, 355, 370	One of: Botany 400, Microbiol. 400, Zoology 400; Physics 410, 411, 470/2; Chemistry 446ax; Mathematics 351c; One course from group A, B or C
4		Physics 450, 452a, 454b, 455, 466a, 467b, 470, Mathematics 460 (see note 4 below)	

NOTES:
1. For the courses listed in groups A, B, C and D, see p. E-16.
2. The total number of science courses is not to exceed twelve.
3. All options are to be selected in consultation with the department in which the student is majoring.

NOTES:
1. After the completion of Second Year Honours (with Mathematics), students may choose to enter the third year of the Honours Mathematics program.
2. After the completion of Second Year Honours (with Chemistry), students may choose to enter the third year of the Honours Chemistry and Physics program.
3. Physics 222 is required for admission to third year Honours Physics.
4. Students who have taken C.S. 100 should take Math 381c instead of C.S. 300a.
5. Students whose curricula did not include Math 253c and 381c may, with the permission of the Head of the Department, take these courses in the fourth year instead of 3 hours of the Senior Laboratory (Physics 470)

BACHELOR OF FINE ARTS

B.F.A. IN FINE ARTS

Admission requirements: A full Grade 13 level program; OR equivalent Preliminary Year. For transfer credit from other institutions, see p. E-116.

For Bachelor of Arts program in Honours Art History, see E-26.

For General Program, Fine Arts Major, see page E-116.

Students are expected to abide by all Departmental regulations with respect to prerequisites.

First Year

Fine Art 110, 114ab, 115y, 116y; one course from Group B; one course from Group C or D; option; Library Orientation.

Second Year Honours

Fine Art 220, 230, 232, 233; one full course in Art History; option.

For admission to Third Year Honours, the student must have and maintain a minimum average of C in Art History and must present a portfolio of his work for faculty approval to continue in the B.F.A. program.

Third Year Honours

Three full courses from Fine Art 331, 334, 337, 338, 339, 340, 345c; one full course in Art History; Philosophy 332.

Fourth Year Honours

Fine Art 435; thesis and practical work in one of: Fine Art 440, 441, 442, 443; one of Fine Art 436, 437, 438, 439; option.

BACHELOR OF MUSIC

Admission requirements: Audition (see below); A full Grade 13 level program; OR equivalent Preliminary Year.

Audition: (See admission requirements above) Admission to the Bachelor of Music program is conditional upon a successful audition evaluated by members of the faculty of the Music Department. Auditions are scheduled periodically throughout the school year. For further information contact the Head of the Music Department. (Completion of Grade VIII Practical in the student's performance medium and Grade II Theory in Music may be deemed to fulfill the Audition requirement).

For course descriptions, see p. E-153.

PROGRAM I: HISTORY AND THEORY

The History and Theory program leading to the Bachelor of Music degree is designed for students who wish to prepare for a general career in music in such areas as university teaching, research or composition.

First Year
Music 100y, 110y, 111, 115, 118; Language; one course from Group B or D*; Library Orientation.

For admission to Second Year Honours, and all subsequent years, an overall average of C, and B in each Music course are required.

Second Year Honours
Music 200y, 210y, 215, 221, 228; Language; one option.

Third Year Honours
Music 300y, 305y, 310y, 329y, 331, 334y, 338, 350; Language; one option.

Fourth Year Honours
Music 400y, 401y, 410y, 441, 444y, 448, 450; Language; one option.

*Physics 180 is suggested as a science option.

Students who have not completed the Grade IV Practical examination in piano must fulfill the Piano Proficiency requirement by examination.

PROGRAM II: SCHOOL MUSIC

The Music Education program leading to the Bachelor of Music degree is designed to prepare students for a music teaching career in secondary schools.

First Year
Music 100y, 110y, 111, 115, 118; Language or option; one course from Group B or D*; Library Orientation.

For admission to Second Year Honours, and all subsequent years, an overall average of C, and B in each Music course are required.

Second Year Honours
Music 200y, 203, 210y, 211, 215, 221, 228; one option.

Third Year Honours
Music 300y, 303, 305y, 310y, 311, 329y, 331, 334y, 338; one option.

Fourth Year Honours
Music 400y, 401y, 410y, 411, 441, 444y, 447y, 448; one option.

*Physics 180 is suggested as a science option.

Students who have not completed the Grade IV Practical examination in piano must fulfill the Piano Proficiency requirement by examination.

SCHOOL OF DRAMATIC ART

Honours Programs:

The School of Dramatic Art offers two honours programs in preparation for careers in the theatre and allied areas:

1. Bachelor of Fine Arts Degree in Dramatic Art (see below). Candidates for this degree will be limited in number and must show evidence of aptitude in acting by auditioning. This is a four-year program.

2. Bachelor of Arts Degree with Honours in Drama and English (see p. E-29). This four-year program provides for a sound training in Theatre Arts as well as in English Literature. It is intended for those students who are particularly interested in teaching in elementary or high schools.

For information regarding the three-year program leading to a Bachelor of Arts Degree in Dramatic Art, see page E-17.

These courses have been designed to prepare the graduates to pursue graduate work, careers in the commercial theatre and related arts, education and community programs.

For course descriptions, see page E-103.

B.F.A. IN DRAMATIC ART

Admission requirements: A full Grade 13 level program; OR equivalent Preliminary Year. Applicants will also be required to show evidence of aptitude in dramatic art by auditioning.

The final application date for auditions for 1972-73 will be April 29, 1972. The final audition date for 1972-73 will be May 14, 1972. (Audition fee $10.00. For other fees, see page C-10).

First Year

Drama 110, 111, 114y, 123y, 125, 127y; English 110 or 115; Psychology 115; one option from Group C or D.

For admission to Second Year B.F.A. an overall average of C is required, with a B average in Drama courses. In addition, the student must be recommended by the Faculty of the School.

Second Year

Drama 210, 211y, 222ab, 225, 227y, 228, 229y, 237y; English 215.

Third Year

Drama 312y, 324y, 326y, 327y, 328, 330; English option; Psychology 231 or 334.

Fourth Year

Drama 424y, 426y, 428, 430; English option; one option from Group A or B.

Students registered under old program must include 127y, 227y, 229y before graduating.

SCHOOL OF NURSING

BACHELOR OF SCIENCE IN NURSING

(a) **Admission requirements:** A full Grade 13 level program including English, Biology, and Chemistry, (Physics is recommended); OR equivalent Preliminary Year.

(Applicants should also have the equivalent of Ontario Grade 12 Mathematics and Physics).

Adult students without Grade 13 Chemistry but with Grade 12 Chemistry in 1966-67 or later, may be admitted under normal adult probation. It is recommended, however, that they take Chemistry 001 in Summer Session or concurrently with Chemistry 109, with the permission of the Director, School of Nursing.

Students lacking Grade 13 Biology may obtain advance placement in Biology 110 by examination given by the Department of Biology.

Selection for Admission: Selection of candidates for admission to the various programs will be based on criteria determined by the School Council. Applicants will be informed of the dates of selections.

General Regulations—Refer to Page E-14.

(b) Particular Regulations:

1. One lecture hour per semester carries 1 unit weight; one laboratory hour per semester is 0.5 unit weight.

2. The student must attend all laboratories unless he has permission from the instructor or a medical certificate to account for his absence.

3. The program of studies must be completed within seven years.

4. Students are responsible for their own travel, uniform, and living expenses incurred in field or clinical experiences.

5. For promotion from year to year and for graduation in all programs of the School, a student must obtain at least a "C" average in the prescribed subjects for the year with a "C" in each of the nursing subjects.

I. FOUR-YEAR BASIC DEGREE PROGRAM — PLAN I

This program is designed for high school graduates who are beginning preparation for a career in nursing, and will in every aspect be under the complete jurisdiction of the University.

The nursing degree curriculum is designed on the premise that professional nursing has its basis in the biological, social and psychological sciences, and that its practitioner must be a well developed person, capable of intellectual growth, and a competent member of the health team serving the needs of society, in the care of the sick as well as in the promotion of health and prevention of disease.

It qualifies the student to write the nurse registration examinations and pursue graduate studies.

Specific regulations:

Admission requirements:

1. Students with only Grade 12 Chemistry but with a 75% or better average in Grade 13 may be exempted from the Grade 13 Chemistry requirement.

2. Students with 60-75% overall average in Grade 13 may be permitted to take Chemistry 001 concurrently with Chemistry 109 with other course adjustments and with permission of the Director of the School.

Make-up Sessions:

Clinical nursing laboratory missed by students must be made up as arranged by the School.

First Year:

Nursing 101, 102; Biology 106, 202; Chemistry 109; Psychology 115; Sociology 100; Library Orientation.

Intersession:

Nursing 199

Second Year:

Nursing 201, 202, 203, 211; Psychology 222, 231; one option from Group A.

Intersession:

Nursing 299

Third Year:

Nursing 301, 302, 311, 312, 321, 322; Political Science 110; Psychology 226ab; one option.

Intersession:

Nursing 399

Fourth Year:

Nursing 401a, 402a, 411a, 412a, 421b, 422b, 431b, 432b; two options (one from Group A).

Intersession:

Nursing 499

II. DEGREE PROGRAM FOR REGISTERED NURSES — PLAN II

Specific Regulations:

Admission Requirements:

1. Applicants seeking admission as adult students are required to have Ontario Grade 13 English, Biology and Chemistry (or equivalent).

2. Nurse Registration for the current year.

3. Psychiatric Nursing.

4. In the case of graduates of any two-year diploma school of nursing, preference will be given to those with a subsequent year of nursing experience.

5. Challenge Examinations: On recommendation of the Director, School of Nursing, registered nurse students may write advance placement examinations in Psychology 115 and Sociology 100. Students who pass these examinations may take alternate courses offered by the Departments instead of these introductory courses. The fee for each examination is $10.00.

First Year:
Nursing 230, 233; Psychology 115; Sociology 100; Political Science 110; Biology 106; Communication Arts 225; Library Orientation.

Second Year:
Nursing 242, 243; Chemistry 109; Biology 304; Psychology 222, 231; one elective from humanities.

Third Year:
Nursing 334, 335, 336, 337; Psychology 226ab; one elective from humanities; open elective.

Note: Nurses holding a university Diploma in Public Health Nursing, Nursing Education or Nursing Administration who wish to obtain a degree in nursing, will register in the new three year program. Suitable courses from the diploma program will be recognized towards the degree, providing the time entailed from the beginning of the diploma year to completion of the degree does not exceed seven years.

Courses of the former two-year degree program, which is being phased out:

First Year:
Chemistry 109; Psychology 115; Sociology 100; Biology 106 and 304; one of: Biology 320, Communication Arts 225, History 222, Philosophy 122, 225; Theology 100, 200, 320; Library Orientation.

Summer Session: following First Year (or at student's convenience): Two options.

Final Year:
Nursing 220a (220c) and 221b (221c); Nursing 230, 231; Nursing 232 or 233; Political Science 110; Psychology 222, 226ab.

III. DIPLOMA PROGRAM IN PUBLIC HEALTH NURSING

Admission requirements are the same as for the B.Sc.N. Plan II program.

Nursing 220a, 221b; Communication Arts 225; Psychology 115, 222; Sociology 100; Biology 106; Library Orientation.

Observation periods, seminars and concurrent field experience are required components. Successful completion of a terminal field practice of three weeks duration is an additional requirement.

SCHOOL OF SOCIAL WORK

Students wishing to prepare for a career in Social Work are advised to take the Honours B.S.W. program.

Students who have completed First Year of any other program and wish to enter the Social Work program may transfer into the second year of this program with the permission of the School of Social Work at the end of the First Year providing they can complete the requirements of the first two years by the end of the Second Year.

BACHELOR OF SOCIAL WORK

1. **Admission requirements:** A full Grade 13 level program; OR equivalent Preliminary Year.

2. Students who have a B.A. or equivalent desiring to enter the B.S.W. program may be admitted. A minimum of one calendar year is required, but each person is admitted on an individual basis. Prospective applicants having a "B" average in their first degree program and seeking a professional social work degree are advised to consult the School of Social Work.

3. For admission to Second Year Honours, the student must have an overall average of C on the work of the First Year, and B in Social Work 115, and in at least one of Psychology 115 or Sociology 100.

4. Candidates for the B.S.W. must possess suitable personal qualities in addition to academic qualifications. Students wishing to continue into the Third year of the Social Work program must apply to the School of Social Work for permission to continue. Students with a first degree must apply to the School of Social Work for permission to enter the School. For both categories, acceptance by the School is a necessary part of the registration procedure.

First Year

Social Work 115; Sociology 100; Psychology 115; three other courses*.

Second Year

Social Work 202b, 235, 245a; Sociology 203; Psychology 222; two other courses.

Third Year

Social Work 301a, 335, 345; Psychology 231; two other courses.

Fourth Year

Social Work 436, 440c, 442c, 445ab, 450; two of: 401c, 402c, 403c, 404c, 405c.

*Among the seven "other" courses to be taken in Years I, II and III, two must be in the Sociology/Psychology subject areas. Of the five additional courses which the student is required to include in the Arts and Science area of his program of studies, not less than two must be in non-Social Science subjects.

SPECIAL PROGRAMS

PROGRAM IN COMPARATIVE LITERATURE STUDIES

I. Nature and Purpose

The discipline of comparative literature, distinct from the more generic notion of world literature or simply literature in translation, is a conscious broadening of perspectives in literary studies beyond the confines of one national or linguistic tradition. It encourages the student to consider literary trends and themes, evolution of styles and problems of literary criticism and history in a wide context of the literatures of Europe and the Western hemisphere, considered as an intelligible unity. Students enrolled in Comparative Literature Studies should take courses in one or more literature departments as they now exist, while also following with comparative literature. At the same time courses in the related fields of history, fine arts, theatre, music, philosophy, and Asian Studies will be counselled as idoneous for this program of studies.

II. Regulations for taking courses

Courses are available for a minor and a combined major program. Combined majors must take their courses in conjunction with another literature and language program.

In the three-year General program, a combined major must take at least five courses in comparative literature including Comparative Literature 210. A majority of these courses must be taken outside of the department in which the student is pursuing the complementary major program. An approved program will include courses in (1) the theory of literature, and in (2) literary relationships, influences and genres.

A minor in comparative literature is made up of three courses approved by the Committee, including Comparative Literature 210.

The program prepares the student for advanced studies in one or more literatures and/or comparative literature.

This program draws upon courses from various departments. Some of these courses require specialized language skills, others necessitate prerequisites for reasons of discipline competence.

It is therefore advisable that students be counselled concerning program choice by the Program chairman and by his colleagues designate and by the individual departments involved.

NOTE: Students intending to pursue Comparative Literature Studies on the graduate level should note that all graduate programs require a knowledge of at least **one** or usually **two** languages other than English and the speaker's native tongue.

For further information, contact: Prof. A. T. Van Den Hoven, Chairman, Comparative Literature Committee, Department of French Language and Literature.

All courses listed will not necessarily be offered in the coming year. Students should consult with the members of the Committee on Comparative Literature Studies and with the department in which the courses are offered.

For complete descriptions of courses see "Details of Subjects" in Departments concerned (p. E-82).

I. Theory

Asian Studies 225: Indian Classics in Translation.
Asian Studies 228: The Worlds of Tagore.
Comparative Literature 210: Theory of Literature.
English 420: Criticism in English from Plato to Samuel Johnson.
English 421: Criticism in English from Coleridge to the Present.
French 360b: The Novel and French Canadian Identity.
French 370a: History of French Criticism.
French 372b: Modern French Criticism.
French 452ab: Avant-garde Spirit in 20th Century French Literature.
Linguistics 101: Introduction to General Linguistics.
Philosophy 332: Philosophy of Art.

II. Influences, Relationships, Themes, Genres

Classical Civilization 330: The Classical Tradition.
English 331: Modern Fiction.
English 334: Modern Drama.
English 335: Modern Poetry.
English 416: Mediaeval European Literature.
English 431: Contemporary Drama.
German 499: Seminar in Weltliteratur.
Russian 338: Russian Literature in European Context: The Novel.

Related Courses Available In Individual Departments

Dramatic Art:
205: Introduction to the Theatre

Classical Studies:
Class. Civ. 117—Literature of Ancient Greece in Translation
Class. Civ. 118—Literature of Ancient Rome in Translation

Communication Arts:
240: History of Cinematic Art

Asian Studies:
220—Indian Civilization
225—Indian Classics in Translation
260—Far Eastern Civilization

Fine Arts:
Any art history course offered by the School of Fine Arts

Germanic and Slavic Studies:
German 200—A survey of the cultural traditions of German-speaking Europe.
Scandinavian 318—A survey of cultural traditions of Scandinavian Europe.

Music:
118—Music History and Literature
220—Music in Western Civilization
228, 338, 448—History of Music

Sociology and Anthropology:
Sociology 403—The Sociology of Culture
Anthropology 351—Language in Culture

PROGRAM IN LINGUISTICS

Major requirements: Five to seven full courses including Linguistics 101.

Minor requirements: Three to five full courses including Linguistics 101.

NOTE: Students following minor or major programs must choose their courses in Linguistics in consultation with the program director. Students are expected to abide by all departmental regulations with respect to prerequisites.

For full description of courses, see Department concerned (p. E-82).

Not all courses listed may be offered in any one year. Students should consult with the program director.

For further information, contact Dr. Paul Cassano, Chairman, Linguistics Committee, Department of French Language and Literature.

Anthropology 350: Anthropological Linguistics.
Anthropology 351: Language in Culture.
English 275: Modern English and Linguistics.
English 280: History of the English Language.
French 320: Old French.
German 363: Introduction to Germanic Philology.
Italian 311: History of the Italian Language.
Linguistics 101: Introduction to General Linguistics.
Linguistics 201: Applied Linguistics.
Linguistics 301: Introducton to Romance Linguistics.
Linguistics 305: The Structure of Canadian French.
Philosophy 200: Philosophy of Language I.
Philosophy 400: Philosophy of Language II.
Psychology 344: Psychology of Communication.
Russian 345: The Structure of Modern Russian.
Spanish 212y: Phonetics.
Spanish 315: History of the Spanish Language.
Spanish 316: History of New World Spanish.

PROGRAM FOR STUDIES IN SOCIAL ACTION

I. Nature and Purpose of the Program

The Program for Studies in Social Action is a cooperative interdepartmental and interfaculty venture bringing together courses designed to help prepare students to make contributions as responsible citizens toward overcoming some of today's urgent social problems. This venture has grown primarily out of the initiative of students who have been disturbed by the human suffering, present and potential, created by such problems as poverty, the population explosion, environmental pollution, racism, urban blight, and international tensions which could lead to the horrors of nuclear, chemical, or biological warfare. A grant from the Students' Administrative Council enabled several students during the summer of 1969 to provide the key impetus for organizing the Program.

The courses in the Program for Studies in Social Action, drawing upon resources both of the University and of the wider community, stress the study of means by which remedies for social problems can be developed and implemented. The Program's courses include careful analyses of social problems and of possible alternative solutions, and also draw upon such analyses provided in other courses, many of which have long been offered in the University. The additional dimension provided by the Program is special emphasis on the study of concrete, practical means by which citizens can participate in efforts to remedy social problems.

II. Regulations for taking courses in the Program

The courses available in the Program for Studies in Social Action are offered by a variety of faculties and departments. These courses may be taken, therefore, in any way that fits into existing curriculum requirements—whether as part of a major or of a minor, or as options. Moreover, all the courses listed in the Program can be treated as a "subject" for purposes of the **minor** in the Faculty of Arts and Science. That is, any three to five courses listed in the Program can be taken (provided the student has completed any prerequisites specified) to fulfill the requirement for the minor. No more than one first year course may be included in this minor, and no course in the same department as the student's major.

The instructors (or where "Staff" is indicated, the Departments) listed below have committed themselves to offer their sections of these courses as part of the Program; that is, stressing means by which citizens can participate in efforts to remedy social problems. If the instructor of a course should be changed, the course might not remain in the Program. To be certain, students should check with the instructors. Moreover, additional courses might be added to the Program between calendar printings. Students can obtain the latest information from the Registrar, or from either of the Program Coordinators: Professor George H. Crowell, Department of Theology, and Professor H. Dale Woodyard, Department of Psychology.

III. Courses Available in the Program

For complete descriptions of courses, see "Details of Subjects" in Departments concerned (p. E-82).

Chemistry 301: Chemistry and Society. Professor Wood.
Roman History 221: History of the Roman Republic. Professor C. A. Querbach.
Geography 331: Resources and Conservation.
Geography 350: Political Geography: Professor Vandall.
Geography 370: Urban Geography. Professor Romsa.
Geography 447: City and Regional Planning. Professor Romsa.
Law 200: Law and Social Issues. (Offered through Extension Division for credit in the Faculty of Arts and Science).
Physics 339: Physics and Society. Professors Schlesinger and Szamosi.
Political Science 315: Urban Politics. Professor Price.
Political Science 412: Political Parties in Canada. Professor White.
Psychology 231: Abnormal Psychology. Professor Woodyard.
Psychology 340c: Psychology of Social Change. Professors Kaplan, Libby, Minton, Schneider, Starr, Woodyard.
Psychology 341c: Contemporary Issues and Psychology. Professor Woodyard.
Psychology 342: Environmental Psychology. Professors Libby and Minton.
Psychology 344: Psychology of Communication. Professor Malone.
Sociology 226c: Sociology of Work and Occupations. Professor Booth.
Sociology 330c: Social Change. Professor Layne.
Sociology 331c: Collective Behaviour. Professor Ferguson.
Speech 204: Discussion and Debate. Professor Miller.
Theology 320: The Biological Revolution and Modern Ethics. Professors Crowell, Suttor.
Theology 321: The Churches and Society. Professor Crowell.

CERTIFICATE IN PUBLIC ADMINISTRATION

First Year

Bus. Ad. 119: Business Organization and Management.
Pol. Sc. 110: Government of Canada.

Second Year

Bus. Ad. 115: Introduction to Financial Accounting.
Pol. Sc. 315: Urban Politics.

Third Year

Bus. Ad. 346: Personnel Management and Industrial Relations.
Pol. Sc. 325: Canadian Public Policy and Administration.

This program may be pursued only in the Extension Division.

Three of the prescribed courses are from the field of Business Administration and three from Political Science. At the rate of two subjects per year, the minimum time required for the Certificate is three years. The student may, however, extend this period by taking only one course per year.

Students must obtain an overall "C" average in the six prescribed courses to merit the Certificate. No supplemental examinations may be written in any of the subjects of the Certificate Program.

CERTIFICATE IN THEOLOGY

Admission requirements: A full Grade 13 level program; OR equivalent "Preliminary Year". For admission as an Adult student, see p. D-10.

Program requirements:

> Theology 270
> Theology 271
> Theology 290
> Any other three courses in Theology not previously taken.

The Certificate in Theology may be pursued only in the Extension Division. At the rate of two subjects per session, the minimum time required for the Certificate is two years and one summer, or two summers and one year. The student may, however, extend this period if unable to take two courses per session. These courses may all be applied to the Bachelor of Arts degree.

Students must obtain an overall "C" average in the six courses to merit the Certificate. No supplemental examinations may be written in any of the subjects of the Certificate program.

DETAILS OF SUBJECTS

Subject Code

Courses in the Preliminary Year are numbered 001-099; courses in the First Year are numbered 100-199; courses in the Second Year are numbered 200-299; courses in the Third Year are numbered 300-399; courses in the Fourth Year are numbered 400-499. Graduate courses are numbered 500 and up.

This code was adopted in 1970; former numbers, if changed, are shown in brackets.

Every subject extends over the complete academic year (two semesters) and counts as a full course, except where otherwise indicated. A course whose number is followed by "a", "b", or "y" is a half course, given usually in the first semester, the second semester, or throughout the year, respectively; the letter "c" indicates a half course, which may be taught either first or second semester.

ANTHROPOLOGY

(See p. E-181).

ASIAN STUDIES

Officers of Instruction:

Professor: J. W. Spellman, Ph.D. (Head of the Department)

Associate Professors: N. A. Jairazbhoy, Ph.D.
K. K. Sarkar, Ph.D.

Assistant Professors: C. Ansley, M.A.
M. Mehta, Ph.D.
D. N. Sharma, M.A.

Major Requirements: Seven courses including Asian Studies 115. Intermediate knowledge of an Asian language. Other courses in consultation with the Department.

Minor Requirements: Three to five courses including Asian Studies 115. For Honours Programs see page E-27.

All courses listed will not necessarily be taught in the coming year.

Course descriptions:

115. Asian Civilization: An inquiry into the oldest human civilizations comprising the greater part of the world's population. An introductory course in which specialists on South Asia, Southeast Asia, and East Asia will discuss the history, religion, politics, societies and dominant cultural values of their special area. Audio-visual aids and selected reading. (3 hours a week).

118. Art of Asia: An introductory survey of the art of Asia with special emphasis on India and Southeast Asia with some treatment of the arts of China and Japan. (3 hours a week).

121. Hindi I: An elementary course in the reading, writing, and speaking of India's major language. (5 lectures, 2 laboratory hours a week).

123. Survey of Music of India: An elementary music appreciation course dealing with folk, tribal, devotional, ritualistic, popular, classical and contemporary music of India. Musical forms, instruments and aesthetics examined with an emphasis on the relationship of music to the culture. Audio-visual materials will be used. (3 hours a week).

140. Southeast Asian Civilizations: An examination of the several major traditions, influences from India and China, traditional values, responses to imperialism and contemporary issues. **(3 hours a week).**

216. Asia, Systematic and Regional. (See Geography 330).

217. Asian Foods and Cooking: A combination of lectures and practical cooking instructions designed to relate Asian foods to the geographical and cultural environments of their use. **(3 hours a week).**

218. Asian Sexual Values: A study of Asian erotic literature, sculpture, sexual customs and taboos, fertility rites, legal and social sexual regulations, the relationship of religion and religious values to Asian sexual values. **(3 hours a week).**

220. Indian Civilization: The culture of India in its broadest sense—history, politics, religion, philosophy, and literature. Lectures, films, tape recordings and readings. An examination of contrasting cultural values of ancient India and problems of contemporary India. **(3 hours a week).**

221. Hindi II: An advanced course in Hindi with emphasis on fluency of reading and speaking. (Prerequisite: Asian Studies 121 or permission). **(5 lectures, 2 laboratory hours a week).**

223. Music of North India: A music appreciation course dealing with the background and basic theory of North Indian classical music. The course will include the performance of North Indian vocal music and extensive use of audio-visual materials. **(3 hours a week).**

225. Indian Classics in Translation: A critical study of the classical literature of ancient India in modern English translations, with a special emphasis on the cultural values. **(3 hours a week).**

227. Hinduism and Buddhism: An introduction to the essentials of Hinduism and Buddhism with a special reference to India, on the basis of their history, literature, philosophical doctrines, and religious and social practices. **(3 hours a week).**

228. The Worlds of Tagore: A study and appreciation of the literature, art, music, poetry, education and religious philosophy of Rabindranath Tagore, one of the most creative geniuses of India. **(3 hours a week).**

229. Sanskrit I: Graded introduction to the script and structure of India's classical language, with an emphasis on the development of the ability to read. **(3 hours a week).**

230. History of Modern India: A study of the foundations of British rule, social and political change, the nationalist movement and the struggle leading to Indian independence in 1947. **(3 hours a week).**

231. Art and Archaeology of South Asia: A study designed to develop an appreciation of the sculpture, paintings, iconography and temple architecture of India with treatment of the relevant cultural and historical aspects. Archaeological methods and sites will also be discussed. **(3 hours a week).**

241. History of South East Asia: An examination of the development of historical and cultural patterns as well as social, political and economic institutions from earliest times to the present. **(3 hours a week).**

260. Far Eastern Civilization: An introduction to the people and cultures of China, Korea and Japan discussing aspects of the geography, history, religion, philosophy and literature. Impact of traditional attitudes on contemporary issues with special attention to modern China. **(3 hours a week).**

261. Chinese I: A basic course in the Chinese language. This course will involve intensive concentration on the Chinese spoken language. The student will also be given an introduction to the written Chinese character. Primary purpose of the course is to acquaint the student with the cultural impact of the Chinese language on East Asia. It may also, however, serve as basis for continuing study by students with specialized interest in Chinese. (By permission only). **(Hours to be announced; full course).**

265. History of Japan: A study of the development of the social institutions, religion and culture of Japan. The political and economic growth, foreign relations and the rise of Imperial Japan from the beginning of the Tokugawa Shogunate. **(3 hours a week).**

313. Contemporary Societies in Transition. (See Anthropology 390).

316. Asian Government and Politics. (See Political Science 245ab).

317. Encounter with World Religions. (See Theology 290).

319. Introduction to Thesis: Under the guidance of an instructor, the student will select a topic for research, become familiar with research techniques, methods of analysis, interpretation and underlying themes. (Required of all Honours students; others by special permission). **(Full course).**

321. Indian Cultural Values: An inquiry comparing and contrasting Indian and western ideas and emphasis on truth, order, time, success, wealth, punishment, sex, size and other values in an effort to observe the impact of values on religion, politics, and other human activities. (Prerequisite: Asian Studies 115, 220 or permission). **(3 hours a week).**

323. Sitar and Tabla: Designed to provide instruction in the performance and playing techniques of the Sitar (a string instrument) and Tabla (drum) under professional supervision. Group performance sessions. (Prerequisite: Asian Studies 223 or permission). **(3 hours a week).**

327. Indian Philosophy: An advanced study of the philosophies of India including the classical Hindu systems of Vedanta and Yoga, those of Buddhism and Jainism, as well as modern Indian thinkers such as Aurobindo, Ramakrishna and Gandhi. **(3 hours a week).**

329. Sanskrit II: A further continuation of the study of Sanskrit grammar on a higher level, with the aid of passages from the Sanskrit literature. **(3 hours a week).**

330. Indian Architecture: An examination of the structure, symbolism and historic development of styles in Indian monuments and buildings with particular emphasis on the Hindu temple. (Prerequisite: Asian Studies 231 or permission). **(3 hours a week).**

331. India and Southeast Asia: A study of cultural, political and social relationships between India and Southeast Asia from earliest times to the present. The course will also focus on popular customs, beliefs and artistic borrowing between the various societies. **(3 hours a week).**

360b. Islamic Art: (See Fine Arts 350b).

361. Chinese II: A continuation of 261. (Prerequisite: Asian Studies 261 or permission). **(3 hours a week).**

365. Modern China: An examination of the political history of China from 1839 to the present time. The modern nationalist movement, the development of the communist party, the contemporary problems of China will also be studied. Includes a critical evaluation of Chinese land reform, the anti-rightist campaigns against the intellectuals, the Great Leap Forward, the origins and development of the Cultural Revolution. Particular stress also on the Korean War, Sino-Soviet relations, and the Sino-Indian border dispute. **(3 hours a week).**

367. History of China: A study of the recorded history of China examining the main technological, artistic, literary, philosophical and political developments of the various dynastic periods up to 1839. **(3 hours a week).**

419. Thesis: Using the resources and research materials gained earlier the student will write and complete the thesis. (Required of all Honours students; others by special permission only). Accepted as equivalent of two courses. (Prerequisite: Asian Studies 319).

421. Ancient Indian History: A study of the historical and cultural developments from the Indus Valley Civilization to the coming of the Muslims. Some treatment of religious, sociological and philosophical themes will be included. Open to honours students only, or by special permission. (Prerequisite: Asian Studies 220 or permission). **(3 hours a week).**

425. Ancient Indian Politics: A study of the concepts of government, principles of law and statecraft, theories of kingship and other topics designed to acquaint the student with perspectives on politics other than traditional western ones. Open to honours students only, or by special permission. (Prerequisite: Asian Studies 220 or permission). **(3 hours a week).**

439. Tutorial in Indian Studies: For students wishing to read, research, or study in an area of Indian Studies not covered by another course. Extensive readings and writing. Open to honours students only, or by special permission. **(3 hours a week).**

469. Tutorial in Chinese Studies: For students wishing to read, research, or study in an area of Chinese Studies not covered by another course. Extensive reading and writing. Open to Honours students only, or by special permission. **(3 hours a week).**

BIOLOGY

Officers of Instruction

Professors: R. J. Doyle, Ph.D. (Head of the Department).
M. L. Petras, Ph.D.
W. G. Benedict, Ph.D.
H. D. McCurdy, Ph.D.
D. T. N. Pillay, Ph.D.
L. R. Sabina, Ph.D.
A. H. Warner, Ph.D.

Associate Professors: J. R. Dougherty, C.S.B., M.S.
*J. M. Winner, Ph.D.
J. E. J. Habowsky, Ph.D.
A. B. Okey, Ph.D.

Assistant Professors: D. Des S. Thomas, Ph.D.
R. T. M'Closkey, Ph.D.
D. G. Wallen, Ph.D.
T. K. Mukkur, Ph.D.

*On leave.

Major requirements in Biology: Six to seven courses including 110.

Students majoring in Biology should strengthen their biological preparation by selecting a minor in Chemistry or Mathematics or any other minor to be selected in consultation with departmental counsellors.

Minor requirements in Biology: Three to five courses, including Biology 110.

For major in General and Honours program, see p. E-60; for Honours Chemistry and Biology, see p. E-63; for Honours Biophysics, see p. E-68.

All courses listed will not necessarily be taught in any given year.

*The courses below designated by * may be offered in whole or in part on an audio-tutorial basis. Much of the instruction is self-paced, using audio-visual aids with no rigid scheduling of lectures and/or laboratories. Please consult departmental counsellors for details.

#The courses designated by # may not be taken for credit as a major or minor towards a B.Sc. degree.

Students majoring in Biology with Grade 13 or equivalent may obtain advanced standing in Biology 110 by the successful completion of an examination given by the department early in September. Please consult departmental office for further details.

NOTE: Timetable assignments for courses will be made as much as possible on the basis of the recommended course sequences. The Biology Department reserves the right to limit registration in any course in this department and where this occurs to give preference to students on the basis of their year in the program.

Course descriptions:

I. BIOLOGY

101.# **Principles and Implications of Biology:** An introduction to the major concepts of biological systems with emphasis on the application of biological ideas to human problems including nutrition, genetic engineering, heredity, population and resources. This course may not be counted as one of the six required courses for Biology majors or one of the three required courses for Biology minors. (2 lecture hours a week).

106.# **Microbiology for Nurses:** A survey of basic microbiology emphasizing structure, classification and physiology of microbes pathogenic for man. (Prerequisites: Biology 110 or Grade 13 Biology; corequisite Chem. 001 or 109). Not open to majors in the biological sciences. (2 lectures full year and 2 laboratory hours a week half year).

110*.   Principles of Biology: The principles of scientific inference, molecular and cellular biology, organismic and developmental biology, and population and environmental biology. For majors and minors in the biological sciences, nursing and physical education. **(2 lectures, 3 laboratory hours, one tutorial hour a week).**

202.#   Human Anatomy and Physiology: Structure and function of the human body with emphasis on the integrating and controlling aspects of bodily behaviour. (Prerequisite: Biology 110 or Grade 13 Biology). Not open to Biology majors or those who take Biology 304 or 305. **(3 lectures, 3 laboratory hours a week).**

209b.#   Human Inheritance: A general examination of genetics especially as applicable to humans. (Prerequisite: Biology 110 or Grade 13 Biology). Not open to majors in the biological sciences. **(2 lecture hours and one seminar session a week, one semester; half course).**

228a.*   Cytology: A study of the organization of animal and plant cells and micro-organisms. (Prerequisite: Biology 110 or consent of instructor). **(2 lectures, 3 laboratory hours a week, one semester; half course).**

229b.   Genetics: Mendelian genetics, chromosome and gene theory, linkage and crossing-over, sex-determination and sex-linkage, cytogenetic aberrations, the nature and action of the gene, mutation and population genetics. (Prerequisite: Mathematics 010 or 190 and Biology 110). **(3 lectures a week, one semester; half course).**

237a.   Ecology: An introduction to the study of plant and animal populations. The structure and dynamics of populations, species interactions and community organizations are treated. (Prerequisite: Biology 110 or Grade 13 Biology). **(2 lectures, 3 laboratory hours a week, one semester; half course).**

304.#   Human Physiology: A survey of the functions of the human body. This course is intended for students who desire an introduction to human physiology. Lecture topics are same as Biology 305. Not open to Biology majors or those who take Biology 202. (Prerequisite: Biology 110 or Grade 13 Biology). **(2 lectures, 1 tutorial demonstration hour a week).**

305.#   Human Physiology: Lecture topics are the same as Biology 304. This is open to a limited number of students. Not open to Biology majors or those who take Biology 202. (Prerequisites: Biology 110 or Grade 13 Biology; and consent of instructor). **(2 lectures, 3 laboratory hours a week).**

320.   The Biological Revolution and Modern Ethics. An investigation, with a view to specific action, of directions biology is taking in fields such as transplants, eugenics, fertility-control, environmental pollution, etc. (This course is given with the Theology Department). (Prerequisite: Biology 101 or equivalent). **(2 seminar hours a week).** [Discontinued in 1972].

330a.   Cellular Physiology: This course will consider problems of special interest to contemporary cell biologists. Special emphasis is placed upon sub-cellular particles and their role in cell/tissue function. The laboratory is designed to introduce the student to methodology currently employed in the study of nerve conduction, respiration, transport of bio-molecules, mitochondria, nuclei, etc. and requires formal laboratory reports. (Prerequisites: Biology 228a, Chemistry 203a, 206b). **(2 lectures, 3 laboratory hours a week, one semester; half course).**

338c.   Undergraduate Seminar.   (2 hours a week, one semester; half course).

437a. Field Biology: A course in testing ecological hypotheses relating to natural populations. Field work includes short term projects and weekend trips to representative habitats, with an intensive investigation of a local terrestrial habitat. (Prerequisite: Biology 237a, Mathematics 251a). **(1 hour orientation a week, one 5-day field trip early in the semester, some weekend field trips, one semester; half course).**

442b. Evolution: Topics include the origin of organisms, the interaction of gene mutation, selection and population characteristics in the process of evolution, mechanisms of speciation, and current problems in evolution. (Prerequisite: Biology 229b). **(3 lectures a week, one semester; half course).**

443a. Aquatic Biology: This course will consider the physical and chemical properties of natural waters in relation to biotic communities in the aquatic environment. Major emphasis will be placed on the biology of local waters, although some consideration of the estuarine and marine environments will be undertaken. (Prerequisites: Biology 110, Chemistry 111z, Biology 237a). **(2 lectures, 3 laboratory hours a week, one semester; half course).**

444b. Developmental Biology: A study of nucleo-cytoplasmic interactions and the role of the nucleic acids during embryonic development. (Prerequisites: Zoology 434a, Chemistry 203a, 206b, and/or consent of the instructor). **(3 lectures a week, one semester; half course).**

448b. Electronmicroscopy: Mainly a laboratory course to examine and apply the analysis and methodology necessary to examine biological material. Open only to honours students. (Prerequisites: Biology 228a, and consent of instructor). **(2 lectures, 4 laboratory hours a week, one semester; half course).**

454b. Molecular Biology and Regulation: A study on the initiation and control of nucleic acid synthesis and on the role of regulators of nucleic acid metabolism. (Prerequisite: Chemistry 306a or equivalent). **(3 lectures a week, one semester; half course).**

455c-499c. Special Topics in Biology: Selected topics of current interest. (Prerequisite: consent of instructor). **(2 hours a week, one semester; half course).**

II. BOTANY

201c.# Applied Botany: A practical introduction to the propagation, identification, nutrition, and cultivation of plants and the control of pests and diseases. This course may not be counted as one of the six required courses for Biology majors. (Prerequisite: Biology 101 or consent of instructor). (3 lectures a week, one semester; half course).

222a.* Plant Anatomy and Morphology: A study of cells, tissues, reproductive structures, and life cycles throughout the plant kingdom. The laboratory will include an introduction to histological techniques. (Prerequisite: Biology 110). (2 lectures, 3 laboratory hours a week, one semester; half course).

224b. Plant Taxonomy: Systematic botany with emphasis on evolution and classification of flowering plants. (Prerequisites: Biology 110 or Grade 13 Biology with consent of instructor). (2 lectures, 3 laboratory hours a week, one semester; half course).

322b. Experimental Morphology: An introduction to theoretical and experimental aspects of plant morphogenesis. (Prerequisites: Biology 110). (1 lecture, 4 laboratory hours a week, one semester; half course).

400. Undergraduate Problems Course In Botany: Completion of undergraduate research project including submission of written final report. (Prerequisite: Consent of Department). (4 laboratory hours a week).

430b. Plant Physiology: General principles relating to cellular functions, nutrition, metabolism, growth and development in higher plants, with emphasis upon physiological phenomena associated with development. (Prerequisite: Biology 110; corequisite: Chemistry 203a, 206b). (3 lectures, 3 laboratory hours a week, one semester; half course).

437b.* General Mycology: Biology of the true fungi with emphasis on the experimental approach. (Prerequisite: Microbiology 226a or consent of instructor). (2 lectures, 3 laboratory hours a week, one semester; half course).

441b. Plant Pathology: Biology of parasitism with emphasis on ecologic physiology and biochemistry of infectious plant disease. (Prerequisite: Consent of instructor). (2 lectures, 3 laboratory hours a week, one semester; half course).

444c. Plant Growth Substances: Nature and physiological effects of auxins, gibberellins, kinins, inhibitors and growth retardants. (Prerequisite: consent of instructor). (2 lecture hours a week, one semester; half course).

455c-499c. Special Topics in Botany: Selected topics of current interest. (Prerequisite: consent of instructor). (2 hours a week, one semester; half course).

III. MICROBIOLOGY

226a. General Microbiology: Structure, growth, genetics, metabolism, taxonomy and control of micro-organisms. (Prerequisite: Biology 110; corequisite: Chemistry 203a). (2 lectures, 3 laboratory hours a week, one semester; half course).

226b. Immunology: A study of the basic principles of host-parasite interactions and mechanisms of immune reactivity. (Prerequisite: Microbiology 226a). (2 lectures, 3 laboratory hours a week, one semester; half course).

341c. Basic Virology: A study of bacterial, animal and human viruses: viral structures; function of subviral components; replication; the influence of physical and chemical agents; and the relationship of viruses to cancer. (Prerequisites: Microbiology 226a, 226b; corequisite: Chemistry 306a). (2 lectures, 3 laboratory hours a week, one semester; half course).

400. Undergraduate Problems Course in Microbiology: Completion of undergraduate research project including submission of written final report. (Prerequisite: consent of department). (4 laboratory hours a week).

431a. Pathogenic Microbiology: Bacteria and other micro-organisms in relation to human disease. Emphasis will be upon morphological, cultural and pathogenic characteristics of these organisms. (Prerequisites: Microbiology 226a, 226b). (2 lectures, 3 laboratory hours a week, one semester; half course).

433b. Food, Dairy and Sanitary Microbiology: Microbiology of food, dairy products and water supplies with emphasis upon standard laboratory procedures for their examination. (Prerequisite: Microbiology 226a). (2 lectures, 3 laboratory hours a week, one semester; half course).

436a. Advanced General Microbiology: An exploration of the biological activities and inter-relationships of micro-organisms in their natural environments. (Prerequisite: consent of instructor). (2 lectures, 3 laboratory hours a week, one semester; half course).

455c-499c. Special Topics in Microbiology: Selected topics of current interest. (Prerequisite: consent of instructor). (2 hours a week, one semester; half course).

IV. ZOOLOGY

222. Comparative Vertebrate Zoology: Phylogeny of the chordates; comparative anatomy of the various organ systems and their physiology in chordates; selected reading and discussions. (Prerequisite: Biology 110). **(2 lectures, 3 laboratory hours a week).**

336a.* Histology: Light microscopic examination of the primary tissues and their modifications: epithelium, connective, muscle and nerve tissue. Analysis of electron micrographs. (Prerequisite: Biology 228a or consent of instructor). **(2 lectures, 3 laboratory hours a week, one semester; half course).**

336b.* Histology: Light microscopic examination of organs and systems: circulatory, integumentary, digestive, respiratory, urogenital, endocrine systems and sensory organs. Analysis of electron micrographs. (Prerequisite: Zoology 336a). **(2 lectures, 3 laboratory hours a week, one semester; half course).**

400. Undergraduate Problems Course in Zoology: Completion of undergraduate research project including submission of written final report. (Prerequisite: Consent of department). **(4 laboratory hours a week).**

430a. Animal Physiology: The principles of animal physiology as illustrated by a study of cardiovascular, muscular and nervous, and respiratory systems, particularly in higher forms. (Prerequisite: Chemistry 206b, Physics 113, Zoology 222). **(2 lectures, 1 demonstration hour, 3 laboratory hours a week, one semester; half course).**

430b. Animal Physiology: The principles of animal physiology as illustrated by a study of blood, body fluids and urinary system, gastrointestinal system and metabolism, hormones and reproductive system, particularly in higher forms. (Prerequisite: Chemistry 206b, Physics 113, Zoology 222). **(2 lectures, 1 demonstration hour, 3 laboratory hours a week, one semester; half course).**

434a. Vertebrate Embryology: Early development of vertebrates with emphasis on current concepts of differentiation. (Prerequisite: Zoology 222). **(2 lectures, 3 laboratory hours a week, one semester; half course).**

435b. Parasitology: The various groups of animal parasites from the point of view of morphology, systematics and life history. In the laboratory, the methods of diagnosis of human diseases caused by parasitic protozoa and helminths will be emphasized. (Prerequisite: Biology 110). **(2 lectures, 3 laboratory hours a week, one semester; half course).**

437a. Biology of the Higher Invertebrates: A survey of the major coelomate invertebrates based upon evolutionary, phylogenetic and ecological considerations. (Prerequisite: Biology 110). **(2 lectures, 3 laboratory hours a week, one semester; half course).**

437b. Biology of the Lower Invertebrates: A survey of the lower invertebrates: Protozoa-Ashelminthes, with special reference to the parasitic forms. (Prerequisite: Biology 110). **(2 lectures, 3 laboratory hours a week, one semester; half course).**

446b. Endocrinology: Hormonal integration and regulation in animals; emphasis on mammalian systems. (Prerequisite: consent of instructor). **(2 lectures, 3 laboratory hours a week, one semester; half course).**

455c-499c. Special Topics in Zoology: Selected topics of current interest. (Prerequisite: consent of instructor). **(2 hours a week, one semester; half course).**

CHEMISTRY

Officers of Instruction:

Professors: F. A. DeMarco, Ph.D.
R. J. Thibert, Ph.D.
K. G. Rutherford, Ph.D.
S. J. W. Price, Ph.D.
W. J. Holland, Ph.D.
J. E. Drake, Ph.D.

Associate Professors: G. W. Wood, Ph.D. (Acting Head of the Department)
D. J. McKenney, Ph.D.
R. C. Rumfeldt, Ph.D.
*E. J. Bounsall, Ph.D.
C. S. Lin, Ph.D.
A. Turek, Ph.D. (Department of Geology)

Assistant Professors: J. L. Hencher, Ph.D.
J. M. McIntosh, Ph.D.
D. E. Schmidt, Ph.D.

Adjunct Professor: H. S. Asselstine, M.D.

Adjunct Associate Professor: T. F. Draisey, M.B.

Adjunct Assistant Professor: T. Hyde, M.D.

*On leave.

Major requirements: seven courses, including 111, 223, 224, 225ab, 332ab, 334; and one of 333, 335ab, 336.

Minor requirements: three to five courses, including 111.

For the General program with Chemistry Major, see p. E-62; for Honours Chemistry, p. E-62; for Honours Chemistry and Biology, p. E-63; for Honours Chemistry and Physics, p. E-63.

All courses listed will not necessarily be offered in the coming year.

#Courses designated by # may not be taken for credit as a major or minor towards a B.Sc. degree.

Course descriptions:

001. Basic Chemistry: An elementary course including a discussion of the elements, compounds, chemical reactions, periodic classification, chemical equilibria, atomic and nuclear structure. The various concepts in chemistry will be exemplified by the use of problems, demonstrations and laboratory exercises. (2 lectures a week, both semesters; 3 laboratory hours a week, one semester).

101.# An Introduction to Chemistry: A series of topics emphasizing what chemistry is and what chemists do. Topics related to everyday experience, but presented qualitatively. Some discussion of new frontiers. (2 lecture hours a week).

103b. Organic Chemistry for Biologists: Introduction to organic chemistry with emphasis on compounds and principles important to students of Biology. (Corequisite: Chemistry 111z). (2 lectures, 3 laboratory hours a week; one semester; half course).

109. Chemistry for Health Sciences: A course of particular interest to students of nursing and other health science areas, which will include selected areas of organic chemistry, biochemistry and physiological chemistry. (Prerequisite: Chemistry 001, Grade 13 Chemistry, or consent of Instructor). (2 lectures, 1 tutorial hour a week).

111. General Chemistry and Qualitative Analysis: A course in general chemistry with special emphasis on the physical aspects. The laboratory course consists of general chemistry experiments, and qualitative analysis. (3 lectures, 3 laboratory hours a week).

111z. General Chemistry for Biologists: The same as Chemistry 111 but without laboratory in second semester. (**3 lectures a week, both semesters; 3 laboratory hours a week, one semester; full course**).

203a. Organic Chemistry for Biologists: A continuation of Chemistry 103b with particular emphasis on the organic chemistry of constituents of protoplasm. (Prerequisites: Chemistry 111z and Chemistry 103b). (**2 lectures, 3 laboratory hours a week, one semester; half course**).

206b. Biochemistry: An introductory course in biochemistry for biology students with practical laboratory exercises. (Prerequisites: Chemistry 103b, 203a or 223). (**2 lectures, 3 laboratory hours a week, one semester; half course**).

223. Organic Chemistry: A fundamental approach to aliphatic and aromatic chemistry. (Prerequisite: Chemistry 111). (**2 lectures, 3 laboratory hours a week**).

223z. Organic Chemistry: Same lecture content as Chemistry 223. (Prerequisite: Chemistry 111). (**2 lectures a week, both semesters, 3 laboratory hours a week, one semester; full course**).

224. Physical Chemistry I: Thermodynamics, chemical equilibrium, changes of state, solutions and phase equilibria. (Prerequisites: Mathematics 115, Chemistry 111). (**2 lectures a week**).

225a. Inorganic Chemistry: Introduction to chemical bonding, valence bond and molecular orbital treatments, simple crystal field approach, stereochemistry. (Prerequisite: Chemistry 111). (**2 lectures a week, one semester; half course**).

225b. Inorganic Chemistry: Structural approach to main group chemistry including boranes, silicates, oxides, and interhalogens. (Prerequisite: Chemistry 111, 225a). (**2 lectures a week, one semester; half course**).

301.# Chemistry and Society — An Examination of What Chemists Do and How Chemistry Influences our Society: Recent discoveries and controversies will be treated as case studies revealing methodology and philosophy of science. Chemistry as a cultural force and the role of society in shaping the movements of science will be considered. The only prerequisite for this course is an enquiring mind. (**2 lectures a week**).

302a. Analytical Chemistry: Principles of titrimetric and gravimetric analyses. Prerequisite: Chemistry 111). (**2 lectures, 3 laboratory hours a week, one semester; half course**).

306a. Biochemistry: An intermediate course in Biochemistry for biology students emphasizing selected topics in intermediary metabolism and physiological chemistry. (Prerequisite: Chemistry 203a and 206b). (**3 lectures, 3 laboratory hours a week, one semester; half course**).

306b. Biochemistry: A continuation of Chemistry 306a with special emphasis on topics in physiological chemistry and biophysical chemistry. (Prerequisite: Chemistry 306a). (**3 lectures a week, one semester; half course**).

332a. Analytical Chemistry: Principles of titrimetric and gravimetric analyses. (Prerequisite: Chemistry 111). (**3 lectures, 3 laboratory hours a week, one semester; half course**).

332b. Analytical Chemistry: Principles of instrumental analysis. (Prerequisite: Chemistry 332a or equivalent). (**3 lectures, 3 laboratory hours a week, one semester; half course**).

332bL.   Analytical Chemistry: The laboratory portion only of Chemistry 332b. (Prerequisite: Chemistry 332a or equivalent). (3 laboratory hours a week, one semester; half course).

333.   Intermediate Organic Chemistry: Organic reactions studied as illustrations of the principles of stereochemistry, kinetics, and thermodynamics and in terms of their application to synthesis. (Prerequisite: Chemistry 223). (3 lectures, 3 laboratory hours a week).

333x.   Intermediate Organic Chemistry: The same as Chemistry 333, but without laboratory periods. (3 lectures a week; full course).

334.   Physical Chemistry II: Kinetic theory, introduction to reaction kinetics, electrochemistry, molecular structure, solid state, and liquid state. (Prerequisite: Chemistry 224). (3 lectures, 3 laboratory hours a week).

334a.   Physical Chemistry IIa: Kinetic theory, introduction to reaction kinetics, and electrochemistry. (Prerequisite: Chemistry 224). (3 lectures, 3 laboratory hours a week, first semester; half course).

334x.   Physical Chemistry II: The same as Chemistry 334, but without laboratory periods. (3 lectures a week; full course).

335a.   Inorganic Chemistry: A general survey of bonding and theories of bonding in coordination compounds. The interpretation of spectroscopic and magnetic properties of transition metal complex ions. (Prerequisite: Chemistry 225a). 3 lectures, 3 laboratory hours a week, one semester; half course).

335b.   Inorganic Chemistry: Nomenclature, structure, isomerism and stability in transition metal chemistry. An introduction to reaction mechanisms. (Prerequisite: Chemistry 225a). (3 lectures, 3 laboratory hours a week, one semester; half course).

335ax.   Inorganic Chemistry: The same as Chemistry 335a, but without laboratory periods. (3 lectures a week, one semester; half course).

335bx.   Inorganic Chemistry: The same as Chemistry 335b, but without laboratory periods. (3 lectures a week, one semester; half course).

336.   Biochemistry: An intensive general course with laboratory exercises designed to acquaint the student with the theory, problems, and laboratory procedures. (Prerequisites: Chemistry 223, or 103b and 203a). (3 lectures, 3 laboratory hours a week).

336x.   Biochemistry: The same as 336, but without laboratory. (Prerequisites. Chemistry 223 or 103b and 203a). (3 lectures a week, full course).

432c.   Analytical Chemistry: Special topics in analytical chemistry. (Prerequisite: Chemistry 332ab). (2 hours a week, one semester; half course).

433c.   Organic Chemistry: Special topics in organic chemistry. (Prerequisite: Chemistry 223 or 223z and consent of Instructor). (2 hours a week, one semester; half course).

434c.   Physical Chemistry: Special topics in physical chemistry. (Prerequisite: Chemistry 334). (2 lectures a week, one semester; half course).

435c.   Inorganic Chemistry: Chemical application of group theory. An introduction to the theory of finite groups and its applications to problems in molecular structure. (Prerequisite: Chemistry 335). (2 lectures a week, one semester; half course).

444. Physical Chemistry III: Reaction kinetics, photo and radiation chemistry, chemical statistics. (Prerequisite: Chemistry 334 or 334x). **(2 lectures, 3 laboratory hours a week).**

444x. Physical Chemistry III: The same as 444, but without laboratory. **(2 lectures a week; full course).**

446a. Intermediate Biochemistry: Special topics in biochemistry. (Prerequisite: Chemistry 306a or 336). **(2 lectures, 3 laboratory hours a week, one semester; half course).**

446b. Intermediate Biochemistry: Special topics in biochemistry. (Prerequisite: Chemistry 306a or 336). **(2 lectures, 3 laboratory hours a week, one semester; half course).**

446ax. Intermediate Biochemistry: The same as Chemistry 446a, but without laboratory periods. (Prerequisites: Chemistry 306a or 336). **(2 lectures a week, one semester; half course).**

446bx. Intermediate Biochemistry: The same as Chemistry 446b but without laboratory periods. (Prerequisite: Chemistry 306a or 336). **(2 lectures a week, one semester; half course).**

447. Theoretical Chemistry: A brief outline of the classical mechanics and the old quantum theory. Rigorous solution of the Schrodinger equation for simple systems and discussions on the electronic structure of more complex systems. **(2 lectures a week).**

449. Research: Original laboratory research in specialized topics. **(1 lecture, 12 laboratory hours a week).**

450y. Seminar: Discussion of selected topics from current literature. **(1 hour a week; half course).**

CLASSICAL STUDIES

Officers of Instruction:

Professor: J. Francis Leddy, D.Phil. (President of the University).

Associate Professors: Charles Fantazzi, Ph.D. (Head of the Department).
Stephen S. Bertman, Ph.D.
H. W. Bird, M.A.

Assistant Professors: William Felver, M.A.
Carl W. Querbach, Ph.D.
Mrs. Carlyn A. Querbach, M.A.

For major in general program, see page E-19; for Honours Classical Studies and Comparative Literature, see p. E-27; for Honours Classical Studies and Linguistics, see p. E-28; for Honours Latin see page E-46; for Honours English and Latin, see page E-34; for Honours French and Latin, see page E-38; for Honours Greek and Latin, see page E-43; for Honours Greek and Theology, see page E-43; for Honours Philosophy and Latin, see page E-50; for Honours Latin and Spanish, see page E-47.

All courses listed will not necessarily be offered in the coming year.

I. CLASSICAL CIVILIZATION

Major requirement: any five to seven courses.

Minor requirement: any three to five courses.

Any course in Greek and Roman History and any literature course in Greek or Latin numbered in the 200's or higher may be counted toward Classical Civilization major or minor requirements.

Classical Civilization courses are designed for students who are interested in the history and culture of the ancient classical world. **All readings are in English** and may serve as an essential background for various courses in classical and other literatures.

Course descriptions:

117. Literature of Ancient Greece in Translation: Reading and discussion of selected literary masterpieces of ancient Greece with emphasis upon their insights into the human condition and their relevancy to our own age. **(3 hours a week).**

118. Literature of Ancient Rome in Translation: Reading and discussion of selected literary masterpieces of ancient Rome with consideration of their continuous influence in the hstory of Western literature. **(3 hours a week).**

221. Renamed Roman History 221 in 1972.

225. Roman History of the Imperial Period: An historical study of the Roman Empire from the establishment of the principate by Augustus to the formal acceptance of Christianity by Constantine and the founding of Constantinople. **(3 hours a week).** [Discontinued in 1972; see Roman History 225].

235. Greek and Roman Art and Archaeology: A study of the artistic masterpieces and monuments of ancient Greece and Rome with emphasis upon the art of each people as an expression of their character and values. **(3 hours a week).**

330. The Classical Tradition: A study of forms, genres, themes, and use of myth from the classical literature of Greece and Rome through the Latin Middle Ages and vernacular Romance and English literatures up to and including the Renaissance. Epic, lyric, romance and didactic poetry. Knowledge of Latin or some Romance language is recommended but not required. **(3 hours a week).**

331. Greek and Roman Mythology and Religion: Studies in the origin and meaning of the Greek and Roman myths. Their religious, anthropological, historical and literary aspects will be examined. **(3 hours a week).**

465. Directed Readings in Classical Civilization: Designed for the advanced student who wishes to explore a special area of interest with the aid of a faculty advisor. **(Full course).**

II. GREEK AND ROMAN HISTORY

Major requirements: no major available.

Minor requirements: three to five courses. Greek 331, Latin 440, and Latin 444 may be counted as Greek and Roman History courses for the purpose of fulfilling the minor requirement.

Greek History 210. History of Ancient Greece: A study of Greek history and civilization from Minoan-Mycenaean times to the period of Roman intervention in the second century B.C. **(3 hours a week).**

Roman History 221. Roman History of the Republican Period: A study of Roman civilization from its early foundations to the fall of the Republic. The course includes a study of social problems in the Roman Republic in comparison with those of our modern civilization. **(3 hours a week).**

Roman History 225. Roman History of the Imperial Period: A study of the Roman Empire from the establishment of the principate by Augustus to the formal acceptance of Christianity by Constantine and the founding of Constantinople. **(3 hours a week).**

Greek and Roman History 465. Directed Readings in Greek and Roman History: Designed for the advanced student who wishes to explore a special area of interest with the aid of a faculty advisor. **(3 hours a week).**

III. GREEK

Major requirements: five to seven courses including Greek 112 or the equivalent.

Minor requirements: three to five courses, including Greek 112 or the equivalent.

004. Renumbered 104 in 1972.

104. [004] Introductory Greek: Vocabulary, forms and syntax. Selections from classical authors and New Testament. **(3 hours a week).**

111. The Greek New Testament: Reading in Greek of extensive selections from the Gospels and the Epistles, with emphasis on development of skills. **(3 hours a week).**

112. Advanced Greek: Review of vocabulary and grammar. Readings from classical prose and poetry. **(3 hours a week).**

222. Greek Epic: Selected books of the **Iliad** and **Odyssey**. Artistic design of the poems. Study of the epic dialect and epic conventions. The civilization of the Homeric Age. **(3 hours a week).**

331. Greek Historians: Reading of selected books of Thucydides, Xenophon, Herodotus and Polybius. Lectures on the history of the various periods. **(3 hours a week).**

332. Greek Tragedy: Selected plays of Aeschylus, Sophocles, and Euripides. Origins and conventions of Greek drama. **(3 hours a week).**

441. Greek Comedy and Greek Orators: Selected plays of Aristophanes. Orations of Lysias and Demosthenes. **(3 hours a week).**

442. Greek Philosophers: Reading of selected works of Plato and Aristotle. **(3 hours a week).**

443. Greek Lyric Poetry: Pindar; early lyric, iambic and elegiac poets; Theocritus and other Hellenistic poets. **(3 hours a week).**

465. Directed Readings in Greek Literature: Designed for the advanced student who wishes to explore a special area of interest with the aid of a faculty advisor. **(Full course).**

IV. LATIN

Major requirements: five to seven Latin courses, including Latin 104 or 112, or the equivalent, and in addition either Classical Civilization 221 or 225.

Minor requirements: three to five courses, including Latin 104 or 112, or the equivalent.

104. Accelerated Latin: An intensive introduction to the Latin language designed to equip the beginner with reading skills prerequisite for courses numbered in the 200's and above. **(5 hours a week).**

112. Advanced Latin: Designed for those who have previously studied the Latin language and wish to develop confidence and ability in translating. Selected passages from the works of Latin authors will be read. **(3 hours a week).**

Latin 104 or 112 or the equivalent is the only prerequisite for the following courses whether numbered in the 200's or 300's.

222. Lyric Poetry: Selected poems of Catullus and Odes of Horace. Linguistic and literary analysis. **(3 hours a week).**

224. Medieval Latin: Main emphasis on reading and comprehension of philosophical and ecclesiastical Latin. This course is exempt from the normal prerequisites and may be taken by anyone who has completed Grade 12 Latin. **(3 hours a week).**

225. The Aeneid: Artistic design of the poem; study of epic conventions and diction; metrical analysis. **(3 hours a week).**

227. Roman Comedy: Representative plays of Plautus and Terence. Origins and conventions of the ancient theatre. Reading in translation of the plays of Aristophanes and Menander. Examination of the colloquial Latin of the comedies. **(3 hours a week).**

331. Roman Satire: Complete investigation of the Roman genre of satire. Fragments of the earlier writers; intensive reading of Horace's **Satires** and **Epistles**, Juvenal and Persius. **(3 hours a week).**

332y. Roman Dramatic Production: An intensive study and performance in Latin of a Roman play: experience in the recitation of colloquial Latin. **(1 to 2 hours a week, all year; half course).**

335. Ovid's Metamorphoses and Love Poetry: A study of the poetic treatment of myth and the sophisticated eroticism of the **Ars Amatoria.** **(3 hours a week).**

336. Cicero and Later Prose Authors: Speeches and letters of Cicero, letters of Seneca and Pliny, and related prose works. **(3 hours a week).**

337y. Rapid Reading: Training in the skill of rapid comprehension of Latin at sight. Assignments adjusted to the ability and needs of each student. **(1 hour a week; half course).**

338. Survey of Latin Literature: An introduction to early Latin; specimens of both major and minor writers of the Golden and Silver Ages. Reading of the authors will be done mainly in Latin, with some supplementary reading in English translation. **(3 hours a week).**

339y. Prose Composition: Training in the writing of Latin prose. **(2 hours a week; half course).**

At least one course numbered in the 200's or 300's is prerequisite for selection of a course numbered in the 400's.

440. Roman Historians: Readings in Livy, Sallust and Tacitus. Research in various problems in Roman history. **(3 hours a week).**

443. Roman Philosophical Writings: Selections from Lucretius' **De Rerum Natura.** Readings in Cicero's **Tusculan Disputations** and **De Natura Deorum,** and in Seneca's philosophical works. **(3 hours a week).**

444. Roman Biography: A survey of biographical literature of the Romans. Reading of Tacitus' **Agricola** and selected biographies from Suetonius, Nepos and the **Historia Augusta. (3 hours a week).**

450. Virgil's Bucolics and Georgics; Elegiac Poets: Careful comparison of Virgil's poems with their Greek models; Virgilian poetic technique. The development of pastoral poetry in the vernacular languages and the ubiquitous influence of the **Bucolics.** Development of elegiac poetry in Rome. **(3 hours a week).**

463y. Advanced Latin Prose Composition: Techniques of writing longer passages of continuous prose. **(1 hour a week).**

465. Directed Readings in Latin Literature: Designed for the advanced student who wishes to explore a special area of interest with the aid of a faculty advisor. **(Full course).**

COMMUNICATION ARTS

Officers of Instruction:

Associate Professors: Walter Romanow, M.A.
Stuart Selby, Ed.D. (Head of the Department)
Hugh Edmunds, B.A., B.Ed.

Lecturer: Mary Gerace, M.A.

Sessional Lecturer: Patrick Masterson, M.A.

Major requirements: 100; at least one of 205, 210, 215; at least one of 220, 225, 240; two to four other Communication Arts courses, except 120.

Minor requirements: 100; at least one of 205, 210, 215; at least one of 220, 225, 240.

All courses listed will not necessarily be offered in the coming year.

For major in the general program, see p. E-19. For Honours Communication Arts, see p. E-28.

Course descriptions:

100. Survey of Mass Media: Designed to develop an understanding of how the media of mass communications both serve and reflect society. The program examines media functions, history, and potential. Included for study are the following: newspapers, magazines, comics, films, radio, television, recordings. The course will be oriented towards laboratory practice and experimentation in a radio and television environment, and approximately one-third of the course will be laboratory research. **(2 lectures, 1 laboratory hour a week).**

120. Writing and Communication Effectiveness: The course is aimed at an overall development of writing effectiveness: emphasis is given to organizational task achievement within the context of communications theory. (No prerequisite:). Restricted to students in Business Administration in 1972-73). **(3 hours a week).**

205. Visual Communication: A non-technical survey of the elements of still and motion picture photography in the press, the arts, education, and research. This class explores the nature of visual communication through personal or non-professional equipment. Students must provide their own cameras. (Prerequisite: Communication Arts 100). **(1 lecture, 2 laboratory hours a week).**

210. The Film Making Process: An introduction to film making, the basic construction of a film with emphasis on continuity and visual perception. Each student helps make several films a year. (Prerequisite: C.A. 100, and permission of Instructor; Normally available only to majors). **(1 lecture, 2 laboratory hours a week).**

215. Production Processes in Radio and Television: This course includes familiarisation with the tools of broadcasting and experiments in the creative planning and producing of programs from rehearsal to final production. (Prerequisite: C.A. 100, and permission of Instructor; Normally available only to majors). **(1 lecture, 2 laboratory hours a week).**

220. Content Planning Processes in Print and Broadcast Media: The role of the content planner in print and broadcast media, examined in the context within which he works: social responsibility, government regulations, public and private ownership, rating and circulations systems, advertising-commercialism. (Prerequisite: Communication Arts 100). **(3 hours a week).**

225. Communication and Technology in Education: An exploration of the problems of individualising and democratising education in and out of school in an age of increasing technological complexity and centralisation. The educational implications of popular mass media and school systems are studied. **(3 hours a week).**

240. History of Cinema: An examination of the development of the art, the industry, and the technology of film from 1895 to 1945. Theatrical and documentary films are studied in the context of their times. (Prerequisite: C.A. 100 or permission). **(2 lecture and 2 laboratory-screening hours a week).**

310. Advanced Film Making: This course emphasizes the utilisation of sound systems in film making; pictorial design; photo and film journalism; the documentary film. (Prerequisite: Communication Arts 210 and permission of Instructor). **(3 hours a week).**

315. Advanced Production Processes in Radio and Television: This course concentrates on the creative-management roles of the broadcasting director and producer and emphasizes the production evaluation functions in broadcasting. (Prerequisite: Communication Arts 215 and permission of Instructor). **(1 lecture, 2 laboratory hours a week).**

320. Communication and the Press: An examination of the style and content in written communication in newspaper, magazine, and broadcast dissemination of news and public affairs. (Prerequisite: C.A. 220). **(3 hours a week).**

330. Materials and Background of Mass Media Criticism: Contemporary critical methods examined as they apply to the communication arts: media rhetorical strategies, characteristics of content, and influences on audiences. Extensive reading in critical literature. (Prerequisite: C.A. 100). **(3 hours a week).**

335. Methods of Mass Communication Analysis: A detailed examination of mass media emphasizing research designs and settings, methodologies and instruments, and research technologies. (Prerequisite: C.A. 100). **(3 hours a week).**

340. The Contemporary Cinema: An examination of the changing art, industry, and technology of the film from 1946 to the present. Theatrical and documentary films are studied in the context of film criticism. (Prerequisite: C.A. 240 or permission of Instructor). **(2 lecture and 2 laboratory-screening hours a week).**

345. Broadcasting and the Popular Arts: An historical examination of radio, television and the popular arts in their utilisation of the forms and conventions of folk art and fine arts and letters to communicate experience in an entertaining manner. (Prerequisite: C.A. 100). **(3 hours a week).**

405. Production Research: An advanced class in film or broadcast production research in which students work on individual and group projects in consultation with the instructor and staff. (Prerequisite: C.A. 310 or 315, and consent of department). **(3 hours a week).** [Not offered in 1972-73].

425. Media Education Strategies. An examination of methods and materials for teaching about the arts, techniques, and the social effects of mass communication in school and community situations. (Prerequisite: C.A. 225, or consent of department). **(3 hours a week).**

430. Communication Policy: Regulation and Control of the Media in Canada, the United Kingdom, and the United States. A comparative study of governmental and non-governmental controls of the media, with special attention to the influences of international media on Canadian media operations. (Prerequisite: C.A. 220, C.A. 330, or consent of Department). **(3 hours a week).**

435. Problems in Media Analysis: Research and the study of research into selected mass communications-audiences problems. (Prerequisite: C.A. 335, or consent of department). **(3 hours a week).** [Not offered in 1972-73].

440. Cinema Studies: Investigation of selected national, stylistic, thematic or period problems in film. (Prerequisites: C.A. 240 and C.A. 340, or consent of department). **(3 hours a week).**

445. Broadcasting Studies: Investigation of selected problems in broadcasting, with emphasis on content implications due to administrative philosophies and changing technology. (Prerequisites: C.A. 220 and C.A. 345, or consent of department). **(3 hours a week).**

450. Press Studies: A closer examination of the changing situation of the press in response to electronic media. (Prerequisites: C.A. 220 and 320 or consent of department). **(3 hours a week).** [Not offered in 1972-73].

COMPARATIVE LITERATURE

DRAMATIC ART

Officers of Instruction:

Professor: D. P. Kelly, M.A. (Director of the School)

Associate Professors: G. L. Neilson, M.F.A.
J. Hackett, Ph.D.

Assistant Professors: R. V. Paul, M.A.
W. G. McGuigan, L.G.S.M.
Mrs. J. Benson, L.G.S.M.
D. M. Mady, B.A.
A. Gazetas, M.F.A.

Special Instructors: J. Miller, Ph.D. (Part-time)
J. Benson (Part-time)
J. Bickle, Fellow, I.S.T.D. (Part-time)
R. Bowers (Part-time)

Major requirements: For B.F.A. in Dramatic Art, see page E-71; for Honours Drama and English, see page E-29; for B.A. major in Drama; five to seven courses (see also page E-17 for general program requirements).

Minor requirements: three to five courses. (see also page E-17).

For Drama majors and minors, Drama 111 is a prerequisite for all courses. Drama 111 must be taken in the first year by all Drama majors. Only Drama majors and minors will be admitted. Drama 111 is **not** a prerequisite for courses in the Speech area.

Non-majors wishing to take a Drama course as an option may enter any of the B.A. and/or Honours Drama and English courses with the consent of the instructor.

All courses listed will not necessarily be offered in the coming year.

Course descriptions:

I. BACHELOR OF FINE ARTS COURSES

110. Voice Production 1: A study and practice of voice and speech for the theatre incorporating the phonetic principles of Kenyon and Knott. Introduction of gross anatomy and physiology of the vocal mechanism. **(3 hours a week, studio seminar).**

111. Introduction to Theatre Arts: The theory of play analysis; the theory of acting; the theory of directing; the theory of technical theatre. It is required that students taking this course be crew members for at least one production. **(3 hours a week plus production assignment as crew members).**

112a. Phonetics: A study of the classifications of sound, particularly with regard to pronunciation of the English language. **(1 hour laboratory a week, one semester; half course).**

112b. Diction: A practical course in the acquisition of received speech. **(1 hour laboratory a week, one semester; half course).**

114y. Oral Interpretation: In-depth study of how to analyze the literary structures and imagery of poetry, prose and drama. Development of vocal flexibility needed to re-create the author's intent. **(3 hours a week, studio seminar; half course).**

123y. Effort and Human Movement: A study of effort and human movement related to the dramatic art. **(2 hours a week, studio seminar; half course).**

125. History of Theatre: History of Theatre from its beginning to 1700. (3 hours a week).

127y. Improvisation: The exploration of human behaviour as it relates to acting and the development of improvisational techniques for the understanding of character and situation. (3 hours a week, studio seminar; half course).

210. Voice Production II: Further drill in voice and diction. Introduction to Received Speech for use in British stage dialect incorporating the phonetic principles of Daniel Jones. (3 hours a week, studio seminar).

211y. Theatre Practicum: Introduction of microphone technique. (3 hours a week, studio seminar; half course).

222a. Readers Theatre: (3 hours a week, studio seminar; one semester, half course).

222b. Studio Theatre: (3 hours a week, studio seminar; one semester, half course).

225. Advanced History of Theatre: History of the theatre from 1700 to modern times. (3 hours a week).

227y. A continuation of Drama 127y: The application of improvisational techniques to specific situations and characters found in plays. (3 hours a week, studio seminar; half course).

228. Scene Study: The actor's approach to the performance of scenes from plays. Emphasis of script analysis and the development of situation and characterization. (5 hours a week, studio seminar).

229y. Styles in Movement: Continuation of effort and human movement with stress laid on the style and fashion of movement in various periods of history. (2 hours laboratory a week; half course).

237y. Theatre Practice: Basics in the application of various media in the physical presentation of character. (1 hour lecture and 1 hour laboratory a week; half course).

312y. Voice Production III: Intensive vocal drill with emphasis on inflectional pattern as required in characterization relative to dramatic material and dialect. (3 hours a week, studio seminar with additional required tutorials; half course).

324y. Kinaesthetics I: Rhythmical co-ordination, fencing, history of arms and armor in relation to the presentation of period productions. (4 hours a week, studio seminar; half course).

326y. Miming Technique: Introduction to the history of miming; development of technical proficiency in mime. (3 hours laboratory a week; half course).

328. Acting: A study of the principles and methods of dramatic art. (Corequisite: Drama 330). (3 hours a week).

330. Studio Seminar, Acting: Must be taken in whole by students attending Drama 328. (Corequisite: Drama 328). (12 hours studio seminar a week).

424y. Kinaesthetics II: History and development of dance. Introduction to common early dance forms. The history of combat; the handling of various weapons and the study of fighting appropriate to them. (4 hours a week, studio seminar; half course).

426y. Theatre Movement: The actor and his space. The application of the expressive use of the body in mime and in movement to the stage experience. **(3 hours a week, studio seminar; half course).**

428. Styles of Acting: A study of the known styles of acting learned by detailed analysis of plays of various periods. (Corequisite: Drama 430). **(3 lectures a week).**

430. Studio Seminar, Styles of Acting: Must be taken in whole by students attending Drama 428. (Corequisite: Drama 428). **(12 hours studio seminar a week).**

II. BACHELOR OF ARTS COURSES

101. Use and Management of Voice: The control and development of the voice. **(3 hours a week).**

111. Introduction to Theatre Arts: The theory of play analysis; the theory of acting; the theory of directing; the theory of technical theatre. It is required that students taking this course be crew members for at least one production. **(3 hours a week plus production assignment as crew members).**

202. Oral Interpretation: Consideration of the problems of speech in performance, of prose and verse for the purpose of interpretation. **(3 hours a week).**

205. A Survey of Theatre History: A survey of the principal periods of the theatre, introducing the student to the uses of ritual and myth in Dramatic Literature. **(3 hours a week).**

206. T.V. Acting: A theoretical and practical study of television and theatre acting with emphasis on adapting the principles of acting to the television medium. (Prerequisites: Communication Arts 100; and/or permission of instructor). **(3 hours a week).**

207. Kinaesthetics: Fundamentals of fencing, sword play, movement and mime. **(3 hours a week).**

208. Acting I: Fundamentals of acting. **(3 hours a week).**

209. Creative Drama: A study of the development of the dramatic play of children and the use of the techniques of speech, movement and drama to extend and develop the child's imagination and creative ability. **(3 hours a week).**

301. The Development of the Director: A seminar course with particular emphasis on modern theories of staging and directing. **(2 hours a week).**

303. Directing I: A practical course: rehearsal techniques, stage presentation of scenes. (Prerequisite: Drama 208 and permission of the instructor). **(3 hours a week).**

305. Design I: Introduction to the technical elements of design; creative approach to stage and lighting design; communicating the design idea through the use of draftings, models and renderings. **(3 hours a week).**

306. T.V. Directing: Principles of directing for the television medium through demonstration, discussion, laboratory productions. (Prerequisite: Drama 206 and/or permission of instructor). (A student cannot receive credit for both Communication Arts 315 and Drama 306). **(3 hours a week).**

308. Acting II: Continuation of acting scenes or scene study and a period of work in progress. (Prerequisite: Drama 208). **(3 hours a week).**

309. Theatre Arts in Education: A practical course for teachers in Theatre Arts including the selection and presentation of material, organization, structure and method of use in a program. **(3 hours a week).**

403. Directing II: The production of a one-act play per semester; the first semester would be a studio production; the second semester being a full presentation, including all attributes of stage production. (Prerequisite: Drama 303). **(3 hours a week).**

405. Design II (Applied Design): The study of specific problems in stage and lighting design, considering the limitations such as stage forms, materials, budgets and styles, with extensive work in models, draftings and renderings. (Prerequisite: Drama 305). **(3 hours a week).**

409. Directed studies in Educational Drama: Field work in elementary and/or high schools, in addition to research paper(s) on an agreed area of drama in education. (Prerequisite: Drama 309). **(1 hour seminar: 6 hours laboratory a week).**

425. A Study of Various Periods of Theatre History significant in the development of the Theatre. (Prerequisite: Drama 205). **(3 hours a week).**

III. SPEECH

Speech 100 is a prerequisite for all speech courses.

100. Effective Speech: A course in the fundamentals of effective speech intended to develop poise and confidence in speaking; it will include voice, diction, bodily action, preparation of speeches. **(2 hours a week).**

200. Public Speaking: A study of the basic principles of expository and persuasive speaking: **(2 hours a week).**

204. Discussion and Debate: A study of the principles and methods of oral communication in small groups, panels and symposiums. **(2 hours a week).**

300. Advanced Public Speaking: Advanced study of the speech designed to affect attitude and beliefs and to induce action. **(2 hours a week).**

302. Directed Studies in Speech: (2 hours a week).

ECONOMICS

Officers of Instruction:

Professors: W. G. Phillips, Ph.D. (Dean of the Faculty)
Z. M. Fallenbuchl, Ph.D. (Head of the Department)
W. J. Gillen, M.A.
A. E. Kovacs, Ph.D.
A. A. Brown, Ph.D.

Associate Professors: J. F. Callaghan, M.A.
P. R. Burrell, M.A.
J. C. Strick, Ph.D.
R. N. Kolinski, Ph.D.
A. Guccione, Ph.D.
P. A. Della Valle, Ph.D.
*D. P. Ross, Ph.D.
O. Mehmet, Ph.D.
*R. P. Mendels, Ph.D.
E. Primorac, Ph.D. (Visiting)
L. P. Sydor, Ph.D.

Assistant Professors: D. F. Barnett, Ph.D.
*N. J. Fortune, Ph.D.
R. Green, Ph.D.
B. S. Meyer, M.A.
N. Oguchi, M.A.

Research Associates: T. E. Posey, Ph.D.
B. K. Short, Ph.D.

*On leave.

Major requirements: five to seven courses, including 102, 222, 232.

Minor requirements: three to five courses, including 102.

For major in the general program, see p. E-19. Students in third year who have maintained standards acceptable to the Department, may be permitted to select one or both of their major options from any of the courses shown below.

For Honours Economics, see p. E-29; for Honours Economics and Political Science, p. E-31; for Honours Economics and History, p. E-30; for Honours Economics and Mathematics, p. E-30; for Honours History (Economics option), p. E-44; for Honours Economics and Sociology, p. E-31; for Honours International Relations, p. E-46.

For suggested choices of minor fields, see page E-19. This year Geology is added; since it is important that the correct choice and sequence of courses be selected, it will be necessary for students considering this major-minor combination to consult the Department of Geology.

Senior courses, assigned at the discretion of the Department Head, may form part or all of the requirements for the first year of the two-year program leading to the degree of Master of Arts.

All courses listed will not necessarily be offered in the coming year.

Course descriptions:

101. Elements of Economics: The development of the market form of economy and the basic principles and policy problems involved. (This course is not meant as an introduction to further study in Economics, and will be accepted as such only on the basis of the student's total performance). **(2 hours a week).**

102. Introduction to Economics: The development of tools for the analysis of price and wage determination, the level of national income and employment, money and banking, international trade and related topics. **(3 hours a week).**

Economics 101 or 102 is prerequisite for all other courses in Economics; credit may not be obtained for both Economics 101 and 102.

204b. Introduction to Non-Stochastic Quantitative Research: The application of non-stochastic models to economic data, with emphasis on linear programming and input-output models. (Prerequisite: Math 240a). (3 hours a week, one semester; half course).

212a. Statistical Methods: Same as Mathematics 251a. (3 lectures, 1 laboratory hour a week, one semester; half course).

212b. Statistical Methods: The application of statistical methods to economic data; index numbers; trends; seasonal and cyclical variations; economic indicators. (2 lectures, 2 laboratory hours a week, one semester; half course).

218. Introduction to Econometric Models: The construction of econometric models, and the problem of identification. (3 hours a week).

222. Intermediate Microeconomics: An intermediate course in the theory of consumer behaviour and demand; the firm, production, cost, and supply; pricing in perfect and imperfect competition; special problems in the theory of monopoly and imperfect competition, with their implications for public policy; distribution; general equilibrium and economic welfare; introduction to linear programming. (3 hours a week).

232. Intermediate Macroeconomics and Money and Banking: The characteristics and functions of money: the monetary systems and banking organization in Canada, the United States and Great Britain; national income and expenditure; the theory of income, employment, interest and prices; economic growth and fluctuations; monetary and fiscal policy. (3 hours a week).

262a. Economic History of Europe. (3 hours a week, first semester; half course).

262b. Economic History of the United States. (3 hours a week, second semester; half course). (Credit may not be obtained for both Economics 262b and 263b).

263b. North American Economic Structure and Development: A selective examination of the economic structure and institutions of Canada and the United States. (Corequisite: Economics 101 or 102). (Credit may not be obtained for both Economics 263b and 262b). (3 hours a week, one semester; half course).

300. Mathematical Economics: The uses and limitations of the mathematical approach in economics; the expression of various aspects of economic theory in mathematical form including consumer and firm behaviour, welfare economics, macroeconomic systems (static and dynamic). (Prerequisite: Math. 110 and/or consent of instructor). (3 hours a week).

302a. Mathematical Economics, Micro Theory: The mathematical formulation of the theory of the consumer and of the firm; general equilibrium theory. (Prerequisites: Math. 210, 211, 220, Econ. 222 and 232). (3 hours a week, one semester; half course).

302b. Mathematical Economics, Macro Theory: General equilibrium theory and macroeconomic models; the mathematic formulation of Keynesian and neo-classical models; introduction to mathematical models of economic growth. (Prerequisites: same as for Economics 302a). (3 hours a week, one semester; half course).

318. Econometric Methods: Methods of obtaining empirical estimates of the parameters in econometric models. (Prerequisite: Economics 218). (3 hours a week).

320. Corporation Finance and Investments: (a) The promotion and financing of business enterprises, financial controls and dividend policies. (b) The principles of investments, individual and institutional; social importance. (Prerequisite: Economics 222, 232, or consent of instructor). **(3 hours a week).** Not open to students in the Faculty of Business Administration.

340. Economic Development: The analysis of economic growth, with emphasis on domestic and international measures for development of underdeveloped countries. (Prerequisite: Economics 222, 232, or consent of instructor). **(3 hours a week).**

352a. Economics of Labour I: A study of the Canadian and American labour movements, collective bargaining, union philosophy and labour legislation in Canada and the U.S. (Prerequisite: Economics 222, 232, or consent of instructor). **(3 hours a week, one semester; half course).**

352b. Economics of Labour II: Analysis of wage theories, the wages structure, and related topics. (Prerequisite: Economics 222, 232, or consent of instructor). **(3 hours a week, one semester; half course).**

360a. Economic History of Canada. (Prerequisite: Economics 222, 232 or consent of instructor). **(3 hours a week, one semester; half course).**

360b. Selected Current Economic Problems and Policies in the Canadian Economy. (Prerequisites: Economics 222, 232). **(3 hours a week, one semester; half course).**

371. Canada and the World Economy: Canada's economic relations with the rest of the world, emphasizing trade, investment, monetary arrangements and foreign aid. An introduction to the theory of international economics will be included. (Prerequisite: Economics 101 or 102). (Credit may not be obtained for both Economics 371 and 372). **(3 hours a week).**

372. International Economics: A survey of traditional and contemporary theories of international trade and balance of payments adjustment; current problems of the international economy. (Prerequisites: Economics 222, 232). (Credit may not be obtained for both Economics 371 and 372). **(3 hours a week).**

381. Canadian Public Finance: A study of government taxation and expenditures, the budgetary system, fiscal policy, and Federal-Provincial fiscal relations in Canada. (Prerequisite: Economics 101 or 102). (Credit may not be obtained for both Economics 381 and 382). **(3 hours a week).**

382. Public Finance: An intensive analysis of the Theory of Public Finance. (Prerequisite: Economics 222, 232). (Credit may not be obtained for both Economic 381 and 382). **(3 hours a week).**

390. Comparative Economic Systems: The organization, operation and performance of economic systems in theory and practice (Prerequisite: Economics 222, 232 or consent of the instructor). **(3 hours a week).**

412. Introduction to Econometrics: An intensive examination of some problems encountered in the use of statistical inference in testing economic theories, including errors in variables, autocorrelation, multicollinearity, lagged variables, and identification. (Prerequisite: Economics 212ab and/or consent of instructor). **(2 lectures, 2 laboratory hours a week).**

416a. Economic Research in Regional Problems: Theoretical development and empirical implementation of interregional income determination; regional input-output models; growth models. (Prerequisite: Consent of the instructor). **(2 hours a week, one semester; half course).**

416b. Economic Research in Urban Problems: Spatial structure of urban areas; urban residential equilibrium and growth; central place theory; the local public sector. (Prerequisite: Consent of the instructor). **(2 hours a week, one semester; half course).**

420. Industrial Organization and Public Policy: Industrial structure in Canada; concentration; effects of differentials in scale economies, productivity, and commercial policy; control of restrictive trade practices and monopoly. Comparative analysis with the United States and Great Britain. (Prerequisites: Economics 222, 232). **(2 hours a week).**

422. Advanced Microeconomics: Selected theories of value, production, distribution and welfare. (Prerequisites: Economics 222, 232). **(2 hours a week).**

432. Advanced Macroeconomics: Monetary, business cycle and growth theory and policy. (Prerequisites: Economics 222, 232). **(2 hours a week).**

440. Problems of Economic Development in Selected Countries. (Prerequisites: Economics 222, 232). **(2 hours a week).**

442. Economic Development in the Caribbean and Latin America: Prerequisite: Economics 232). **(2 hours a week).**

452a. Labour Economics: Comparative Labour Movements and Markets: A study of foreign labour movements, other than the U.S.; international labour organizations. (Prerequisite: Economics 352a). **(2 hours a week, one semester; half course).**

452b. Labour Economics: Human Resources: Human capital; concepts and measures; analysis of manpower policies; manpower forecasting; various topics in the area of wages and labour allocation. (Prerequisite: Economics 352b). **(2 hours a week, one semester; half course).**

460. History of Economic Thought: The evolution of economic thought, emphasizing the Classical School. (Prerequisites: Economics 222, 232). **(2 hours a week).**

490. The Soviet Type Economies: The communist economic theory, institutions and policies as applied in the U.S.S.R. and Soviet-dominated countries. (Prerequisites: Economics 222, 232). **(2 hours a week).**

ENGLISH

Officers of Instruction:

Professors: Rev. C. P. J. Crowley, C.S.B., Ph.D.
John F. Sullivan, Ph.D. (Head of the Department)
Eugene J. McNamara, Ph.D.
Raymond J. Smith, Ph.D.
Roderick Huang, Ph.D.
Bruce A. King, Ph.D.

Associate Professors: Homer F. Plante, M.A.
Lois K. Smedick, Ph.D.
David M. Holmes, D.Phil.
Samuel S. Stollman, Ph.D.
*Edward A. Watson, Ph.D.
John M. Ditsky, Ph.D.
Joyce C. Smith, M.A.
Peter S. Stevens, Ph.D.
Charles C. Murrah, Ph.D.

Assistant Professors: **Rev. E. C. Pappert, C.S.B., Ph.D.
Rev. J. A. Quinn, C.S.B., Ph.D.
*Paul J. Black, M.A.
Alistair MacLeod, Ph.D.
Bernhard D. Harder, M.A.
H. D. Janzen, Ph.D.
Colin B. Atkinson, Ph.D.
Louis K. MacKendrick, Ph.D.
Brian Cosgrove, B.Litt. (Visiting)

Lecturers: Edward Ducharme, M.A.
*Richard F. Hornsey, M.A.
Laurel Thompson, M.A.
Ronald W. Wallace, M.A.

Visiting Writer in Residence: Morley Callaghan, B.A.

Sessional Instructors: Kenneth F. Long, M.A.
Helga Harder, M.A.

*On leave.

**On leave to be Dean of Extension and Continuing Education.

Combined Honours Programs: For Honours Drama and English, see p. E-29; for Honours English Language and Literature, see p. E-32; for Honours English and French, see p. E-33; for Honours English and German, see p. E-33; for Honours English and History, see p. E-34; for Honours English and Philosophy, see p. E-35; for Honours English and Russian, see p. E-35; for Honours English and Spanish, see p. E-36; for Honours English and Latin, see p. E-34.

General and Honours programs in English are distinguished only by their length, the number of courses required, and the consequent degree of specialization in the subject.

In the four-year Honours programs, students must take at least eight English courses and may take as many as twelve.

In the three-year General program, an English major must take at least five courses and may take as many as seven.

An English minor in the General program is required to take three courses.

English 110 or 115 is a required course in the First Year for any of the English programs and is normally a prerequisite for any of the Core Courses in English. Students in the First Year may not ordinarily elect courses numbered 200 or higher.

English 200 is recommended for all Honours and major programs.

Courses numbered between 201 and 299 are **core** courses, and any program of concentration in English must include a number of these courses, which may be taken in the second or subsequent years of a program.

The **core** courses are divided into four groups, listed below as Group I, Group II, Group III, and Group IV.

Students in the Honours program in English language and literature are required to take ten to twelve courses, which must include at least one core course in each of the four groups. (See p. E-32).

English 400 is strongly recommended to fourth-year students intending to proceed to the M.A. in English.

Students in combined Honours programs are required to take eight or nine courses, which must include at least one core course from each of Groups I, II, and III.

English majors in the General program are required to take at least three core courses, one from each of Groups I, II, and III. (See also p. E-24).

English minors in the General program are required to take one of the Group I core courses.

Students intending to proceed to the M.A. in English should obtain information from the Department about the undergraduate preparation required.

The Core Courses: By Groups

GROUP I	GROUP II	GROUP III	GROUP IV
205—Chaucer	225—Romantics	255—Modern	275—Linguistics
210—Renaissance	230—Victorian	260—Modern	280—History of
215—Shake-	240—Transition	Canadian	English
speare	245—North	265—Modern	Language
220—Restoration	American	American	
& 18th	19th C.		
Cent.			

Not all English courses are offered every year. Students should consult the Department in advance of registration to determine which courses will be available.

Course descriptions:

110. Introduction to Literature: A study of selected works in English, including drama, fiction, expository prose, and poetry, and featuring an intensive analytical approach to reading and writing. **(3 hours a week).**

115. Perspectives on Literature: A study of representative works in English including drama, fiction, expository prose, and poetry, through which the various modes of literary experience may be explored, using a broad spectrum of materials and critical approaches. **(3 hours a week).**

200. Practical Criticism: Close analysis of poetic and prose texts, emphasizing contemporary approaches in literary criticism. Many short papers. **(2 hours a week).**

205. Chaucer and His Age: A study of the works of Chaucer (in Middle English), relating his achievement to English and Continental literature of the later Middle Ages. **(3 hours a week).**

210. Literature of the Renaissance: The forms, themes, and ideas of English literature, exclusive of drama, in the period from Thomas More to Milton. (3 hours a week).

215. Shakespeare: A study of the works of Shakespeare, with major emphasis on his plays. (3 hours a week).

220. Restoration and Eighteenth Century Literature: Literature from 1660 to 1800, with emphasis upon Dryden, Swift, Pope, Johnson, and the major novelists of the era. (3 hours a week).

225. Literature of the Romantic Era: Emphasis on the major poetry from Blake to Keats. (3 hours a week).

230. English Literature of the Mid-Nineteenth Century, 1830-1880: Victorian prose, poetry, and drama from Macaulay to the Aesthetic Movement. (3 hours a week).

240. Literature in Transition, 1880-1920: Prose, poetry, and drama in English from the Aesthetic Movement to Joyce, Eliot, Pound and Yeats. (3 hours a week).

245. 19th Century North American Literature: A reading of major American and Canadian authors of the nineteenth century for the purpose of exploring themes, forms, and ideas common to the New World literature. (3 hours a week).

255. Literature of the Modern Period, 1920-1945: Emphasis on fiction and poetry of the period, particularly that of the British Isles. (3 hours a week).

260. Canadian Literature of the Period Since 1918: Emphasis on fiction and poetry of the modern and contemporary periods. (3 hours a week).

265. American Literature since 1865: The literature of the United States from Twain and James to the present day. (3 hours a week).

275. Modern English and Linguistics: A linguistic study of the problems of usage, dialect, semantics, sentence structure, and style in the English Language with particular emphasis on comparing traditional, structural, and transformational approaches to language. (3 hours a week).

280. History of the English Language: An examination of the history of the English Language, concentrating on the rise and development of Standard English. Particular attention will be given to the language of Chaucer and of Shakespeare. (3 hours a week).

300. Literature and Consciousness: A study of the recurrent experiences of the reader and writer as special instances of "The whole and parts" theory of consciousness. (3 hours a week).

301. Advanced Rhetoric: Classical and modern rhetorics. Investigation of the processes of invention, the varieties of structures, and the principal devices that determine tone. (2 hours a week, with writing conferences). [Not offered 1972-73].

302. Creative Writing: The development of original writing in various forms. Intensive workshop practice may be undertaken. Permission of the Department is required. (2 hours a week; irregular individual writing conferences may be required).

331. Modern Fiction: A study of fiction, from Dostoevsky and Flaubert to Hemingway and Thomas Mann. Foreign works will be read in translation. (3 hours a week). [Not offered 1972-73].

334. Modern Drama: A study of drama from Ibsen and Shaw to Brecht and Albee. Foreign works will be read in translation. (3 hours a week).

335. Modern Poetry: A study of poetry from the symbolists to Garcia Lorca and Dylan Thomas. Foreign works will be read in translation. **(3 hours a week).**

338. American Literature to 1865: A study of the literature of the United States from Puritan times to the American Renaissance, including the works of Poe, Emerson, Thoreau, Whitman and Melville. **(3 hours a week).**

341. Literature in Translation: The study of a particular period or type to vary from year to year; English texts will be included. Some attention will be paid to the relevance for or influence upon English literature. **(3 hours a week).** [Not offered in 1972-73].

356. English Drama from Its Mediaeval Origins to 1642: Study of the traditions and development of English drama before 1642, the emphasis falling upon the years 1580-1620. Attention to be paid to matters of stages and staging. Some of Shakespeare's plays will be included, but a prior knowledge of more will be assumed. **(3 hours a week).**

360. The Rise and Development of the English Novel: A study of the novel in England from Defoe to the present day. **(3 hours a week).**

363. Old English Literature: The study of Old English literature in its original language, with concentration upon the poetry of the heroic tradition. **(3 hours a week).** [Not offered in 1972-73].

370. Spenser and Milton: Concentration on the major poems, but the minor poems and some of the prose works will be examined. **(3 hours a week).** [Not offered 1972-73].

400. Advanced Survey: A survey course, offering a conspectus of English and North American literature for advanced students with emphasis on selected special topics according to the particular interest and needs of students enrolled in the course. **(3 hours a week).**

410. Sixteenth Century English Literature: A study of the major genres, figures and literary trends and ideas, concentrating on More, Spenser, Sidney, Marlowe and the early Shakespeare. **(3 hours a week).** [Not offered 1972-73].

411. English Literature, 1600-1660 (including Milton): A study of the major genres, figures, and literary trends and ideas, concentrating on Bacon, Donne, the later Shakespeare, Ben Jonson, and Milton. **(3 hours a week).** [Not offered 1972-73].

415. Mediaeval English Literature: Old English poetry, works of the "alliterative revival", early English prose, lyrics, drama. **(3 hours a week).** [Not offered 1972-73].

416. Mediaeval European Literature: A study of Old and Middle English texts, in comparison with mediaeval Latin, Romance and Germanic Literature from the period 500 to 1500. The emphasis and selection of texts will vary from year to year. Texts will be read in their original languages to the extent that the background of the students makes such reading possible. **(3 hours a week).**

420. Criticism in English from Plato to Samuel Johnson: Major works and ideas in the literary criticism of the Classical, Mediaeval, Renaissance and neo-Classical periods. Some critical practice. **(3 hours a week).** [Not offered 1972-73].

421. Criticism in English from Coleridge to the Present: Major works and ideas in the literary criticism of the Romantic, Victorian, Transitional and Modern periods. Some critical practice. **(3 hours a week).** [Not offered 1972-73].

425. English Tutorial: Studies in English language and literature, directed by members of the Department. **(2 hours a week).** [Discontinued in 1972].

430. Contemporary Poetry in English: Intensive readings in such writers as Robert Lowell and Theodore Roethke. **(3 hours a week).** [Not offered 1972-73].

431. Contemporary Drama: A study of the drama of the post-war world with particular emphasis on "Theatre of the Absurd" and other significant trends in the theatre of our time. **(3 hours a week).** [Not offered 1972-73].

432. Contemporary Fiction in English: Intensive readings in such writers as William Styron and Iris Murdoch, with emphasis on the post-1945 period. **(3 hours a week).**

449. Scholarship and Bibliography: Training in the methods and materials of scholarship in English literature. **(2 hours a week).**

Further courses numbered 450-499 (**studies** courses) will be available in areas of English literature defined by the **core** courses (201-299). A variety of studies courses will be announced and offered each year. Studies courses are primarily designed for students in their fourth year and may have fewer scheduled class meetings with more opportunity for independent study.

FINE ARTS

Officers of Instruction:

Professor: J. N. DeLauro, M.F.A. (Head of the Department).

Assistant Professors: A. P. Doctor, M.F.A.
J. K. Pufahl, M.F.A.
M. J. Farrell, M.A.
R. Ferraro, M.F.A.
D. Boles, M.F.A.
J. R. DeAngelis, M.F.A.

Lecturers: W. C. Law, M.F.A.
C. B. Nicholas, M.A.

Sessional Instructors: S. B. Gold, M.A.
D. Dingler, M.F.A.
S. Hauptman, M.F.A.
P. Mitchell, M.A.

For Honours program leading to B.F.A. Degree, see p. E-69.

For Honours program in Art History, see p. E-26.

GENERAL PROGRAM IN FINE ARTS:

Major: Five to seven courses, including Fine Arts 110, 114ab and at least three of 220, 230, 232, 233. Minor: Three to five courses, including Fine Arts 110. Options: Fine Arts 110, 114ab. Students majoring in Studio Fine Arts may, with permission of the Department, minor in Art History. (See p. E-17 for details of general B.A. program).

GENERAL PROGRAM IN ART HISTORY:

Major: Five to seven courses, including Fine Arts 110, 114ab and at least three full courses in consultation with the department. Minor: three to five courses including Fine Arts 114ab. Options: Fine Arts 114ab, 225a, 225b. Students majoring in Art History may, with the permission of the Department, minor in Studio Fine Arts. (See p. E-17 for details of general B.A. program).

Regulations For Transfer Students:

Students who have had art courses at other institutions, and desire credit for basic courses in this department must submit a portfolio of their own work for evaluation by the faculty and an official transcript of their record, together with catalogues describing the courses taken, all of which must be submitted no later than two weeks before the first day of classes.

Transfer students who wish to get art history credit for courses taken at other schools will be required, at the discretion of the department, to take a qualifying examination to be given the prospective student during the first week of regularly scheduled classes. The examination will cover those art history courses from which the student wishes to be exempted.

All courses listed will not necessarily be offered in the coming year.

Course descriptions:

110. Basic Drawing: Introduction to the elements of drawing; Work with various media, techniques and subject matter. Approximately one half the course will be devoted to life drawing and anatomy; individual and studio criticism. (Prerequisite: Fine Arts Major or by permission). **(3 lectures, 3 laboratory hours a week).**

114a. Survey of Art History: History of Art from prehistoric to mediaeval art with an introduction to composition and the language of the plastic arts and relationships to its culture. **(3 hours a week, one semester; half course).**

114b. Survey of Art History: History of Art from Italian Renaissance to Twentieth Century Art with emphasis on the influence of social and philosophical ideas on art. (Prerequisite: F.A. 114a). **(3 hours a week, one semester; half course).**

115y. Art Fundamentals: An investigation of the basic elements of two dimensional form, including studies in line, plane, virtual volume, dark and light modulation, colour, negative-positive patterns, composition, etc. (Open to Fine Arts majors only). (Prerequisite: permission of instructor). (Must be taken concurrently with F.A. 116y). **(1½ lectures, 1½ laboratory hours a week, two semesters; half course).**

116y. Art Fundamentals: Projects in the abstract elements of three dimensional form. (Open to Fine Arts majors only). (Prerequisite: permission of instructor). (Must be taken concurrently with F.A. 115y). **(1½ lectures, 1½ laboratory hours a week, two semesters; half course).**

220. Intermediate Drawing: Continuation of F.A. 110; emphasis on the concepts and problems of drawing as an expressive medium; individual and studio criticism. (Prerequisite: Fine Arts 110 or permission). **(3 lectures, 3 laboratory hours a week).**

225a. Ancient Near Eastern Art: A comprehensive study of the art of Egyptian and Mesopotamian civilizations with emphasis upon those periods which had distinct cultural influence upon the peripheral areas of the Eastern Mediterranean. (Prerequisite: Fine Arts 114a). **(3 hours a week, one semester; half course).**

225b. Mediaeval Art: An examination of the painting, sculpture and architecture of Europe through the Early Christian and the Gothic periods including the Byzantine, Carolingian and Romanesque cultures. (Prerequisite: Fine Arts 114a). **(3 hours a week, one semester; half course).**

230. Beginning Painting: Exploration of the possibilities of various painting media as a means of expression; studies from still life, nature and imagination; emphasis on creative painting techniques in oil; water colours, acrylic, and special problems on media behaviour; individual and studio criticism. (Prerequisite: Fine Art 110 or consent of the instructor). **(3 lectures, 3 laboratory hours a week).**

232. Printmaking: Introduction to the basic processes and techniques of creative printmaking media; intaglio and lithography. Individual and studio criticism. (Prerequisite: Fine Arts 110 or consent of the instructor. **(3 lectures, 3 laboratory hours a week).**

233. Sculpture: Modeling in the round and in relief and from the figure, carving, construction, direct building and casting. Projects in various media including plaster, ceramics, cement, wood, stone, metal and plastic. Problems in sculpture for architecture and landscape design. (Prerequisite: Fine Arts 110). **(3 lectures, 3 laboratory hours a week).**

245a. Northern Renaissance Art: The Art of Northern Europe during the Fifteenth and Sixteenth Centuries with particular emphasis upon the Franco-Flemish and German painting traditions and the beginnings of Graphic Art. (Prerequisite: Fine Arts 114a and 114b). **(3 hours a week, one semester; half course).**

245b. Renaissance Art I: The Renaissance in Italy during the Fifteenth Century with special attention given to the architecture, sculpture, and painting of Florence. (Prerequisite: Fine Arts 114a and 114b). **(3 hours a week, one semester; half course).**

246a. Renaissance Art II: The art of the Renaissance in Italy with a major consideration of the architecture, sculpture, and painting produced in Rome and Venice during the Sixteenth Century. (Prerequisite: Fine Arts 114a and 114b). **(3 hours a week, one semester; half course).**

246b. Baroque Art: An analysis of the architecture, painting, sculpture of the Seventeenth and early Eighteenth Centuries in Europe. (Prerequisite: Fine Arts 114a and 114b). **(3 hours a week, one semester; half course).**

247a. European Art During the Eighteenth Century: The study of art of the rococo in Europe and the evolution of the neo-classic movement. (Prerequisite: Fine Arts 114a and 114b). **(3 hours a week, one semester; half course).**

247b. History of Graphics: A survey of the various European developments in the Graphic Arts from the Fifteenth Century to the present. (Prerequisite: Fine Arts 114a and 114b). **(3 hours a week, one semester; half course).**

331. Intaglio: Continued development of expressive and interpretive skills with emphasis on the techniques and processes of engraving, etching and drypoint. (Prerequisite: Fine Arts 232). **(3 lectures, 3 laboratory hours a week).**

334. Advanced Sculpture: Modeling and sculptural design are further developed and refined to heighten the expressive potential of the form. Experimentation is encouraged to broaden the scope of media at the students' command and to increase his technical facility. (Prerequisite: F.A. 233). **(3 lectures, 3 laboratory hours a week).**

335. Experimental Sculpture: The continuation of sculpture and design with emphasis on experimenting with different media such as plastics and metal bronze, etc. (Prerequisite: Fine Arts 233). **(3 lectures, 3 laboratory hours a week).** [Discontinued in 1972].

336. Figurative Sculpture: Emphasis on utilizing the human and animal figures and natural forms to sculptural expressions. Studies from the nude, zoos and museums. (Prerequisite Fine Arts 233 or consent of instructor). **(3 lectures, 3 laboratory hours a week).** [Discontinued in 1972].

337. Lithography: Continued development of expressive and interpretive skills with emphasis on the technique of the lithograph process. (Prerequisite: Fine Arts 232). **(3 lectures, 3 laboratory hours a week).**

338. Painting Composition: Creative synthesis of previous studies in design, drawing and beginning painting; development of personal style and composition analysis; survey of traditional and contemporary painting compositions; individual and studio criticism. (Prerequisites: Fine Arts 220 and 230). **(3 lectures, 3 laboratory hours a week).**

339. Life Painting: Emphasis on the human form as a subject and as a means of design in painting. Survey of traditional and contemporary expressions and techniques, and development of the students' individual styles; individual and studio criticism. (Prerequisites: Fine Arts 220 and 230). **(3 lectures, 3 laboratory hours a week).**

340. Advanced Drawing: Emphasis on individual experimentation with drawing media and image, stressing drawing as an expressive medium; individual and studio criticism. (Prerequisite: Fine Arts 220). **(3 lectures, 3 laboratory hours a week).**

345c. Independent Studio Work: Individual work on specific projects under the guidance of an instructor. (Prerequisites: 200 level studio course in the subject desired and permission of the instructor and the department head). **(6 hours a week, one semester; half course).**

350a. Far Eastern Art: An examination of the major developments in the arts of China and Japan along with particular aspects of Indian Art. (Prerequisite: Fine Arts 114a and 114b or permission). **(3 hours a week, one semester; half course).**

350b. Islamic Art: An examination of important trends in the artistic development of the Muslim era—including the Ummayad, Tulunid, Fatamid, Seljuk, Mongol, Nasrid, Mamluk, Ottoman, Timurid, Safavid, and Mughal dynasties. (Prerequisite: Fine Arts 114a and 114b or permission). **(3 hours a week, one semester; half course).**

351a. Nineteenth Century European Art: Architecture and sculpture during the Nineteenth Century in Europe with emphasis upon painting as the visual exponent of the Neo-classic, Romantic, Impressionist and Post-impressionist movement. (Prerequisite: Fine Arts 114a and 114b). **(3 hours a week, one semester; half course).**

351b. Twentieth Century European Art: An examination of the sources, movements and major figures contributing to Twentieth Century architecture, sculpture and painting in Europe. (Prerequisites: Fine Arts 114a and 114b). **(3 hours a week, one semester; half course).**

352a. Early American Art—1650-1867: An analysis of the art produced in North America from the colonial period up to the period of Confederation. (Prerequisite: Fine Arts 114a and 114b). **(3 hours a week, one semester; half course).**

352b. Twentieth Century American Art: The architecture, sculpture, and painting produced in North America from Confederation to the present. (Prerequisite: Fine Arts 114a and 114b). **(3 hours a week, one semester; half course).**

435. Criticism and Seminar: Presentation and group analysis of the student's works; discussion on current trends in art; open to all senior students in sculpture, painting and printmaking. **(3 hours a week; full course).**

436. Drawing Workshop: Synthesis of previous studies in drawing and creative experiments in drawing, media, style, and choice of subject matter. (Prerequisite: Fine Arts 340). **(4 hours a week, full course).**

437. Sculpture Workshop: Survey of past and contemporary sculptural practices, equipment and supplies sources, techniques, foundry set-up and commission contracts. (Prerequisite: Fine Arts 335 or 336). **(4 hours a week; full course).**

438. Painting Workshop: Individual experimentations in media techniques and styles in painting; survey of studio practices and equipment; open to senior students; individual and studio criticism. (Prerequisite: Fine Arts 338 or 339). **(4 hours a week; full course).**

439. Print Workshop: Work in selected print media or processes, continuation of one of Fine Arts 232, 331 or 337. **(4 laboratory hours a week; full course).**

440. Thesis and Practical Work—Painting: A one year studio project in painting. Planning, research and discussion of the project with the faculty adviser. (Prerequisite: Fine Arts 338 or 339). **(12 laboratory hours a week; full course).**

441. Thesis and Practical Work—Sculpture: The advanced student is given free range to experiment in his chosen medium and to synthesize his previous knowledge and experience, with personal criticism from his instructor in order to assess his ability. (Prerequisite: Fine Arts 335 or 336). **(12 laboratory hours a week; full course).**

442. Thesis and Practical Work—Graphics: The student is given wide range to experiment in his chosen medium and to synthesize his accumulated knowledge and experience with the instructor acting in an advisory capacity. (Prerequisite: Fine Arts 331 or 337). **(12 laboratory hours a week; full course).**

443. Thesis and Practical Work—Drawing: A one year studio project in drawing. Planning, research, and discussion of the project with the Faculty advisor. (Prerequisite: Fine Arts 340). **(12 laboratory hours a week, full course).**

453c. Directed Individual Study: A close individual examination by the student of a particular area of interest in which a paper will be required. (Prerequisites: Fine Arts 114a and 114b, a 200 or 300 level course in the subject desired, and permission of instructor). **(3 hours a week, one semester; half course).**

454c. Proseminar: Group encounters with particular problems in the history of art which will be considered by means of readings, discussion, papers and museum trips. Open to Fourth Year Honours students only. (Prerequisites: Fine Arts 114a and 114b, a 200 or 300 level course in the subject desired, and permission of instructor). **(3 hours a week, one semester; half course).**

455c. History of Art Comprehensive Studies: Preparatory exercises for the purpose of establishing a comprehensive knowledge of art history in regards to qualifying examinations. Open to Fourth Year Honours students only. (Prerequisites: Fine Arts 114a and 114b and permission of instructor). **(3 hours a week, one semester; half course).**

In addition to the Fine Arts courses listed above, the following courses offered by other Departments will be accepted by the Department of Fine Arts towards the B.A. degree in the History of Art in lieu of Fine Arts courses, with the permission of the Fine Arts department.

Asian Studies 118: "The Art of Asia". (Prerequisite, Fine Arts 350a or permission). **(3 hours a week).**

Asian Studies 231: "The Art and Archaeology of South Asia". (Prerequisite: Fine Arts 350a or permission). **(3 hours a week).**

Classical Civilization 235: "Greek & Roman Art and Archeology". (Prerequisite: Fine Arts 114a). **(3 hours a week).**

FRENCH LANGUAGE AND LITERATURE

Officers of Instruction:

Professors: A. A. Thibault, D. es L.
Rev. C. J. Drouillard, C.S.B., Ph.D.
Miss Lillian McCarthy, Ph.D.

Associate Professors: W. S. Skakoon, M.A.
B. D. Kingstone, Ph.D.
Marie-Thérèse Caron, Ph.D.
Guy Fournier, D. de l'Un.
J. P. Andréoli-De Villers, Ph.D. (Head of the Department)
P. Cassano, Ph.D.

Assistant Professors: P. W. Halford, M.A.
A. T. Van den Hoven, M.A.
Mrs. Y. Fournier, D. de l'Un.
G. R. Lemieux, M.A.
M. Chabot, Ph.D.

For major in general program, see p. E-19; for Honours English and French, p. E-33; for Honours French Language and Literature, see p. E-36; for Honours French and Comparative Literature, see p. E-37; for Honours French and German, see p. E-33; for Honours French and Italian, see p. E-38; for Honours French and Latin, see p. E-38; for Honours French and Linguistics, see p. E-39; for Honours French and Russian, see p. E-39; for Honours French and Spanish, p. E-40; for Honours English and Philosophy (Language option), p. E-35.

Not all courses will be offered in any one year.

I. FRENCH STUDIES:

Major requirements: five to seven courses including 112, 114 and 200; one of 221, 222, and 223; plus one other full course or two half courses. These are the normal major requirements. Departures from this program require the permission of the department.

Minor requirements: three to five courses including 114 or 200 and any two of 112, 221, 222, 223.

Honours French Language and Literature: ten to twelve courses including: at least three language courses, beginning with 114 (or 200 if excused 114); at least seven literature courses, namely 112, 221, 222, 223 and three more full course credits (or 221, 222, 223 and four more full course credits if excused 112).

Combined Honours program: at least eight courses in French, including: at least three language courses, beginning with 114 (or 200 if excused 114); at least five literature courses, namely 112, 221, 222, 223 and one more full course credit (or 221, 222, 223 and two more full course credits if excused 112).

It is recommended that, where possible, Honours students take at least one half-course each from the areas covered by core courses A, B and C:

A: 333a, 336b, 339a, 430b
B: 340b, 345a
C: 353a, 356b, 450a, 452ab.

With the permission of the Department, students may substitute for 221, 222, 223, half courses covering the same area.

Third-year students may take fourth-year courses, which are so numbered only to indicate the degree of difficulty.

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Not all courses listed may be offered in any one year. Students should consult with the Department.

Students taking majors, minors and Honours programs must have their choice of courses approved by the Department. Comparative Literature 210 and Linguistics 201 are recommended as options.

Course descriptions:

FRENCH LANGUAGE COURSES:

030. Elementary and Intermediate: Emphasis is placed on the acquisition of basic reading and writing skills and of aural and oral comprehension up to and including the intermediate level outlined in French 050. No previous course of study in French is required. (5 lectures, 2 laboratory hours a week).

050. Intermediate: This course is designed to teach the student accurate writing, rapid reading and exact comprehension. Training in the basic skills of aural comprehension and conversation will be given in the laboratory. Prerequisite: Grade 12 French. (3 lectures, 2 laboratory hours a week).

111. French Conversation: This course is designed to develop oral fluency in the language. (Prerequisite: French 030 or French 050 or Grade 12 French). (3 lectures a week; laboratory work and oral and written reports will be required). Does not count toward a Major or Minor in French.

114. Language Training 1: This course is designed for those planning to follow an honours, major or minor program of French studies. Intensive oral training: corrective phonetics—structural drills—French grammar and stylistics. (Prerequisite: French 030 or French 050 or Grade 13 French). (3 lectures, 2 laboratory hours a week).

A separate section of French 114 consisting of 3 lectures and 2 laboratory hours a week will be available for those whose mother tongue is French. Placement to sections will be determined by interview with the Department.

200. Language Training II: Contrastive grammar; stylistics; structured conversation. (3 lectures, 2 laboratory hours a week).

300. Language Training III: Translation, comparative stylistics. (3 hours a week).

304. Language Training IV: Literary stylistics; theoretical and applied structural grammar. (3 hours a week).

408. Language Training V: Structural semantics; French transformational grammar; generative grammar. (3 hours a week).

FRENCH LITERATURE COURSES:

112. Introduction to French literature: The purpose of this course is to introduce the student to a series of significant and interesting texts of the various periods of French literature. Each text is studied for its intrinsic literary value; it is also used to point out salient features of the genre being dealt with and of the period from which the text is chosen. (3 hours a week).

A separate section of French 112 consisting of 3 lectures a week will be available for those who have some knowledge of French Literature and a marked degree of oral proficiency. Placement to sections will be determined by interview with the Department.

221. French Literature Core course A: From the Renaissance up to Pre-Romanticism. (3 hours a week).

222. **French Literature Core course B:** From Pre-Romanticism up to 1885. (3 hours a week).

223. **French Literature Core course C:** From 1885 to the present. (3 hours a week).

308a. **Aspects of French Civilization from Charlemagne to World War II:** Emphasis will be placed on the historical development of political, social, artistic, economic, educational and religious life. (3 hours a week, first semester; half course).

308b. **Continuation of French 308a.** (3 hours a week, second semester; half course).

320. **Old French:** History of the French Language and a study of representative texts. (3 hours a week).

Students are urged to take core courses (French 221, 222, 223) before taking any half courses in French).

333a. **17th Century French theatre.** (3 hours a week, first semester; half course).

336b. **17th Century prose and poetry.** (3 hours a week, second semester; half course).

339a. **Aspects of the 18th Century.** (3 hours a week, first semester; half course).

340b. **Pre-Romanticism and Romanticism.** (3 hours a week, second semester; half course).

345a. **Prose and poetry 1840-1885.** (3 hours a week, first semester; half course).

353a. **The Modern Novel.** (3 hours a week, first semester; half course).

356b. **Modern drama.** (3 hours a week, second semester; half course).

370a. **History of Criticism:** The evolution of the concepts of art, nature, imitation and creation. (3 hours a week, one semester; half course).

372b. **Modern Criticism:** Schools and movements, with special emphasis on the adaptation of certain concepts of man, society and language to criticism. (3 hours a week, one semester; half course).

410a. **Modern French Culture:** A semiotic and systemic approach to French and North American cultures. A comparative study of the differences and similarities of systems of patterned behavior that constitute the French and North American cultures. Emphasis will be placed on the political, social, cultural and economic aspects of these systems. (Prerequisite: French 114, 200 and 300 or permission of the instructor). (3 hours a week, first semester; half course).

410b. **A continuation of French 410a.** (Prerequisites: French 114, 200 and 300, or permission of the instructor). (3 hours a week, second semester, half course).

430a. **French literature of the 16th century.** (3 hours a week, second semester; half course).

450b. Poetry from 1885 to the Present. (3 hours a week, first semester; half course).

452a. The avant-garde spirit in Twentieth century French Literature: A general introduction to the concept of the avant-garde in Literature. Unanimism, Dada, Surrealism and their influence on post-1950 novel, poetry and theatre. (Prerequisites: French 112, 222, 223 and permission of the instructor). **(3 hours a week, first semester; half course).**

452b. A continuation of French 452a. (Prerequisites: French 112, 222, 223 and permission of the instructor). **(3 hours a week, second semester; half course).**

FRENCH CANADIAN LITERATURE:

360a. French Canadian Novel: Analysis of its structure and techniques. **(3 hours a week).**

360b. The Novel and French Canadian Identity: (3 hours a week).

362a. French Canadian Drama: French drama in North America from its origin (1604, Port Royal) to the present with emphasis on modern playwrights, Gélinas, Toupin, Languirand, de GrandMont, Leclerc and Ferron. **(3 hours a week, one semester; half course).**

363. Ideologies in French Canada: The "Survival question" from 1759 to the Rebellion of 1837. The "Linguistic question" from the Union Act to the "Revolution tranquille" 1960. The Cultural question thereafter. **(3 hours a week).**

364. French Canadian Poetry: with emphasis on its origins, its themes and the evolution of its form. Study of Nelligan, Desrochers, Hertel, Saint-Denys Garneau, Grandbois, Hébert, Lapointe, Chamberland, Vigneault. **(3 hours a week).**

365b. French Canadian Folklore: The influence of the oral tradition from the foundation of Quebec to the present. With emphasis on music, songs, tales and legends. **(3 hours a week, one semester; half course).**

II. LINGUISTICS:

Major requirements: Five to seven full courses; all candidates for a major in Linguistics must take Linguistics 101.

Minor requirements: Three to five full courses; all candidates for a minor in Linguistics must take Linguistics 101.

NOTE: Students following minor or major programs must choose their courses in Linguistics in consultation with the program director. Students are expected to abide by all departmental regulations with respect to prerequisites.

For Honours Classical Studies and Linguistics, see p. E-28. For Honours French and Linguistics, see p. E-39.

All courses in this section will be offered in English. They may not count for credit towards a major or minor in French.

101. Introduction to General Linguistics: A general introduction to theories of the nature and structure of language: the organization of sounds, words and sentences from a historical and modern point of view. **(3 hours a week).**

201. Applied Linguistics: The application of linguistic theory to the teaching of the following languages: French, Spanish and English. This course has been designed especially for people who are involved or engaged in language teaching at all levels and who wish to update and increase their knowledge of language teaching techniques and the linguistic theory underlying these techniques. May be taken in any year. **(3 hours a week).**

301. Introduction to Romance Linguistics: A study of the main Romance languages from the point of view of their structure and development; some knowledge of Latin is desirable. (Prerequisite: Linguistics 101 or 201 or permission of the instructor). **(3 hours a week).**

305. The Structure of Canadian French: A linguistic study of the French of Canada; a study of the sounds, the grammar, and the vocabulary of this speech system will be made. (Prerequisite: a working knowledge of standard French and one of Linguistics 101, 201, 301 or permission of the instructor). **(3 hour a week).**

III. COMPARATIVE LITERATURE:

Major requirements: At least five courses including C.L. 210. A majority of these courses must be taken outside the Department in which the student is pursuing the complementary major program. An approved program will include courses in the theory of literature, and in literary relationships, influences and genres.

Minor requirements: Three courses approved by the Committee, including C.L. 210.

For Honours Classical Studies and Comparative Literature, see p. E-27. For Honours French and Comparative Literature, see p. E-37.

This course does not count for credit towards a major or minor in French.

210. Theory of Literature: This course will examine the various theories of literature and deal with the question "What is literature?" It will concentrate on specific theories from year to year. To be taught in cooperation with members of several departments. **(3 hours a week).** Not for credit towards a major or minor in French.

GEOGRAPHY

Officers of Instruction:

Professor: *J. C. Ransome, Ph.D.

Associate Professors: P. E. Vandall, M.A.
A. Blackbourn, Ph.D.
*M. E. Sanderson, Ph.D. (Acting Head of the
Department 1971-72)
A. Lall, Ph.D.
I. Stebelsky, Ph.D.
P. LaValle, Ph.D.
S. Raby, Ph.D.

Assistant Professors: A. Brazel, M.A.
A. Trenhaile, Ph.D.
V. Smith, Ph.D.
G. Romsa, Ph.D.

Lecturer: R. Seale, M.A.

*On leave.

Major requirements: Six or seven courses including 100, 130, 220ab, 230y, 231y, 250, any regional course. It is recommended that 301a form part of the major program.

Minor requirements: from three to five courses, including Geography 100 and 130.

For major in general program, see p. E-19; for Honours Geography, see p. E-41.

All courses listed will not necessarily be offered in the coming year.

Course descriptions:

100. Elements of Geography: An analysis of the physical processes which constitute man's global environment, including meteorology, climatology, geomorphology, vegetation and soils. **(2 lectures and 2 hours laboratory a week).**

120. The Geography of Canadian Resources: A general analysis of population characteristics, stages of human occupancy, and present state of resource use and mis-use. **(2 lectures and 2 hours laboratory a week).** [Discontinued in 1972].

130. Problems in Cultural and Economic Geography: A systemic examination of dynamic factors in cultural and economic geography. **(3 lectures, 1 hour laboratory a week).**

220a. Climatology: A systematic study of the major climatic elements, climate classification and climatic variation, with special emphasis on the heat and water balances of man's environment. (Prerequisite: Geography 100 or consent of instructor). **(2 lectures, one 3 hour laboratory a week; half course).**

220b. Geomorphology: The study of landforms: their origins, structures, external expressions, and spatial arrangements. (Prerequisite: Geography 100 or consent of instructor). **(2 lectures, one 3 hour laboratory a week; half course).**

230a. Introduction to Statistical Geography: An introduction to the methods of geographic measurement, data presentation, the geographic use of descriptive statistics, and inferential methods of spatial analysis. **(2 lectures, 2 hours laboratory a week; half course).** [Discontinued in 1972].

230b. **Introduction to Cartography:** Cartographic design and methods. Statistical mapping, general properties of map projections, properties of Canadian survey maps. **(2 lectures, 2 hours laboratory a week; half course).** [Discontinued in 1972].

230y. **Introduction to Statistical Geography:** An introduction to the methods of geographic measurement, data presentation, the geographic use of descriptive statistics, and inferential methods of spatial analysis. **(1 lecture a week and 2 hours laboratory on alternate weeks for the academic year; half course).**

231y. **Introduction to Cartography:** Cartographic methods and design. Statistical mapping, properties of map projections. Canadian survey maps. **(1 lecture a week and 2 hours laboratory on alternate weeks for the academic year; half course).**

240. **Problems in Cultural and Economic Geography:** A systematic examination of dynamic factors in cultural and economic geography. **(3 lectures a week).** [Discontinued in 1972].

250a. **Agricultural Geography:** Study of the physical, cultural and economic factors influencing world agriculture. **(3 lectures a week; half course).**

250b. **Location Theory:** Survey of the theory and practice of industrial location. **(3 lectures a week; half course).**

270. **The Geography of Canadian Resources:** An analysis of population characteristics, stages of human occupancy and present state of resource use and misuse. **(3 lectures a week).**

280. **Geography of Latin America:** A regional analysis of the cultural and economic geography of South and Middle America. Regional diversities and similarities analyzed, with emphasis on the evolution of spatial patterns and economic development. **(3 lectures a week).**

290. **Geography of Europe:** A systematic and regional analysis of European geography with special emphasis on its economic aspects. **(2 lectures a week).**

301a. **Field Techniques:** The basic methods of analyzing the physical and cultural elements of the landscape. (Prerequisite: Geography 230y or consent of instructor). **(1 lecture and 1 four-hour laboratory a week, one semester; half course. A one-week field program is a required part of the course).**

301b. **Air Photography — Interpretation and Photogrammetry:** The interpretation of air photographs, elements of their properties, and an introduction to methods of mapping using air photography. (Prerequisite: Geography 230ab or consent of instructor). **(1 lecture, 2 hours laboratory a week, one semester; half course).**

310. **Agricultural Geography:** Study of the physical, cultural and economic factors influencing world agricultural activities. **(2 lectures a week).** [Discontinued in 1972].

320a. **Transportation and Communications:** A survey of principles of transportation and communications, analyzing the flow and distribution of goods, people and ideas. (Prerequisite: Geography 240 or consent of instructor). **(3 lectures a week, one semester; half course).** [Discontinued in 1972].

320b. **Location Theory:** Study of methods of locational analysis applicable to manufacturing and other economic activities. Attention will be given to single enterprise cases and to the development of spatial economic systems. (Prerequisite: Geography 240 or consent of instructor). **(3 lectures a week, one semester; half course).** [Discontinued in 1972].

321. Transportation and Communications: A survey of principles of transportation and communication. An analysis of the flow and distribution of goods, people and ideas. (Prerequisite: Geography 130 or consent of the instructor). **(2 lectures a week).**

330. Geography of South Asia: A systematic and regional analysis of resources, problems and development of South Asia. **(2 lectures a week).**

331. Resources and Conservation: A study of the development of natural resources in the evolution of modern Atlantic civilization, leading to consideration of some contemporary ecological, economic and political concerns. **(3 lectures a week).**

340c. Quantitative Methods in Geography: Techniques of modern spatial analysis including multivariate analysis and topics in probability analysis. (Prerequisite: Geography 230y, or consent of instructor). **(3 lectures a week, one semester; half course).**

348. Population Geography: The geographic study of world population patterns and problems. **(3 lectures a week).**

350. Political Geography: An analysis of the spatial characteristics of political structures, processes and behaviour, including a consideration of the spatial organization of resource management. **(3 lectures a week).**

370. Urban Geography: A survey of the locational and functional characteristics of urban communities. **(3 lectures a week).**

381. Geography of the U.S.S.R.: A systematic and regional analysis of the Soviet Union, with special emphasis on the resources, aims of the Communist Party, and problems of economic development. **(3 lectures a week).**

410. Problems in the Geography of North America: A systematic and regional analysis of the physical and cultural elements of Canada and the United States. **(3 lectures a week).**

440. Climatology: The study of microclimates and the heat and moisture exchange at the surface of the earth. Applied climatology: how the techniques of modern climatology can be used to solve problems in economic, agricultural and urban geography. (Prerequisite: Geography 220a or consent of instructor). **(2 lectures a week).**

441. Advanced Geomorphology: Advanced analysis of landform development. (Prerequisite: Geography 220b or consent of instructor). **(2 lectures a week).**

442. Historical Geography: The study of past and present geographies as a background for understanding the settlement and development of regions through time. **(2 lectures a week).**

445. Geographical Literature and Thought: An exposition of major themes in the history of geographical ideas from Hellenic to modern times. **(2 lectures a week).**

446. Geography Research Problems: Each student will be required to carry out a research project and write a report under the supervision of a staff member. It will involve bibliographical research, field work, cartographical and other representation of findings. This course is compulsory for all students in fourth year honours, make-up, special or extension. (Prerequisite: Geography 230y and 231y or consent of instructor). **(2 lectures a week).**

447. City and Regional Planning: An analysis of land use principles, methods of implementing area development, and policies, procedures and designs of controlled land use. (Prerequisite: Geography 370, or consent of instructor). **(2 lectures, 1 hour laboratory a week).**

449. Advanced Regional Geography: A seminar course in the geography of selected regions. (Prerequisite: one of 280, 290, 330, 381, 410, or consent of instructor). **(2 hours a week).**

451. Advanced Cultural Geography: A discussion of the nature and origins of the discipline, with detailed studies of interrelations between man and his milieux which result in distinctive cultural ecologies and landscapes. Most of the materials considered will be taken from the ethnographies of non-literate societies. (Prerequisite: Geography 240 or consent of instructor). **(2 hours a week).**

460. Environmental Assessment and Analysis: Principles and techniques of assessing and analyzing the spatial variations of ecosystem components. **(2 lectures a week).**

GEOLOGY

Officers of Instruction:

Professors: *P. Sonnenfeld, Dr. rer. nat. (Head of the Department)
C. P. Gravenor, Ph.D., F.R.S.C.

Associate Professors: R. K. Jull, Ph.D.
T. E. Smith, Ph.D.
D. T. A. Symons, Ph.D.
P. P. Hudec, Ph.D.
A. Turek, Ph.D.

Sessional Instructor: M. W. Davis (Mrs.), B.S.

*On leave.

For major in general program, and for Honours Geology, see p. E-64; for Geological Engineering, see p. G-15.

Major requirements: Geology 100, and four to six others in the 200's or 300's.

Minor requirements: Geology 100, and two to four others in the 200's or 300's.

All courses listed will not necessarily be offered in the coming year.

#Courses designated by # may not be taken for credit as a major or minor towards a B.Sc. degree.

Course descriptions:

100. Introductory Course in Geology: Minerals and rocks, geological processes and their results; structure of the earth; practical application of geology; fossils and their use; an outline of the earth's history. (2 lectures and 2 laboratory hours a week. Field trips).

119.# Modern Concepts in Earth and Planetary Science: Origins and evolution of life, the earth, moon and planets. Current theories on such topical issues of life, the earth, moon and planets. Current theories on such topical issues as mountain building, earth quakes, ice ages, continental drift and expanding earth. (Not open to science or geography majors). (2 hours a week lectures and demonstrations, field trips).

219.# Evolution and Earth History: Evolution of invertebrate, vertebrate and plant life in time, space and environment, significant events in the history of the earth. (Not open to science or geography majors). (2 lectures a week). Note: May not be combined with Geology 223a in any degree program.

220. Mineralogy and Crystallography: Principles of crystal structure, morphology and classification of crystals. Chemical and physical properties of minerals. Systematic mineralogy of common members of the major mineral groups. (2 lectures and 3 laboratory hours a week).

222a. Paleontology: Structure, classification and occurrence of Precambrian to Recent life with special emphasis on the major invertebrate groups. (2 lectures and 3 laboratory hours a week, one semester, half course; field trips).

222b. Applied Paleontology: The application of fossils to stratigraphy, paleoecology and evolutionary principles. (Prerequisite: Geology 222a). (2 lectures and 3 laboratory hours a week, one semester, half course; field trips).

223a. Historical Geology: Concept of time in geology. Paleogeography with emphasis on North America. Sequence of major physical events in the history of the earth with a synopsis of the concurrent changing pattern of life. (3 lectures and demonstrations a week; half course).

224b. Regional Geology of Canada: Historical and stratigraphic geology of Canada; major structural features, morphology and petrographic provinces in the various periods of earth history and their present record; mineral deposits. (3 lectures a week; half course).

225c. Geomorphology: The study of landforms. (Prerequisite: Geology 100 or consent of the Department). **(2 lectures, 2 hours practical work a week, one semester; half course).**

331. Geology in Engineering: Engineering properties of minerals and rocks, soils, construction materials; geological processes and their results; geological aspects of engineering projects and rock structures. Case histories. **(2 lectures a week, 2 laboratory hours alternate weeks).** (For Third Year Civil Engineers only).

336. Structural Geology: Nature of rock structures, mechanics of rock deformation. Methods of solution of structural problems. Regional tectonics. (Prerequisite: Geology 100). **(2 lectures and 3 laboratory hours a week).**

337a. Igneous Petrology: The origin, description and classification of the common igneous rocks; their distribution and significance in the evolution of the earth's crust. **(2 lectures and 3 laboratory hours a week, one semester; half course).**

337b. Metamorphic Petrology: The origin, description classification and distribution of the common metamorphic rocks. Metamorphic facies series and the physical conditions under which they form. **(2 lectures and 3 laboratory hours a week, one semester; half course).**

338a. Sedimentary Petrology I: Principles of optical mineralogy and introduction to sedimentary mineralogy. Genetic interpretation of sedimentary rocks. Environmental interpretation. (Prerequisite: Geology 100). **(2 lectures and 3 laboratory hours a week, one semester; half course).**

338b. Sedimentary Petrology II: Physics of sedimentation, lithofacies analysis. Introduction to techniques of sediment analysis and lithofacies interpretation. (Prerequisite: Geology 338a). **(2 lectures and 3 laboratory hours a week, one semester; half course).**

411a. Engineering Geology I: Geology and exploration of common construction materials. Engineering soundness and properties of concrete and bituminous aggregates. Economic, environmental and conservation aspects of aggregate industry. **(2 lectures and 3 laboratory hours a week, one semester; half course).**

411b. Engineering Geology II: Geologic hazards in major construction. Engineering properties of various geologic materials. Geologic engineering case history studies. **(2 lectures and 3 laboratory hours a week, one semester; half course).**

425. Geomorphology: The study of land forms, including an analysis of their origins, stages of growth, classifications and effects on land use. **(2 lectures and 2 laboratory hours a week).**

426. Quaternary Geology: Glacial geology with particular reference to the Pleistocene. Quaternary stratigraphy and chronology of glaciated and non-glaciated regions. **(2 lectures and 2 laboratory hours a week).**

434a. Lithostratigraphy: Interpretation of sedimentary sequences including structures in stratified rocks, facies analysis, stratigraphic units, lithofacies and other geologic maps. (Prerequisite: Geology 338). **(2 lectures and 3 laboratory hours a week, one semester; half course).**

434b. Biostratigraphy: Index fossils, zones, introductory paleoecology. Stratigraphic sections and associated fossils in various parts of North America. (Prerequisite: Geology 222). **(2 lectures and 3 laboratory hours a week, one semester, half course).**

438. Sedimentology: Processes of sedimentation, sedimentary petrogenesis, environmental interpretation, sedimentation analysis, quantitative and qualitative lithofacies analysis. **(2 lectures and 3 laboratory hours a week).**

441a. Economic Geology: Origin, emplacement and geology of metallic mineral deposits and of industrial rocks and minerals. Principles, methods and design of mineral exploration. **(2 lectures and 3 laboratory hours a week, one semester; half course).**

441b. Evaluation of Mineral Deposits: Methods of volume, grade and tonnage calculations. Evaluation of mineral deposits in terms of exploration, exploitation and processing. Present value of mineral reserves. **(2 lectures and 2 laboratory hours a week, one semester; half course).**

442b. Geology of Fossil Fuels: Origin, accumulation and geologic occurrence of petroleum hydrocarbons, associated mineral deposits and coal and their methods of exploration. (Prerequisite: Geology 338). **(2 lectures and 3 laboratory hours a week, one semester; half course).**

448a. Hydrogeology: Geology of groundwater; chemistry, pollution, rate of flow of phreatic water circulation; hydrodynamics of subsurface waters in saturated porous rocks, erosion and deposition by percolating meteoric and thermal waters. Geological exploration methods for water resources. **(2 lectures and 3 laboratory hours a week, one semester; half course).**

455c. Special Topics in Geology: Selected topics of current interest. (Prerequisite: Consent of instructor and department). **(2 hours a week, one semester; half course).**

457. Geochemistry: Chemical constitution of the earth, processes responsible for the observed geochemical distribution of elements. Physical geochemistry in determination of major and trace elements in rocks. Geochronology. Geochemical prospecting. **(2 lectures and 3 laboratory hours a week).**

462. Physics of the Earth: Isostasy and crustal structure, seismology and the earth's interior, thermal constitution of the earth, geomagnetism and geoelectricity, paleomagnetism, exploration geophysics. **(2 lectures and 3 laboratory hours a week).**

480c. Field Camp: Geological mapping methods, use of geophysical equipment. A fee of $60 is charged to defray costs of accommodation. (Prerequisite: Geology 336 or consent of instructor). **(2 weeks, after spring examinations, half course).** (May be taken more than once).

499. Thesis: Each student will be required to carry out a selected research project and write a report under the supervision of a staff member. **(Equivalent to a full course).**

GERMANIC AND SLAVIC STUDIES

Officers of Instruction:

Professor: Fritz Wieden, Ph.D. (Head of the Department)

Associate Professors: Mrs. B. Zakon, M.A.
Dieter Horn, Dr. Phil.

Assistant Professor: C. M. Taylor, M.A.

Lecturer: L. D. Majhanovich, M.A.

Sessional Instructors (part-time): Miss Joan Magee, M.L.S.
Robert B. Vandervaart, B.A.

The Department maintains a summer campus in Germany, for both the Intersession and Summer School terms, offering credit courses in German on the intermediate and advanced levels. A separate pamphlet describing the summer program in Germany may be obtained from the Department.

Course descriptions:

I. GERMANIC STUDIES:

Major Requirements: German 111 or 112, and any other four to six courses, subject to the approval of the Department.

Minor Requirements: German 111 or 112, and any other two to four courses, subject to the approval of the Department.

The Department may waive certain conditions of admission and grant advanced placement to particularly well-qualified students.

Not all courses in Germanic Studies are given every year. Germanic Studies courses with numbers ending in -6 or -7 are given in Germany during the summer only. Courses with numbers ending in -8 denote a course content other than German, e.g. Scandinavian Studies; they may not ordinarily count towards a major or minor in German.

The Department reserves the right to limit enrolment in certain courses.

BASIC COURSES IN GERMAN:

040. The first course in German provides a co-ordinated approach to the basic language skills of listening, speaking, reading and writing. Its aim is to develop a flexible command of the language through classroom instruction, and intensive laboratory practice. No previous study of German is required. **(5 lectures, 2 laboratory hours a week).**

111. The second course in German provides a comprehensive review and reinforcement of the major aspects of German grammar and usage, continues to develop the four basic language skills, and introduces the student to the reading of unedited contemporary literary texts. (Prerequisite: German 040 or the permission of the Department). **(3 lectures, 2 laboratory hours a week).**

112. Introduction to German Literature. (Prerequisite: Grade 13 German, or permission of the Department). **(3 hours a week).**

GERMAN LANGUAGE COURSES:

220.   Intermediate German Composition and Conversation. (3 hours a week).

230.   German Composition. (3 hours a week). [Discontinued in 1972].

320.   Studies in German Language. (Prerequisite: German 220, or permission of the Department). (3 hours a week).

326.   Advanced German Conversation: To be given in Germany during the summer only. Systematic practice of spoken German in a German environment. **(60 hours during either Intersession or Summer School).**

327.   Advanced German Composition: To be given in Germany during the summer only. Systematic practice of writing German, and of translating from English to German or German to English, in a German environment. **(60 hours during either Intersession or Summer School).**

427.   Contemporary German Language Usage: To be given in Germany during the summer only. Intensive study of contemporary German language usage, including colloquialisms, neologisms, and idiom in a German environment. **(60 hours during either Intersession or Summer School).**

GERMAN LITERATURE COURSES:

315.   [334]   German Literature of the Eighteenth Century. (3 lectures a week).

325.   German Literature 1800-1880. (3 lectures a week).

334.   Renumbered 315 in 1972.

335.   German Literature 1880-1945. (3 lectures a week).

339.   Seminar in German Poetry. Its forms and traditions from the Reformation to the present time. (3 hours a week).

345.   [431]   German Literature since 1945. (3 lectures a week).

363.   Introduction to Germanic Philology and Readings in Mediaeval German Literature. (2 lectures a week).

431.   Renumbered 345 in 1972.

SPECIAL INTEREST COURSES IN GERMANIC STUDIES:

200.   A Survey of the Cultural Traditions of German-Speaking Europe: Lectures, seminars and discussions on the literature, the fine arts, and the cultural development of German-speaking countries. This course is taught in English. **(2 lectures a week).**

300.   Bibliography: Introduction to the Methods and Resources of Research. A short introduction to the methods and the tools of scholarship with particular reference to Germanic Studies. Recommended for students intending to major or honour in Germanic Studies. A non-credit course. **(6 meetings during the first term).**

391.   Special Study Topics in German Literature. (3 hours a week).

406.   Contemporary German Culture and Civilization: To be given in Germany during the summer only. Lectures, seminars, and field trips will aim at a first-hand study of the culture and civilization, past and present, of the German-speaking countries. **(60 hours during either Intersession or Summer School).**

407. Methodology of Teaching German as a Foreign Language: with practice sessions. To be given in Germany during the summer only. **(60 hours during either Intersession or Summer School).**

491. Directed Readings in Germanic Studies. (2 to 3 hours a week, as determined by the instructor).

499. Seminar in Weltliteratur. The literary relations between Germany and England, or Germany and France, will be studied in alternate years. Students without sufficient linguistic preparation will require the permission of the instructor to enroll in this course. In 1972-73 Anglo-German literary relations will be studied. **(2 hours a week).**

II. RUSSIAN

Major requirements: Russian 111 or 130 and any other four to six courses.

Minor requirements: Russian 111 or 130 and any other two to four courses.

Not all courses are offered every year.

040. Elementary and Intermediate: Provides a co-ordinated approach to the basic language skills of listening, speaking, reading and writing. Its aim is to develop a flexible command of the language through classroom instruction and intensive laboratory practice. No previous study of Russian is required. **(4 lectures, 2 laboratory hours a week).**

111. Advanced Russian: Composition, Conversation and selected Readings: Reading of literary selections and works of non-fiction. Conversation based on reading and topics of current interest. (Prerequisite: Russian 040 or permission of the Department). **(3 lectures a week; laboratory work may be assigned by the instructor).**

130. [224] Readings from Modern Russian Literature: Analysis of texts, translation, composition, conversation. (Prerequisite: Russian 040 or permission of the Department). **(3 lectures a week; laboratory work may be assigned by the instructor).**

224. Renumbered 130 in 1972.

230. The Russian Short Story. Survey of the Russian Short Story Tradition, including representative works in the original language of Pushkin, Gogol, Turgenev, Tolstoy, Dostoevsky, Chekhov, Gorky, Bunin, Zoshchenko, Babel, Solzhenitsyn. (Prerequisite: Russian 111 or 130 or permission of the Department). **(3 hours a week; laboratory work may be assigned).**

330. Soviet Literature: A survey of major Soviet Russian writers and poets from 1917 to the present day. (Prerequisite: Russian 111 or 130 or permission of the Department). **(3 lectures a week).**

334. Nineteenth-Century Poetry: Reading, translation, analysis, discussions. (Prerequisite: Russian 130). **(2 lectures a week).**

336. Russian Drama: From Fonvisin to the present. (Prerequisite: Russian 111 or 130). **(3 lectures a week).**

337. Russian Literature in Translation. [Discontinued in 1972].

338. The Russian Novel. The development of the novel as a literary form. Readings in translation, or the original, of major Russian novels by Gogol, Goncharov, Turgenev, Tolstoy, Dostoevsky, Bely, Pasternak, and Solzhenitsyn. Open to students not majoring in Russian. This course is taught in English. **(3 hours a week).**

345. The Structure of Modern Russian. Analysis of the syntactic and morphological structure, and of word usage in modern Russian. Practical exercises are included. This course is intended for all students planning to teach Russian. **(3 hours a week).**

460. Studies in the Art of Russian Nobel Prize Winners in Literature. This course will be taught in English and is open to all students. **(3 hours a week).**

465. Old Russian Literature. From the **Tale of Igor's Campaign** to Derzhavin and Karamzin. (Prerequisite: Russian 345 or permission of the Department). All readings will be in Russian. **(3 hours a week).**

III. SCANDINAVIAN

This course may not be offered every year.

318. A Survey of Cultural Traditions of Scandinavian Europe: Lectures, seminars, and discussions on the cultural development of the Scandinavian countries from the earliest North Germanic roots to the present. This course is given entirely in English. **(2 hours a week).**

IV. UKRAINIAN

Minor Requirements: Ukrainian 111, 200, and 300.

Not all Ukrainian courses listed here will be given every year. In 1972-73 Ukrainian will be offered in the Division of Extension only, subject to sufficient registration.

100. Intermediate Ukrainian: Intensive review of grammar, translation, oral practice, selected readings. (Prerequisite: Some knowledge of Ukrainian, but not Grade 13 standing; placement to be determined by the Department). **(3 lectures; additional laboratory work recommended).**

111. Advanced Ukrainian: Composition, conversation, selected readings. (Prerequisite: Ukrainian 100, or permssion of the Department). **(3 lectures a week; additional laboratory work recommended).**

200. A Survey of Ukrainian Cultural Traditions. Lectures, seminars, and discussions on the literature, the arts, and the cultural traditions of Ukrainians in Europe and Canada. This course will be taught entirely in English. **(2 hours a week).**

300. Survey of Ukrainian Literature. Studies in selected works of Ukrainian and Ukrainian-Canadian writers. (Prerequisite: Ukrainian 111, or permission of the Department). **(3 hours a week).**

GREEK

(See p. E-97).

HISPANIC AND ITALIAN STUDIES

Officers of Instruction:

Associate Professors: Rev. R. S. Pazik, Cert. Est. del Doct.
(Head of the Department)
Rev. J. C. O'Donoghue, A.M.
V. Perez-Soler, Doctor en F. y L.
C. Fantazzi, Ph.D. (Department of Classical Studies)

Assistant Professors: B. Primorac, M.A.
S. Adorni, M.A.
W. J. Temelini, Ph.D.

For major in Spanish in the general program, see p. E-19; for Honours English and Spanish, see p. E-36; for Honours French and Italian, see p. E-38; for Honours French and Spanish, see p. E-40; for Honours German and Spanish, see p. E-42; for Honours Latin and Spanish, see p. E-47; for Honours Latin American Studies, see p. E-48; for Honours Spanish and Italian, see p. E-56.

All courses listed will not necessarily be offered in the coming year.

Course descriptions:

I. ITALIAN

Major requirements: Five to seven courses, including Italian 113, 220, and 370 or 380.

Minor requirements: Three to five courses, including Italian 113 and 220.

Note: Prerequisite for all courses: Italian 101, equivalent or approval of the Department. For all majors and minors Italian 113 is a prerequisite or a co-requisite for all subsequent courses.

030. Introductory: elementary and intermediate grammar, oral practice, selected readings. (No prerequisite). (Placement to be determined by interview). **(5 lectures; 2 laboratory hours a week recommended).** [Discontinued in 1972].

101. Intensive Introductory Italian: Elementary and intermediate. Grammar, translation, oral practice, selected readings. (No prerequisite. Open to students of Preliminary and First Year). **(5 lectures a week; 2 laboratory hours recommended).**

Note: A separate section of Italian 101 consisting of 3 lectures and 1 laboratory hour a week will be available for those who have some knowledge of Italian. Placement to sections will be determined by interview with the Department.

113. Advanced Grammar and Syntax: Lexical and stylistic elements with selected readings. (Prerequisite: Grade 13 Italian or the equivalent approved by the Department). **(3 hours a week; 1 laboratory hour recommended).**

220. Italian Civilization: The cultural traditions of Italy from the Middle Ages to Modern times, illustrated through selected readings. **(3 hours a week; 1 laboratory hour recommended).**

221. Advanced Conversation and Composition: A course designed for providing proficiency in the spoken and written language. Topics will be chosen from various aspects of Italian life and thought. **(3 lectures a week; 1 laboratory hour recommended).** [Not offered 1972-73].

250. Nineteenth and Twentieth Century: from *Verismo* to the present. **(3 lectures a week).**

300. Seminar in Italian Literature: Topics will vary from year to year, to be announced by the Department in early Spring, prior to the academic year in which the course will be offered. (2 lectures, 1 seminar hour a week). [Not offered 1972-73].

311. History of the Italian Language: From Latin through *Vulgari Eloquentia*, the *Questione della lingua* to modern development. (3 lectures a week). [Not offered 1972-73].

350. Seventeenth to Nineteenth Century: *Marinismo, Arcadia, Illuminismo, Neo-Classicismo, Romanticismo.* (3 lectures a week).

370. The Renaissance: from *Theocentrism* to *Humanism*. Machiavelli, Castiglione, Ariosto, Tasso. (3 lectures a week). [Not offered 1972-73].

380. Literature of the Middle Ages: Dante, Petrarca, Boccaccio. Selected readings from the *Inferno, Canzoniere, Decamerone.* (3 lectures a week).

II. PORTUGUESE

309. Intensive Introductory Portuguese: Composition, conversation, readings from selected contemporary authors. (Course required for Latin American Studies. Open to students of Romance Languages or Linguistics. Prerequisite: French 114 or Italian 113 or Linguistics 101 or 201 or Spanish 113 or 116). (3 hours a week). [Not offered 1972-73].

490. Brazilian Literature: A survey of the main currents of Brazilian Literature. (Course required for Latin American Studies). (Prerequisite: Portuguese 309 or approval of the Department). (3 hours a week).

III. SPANISH

Major requirements: Five to seven courses, including Spanish 113 or 116; Spanish 232 and 242.

Minor requirements: Three to five courses, including Spanish 113 or 116; Spanish 232 and 242.

030. Introductory: Elementary and Intermediate. Composition, conversation and selected readings. (No prerequisite. Preliminary Year only). (4 lectures, 1 laboratory hour a week).

050. Intermediate: Composition, conversation and selected readings. (Prerequisite: Grade 12 Spanish or the equivalent). (3 lectures, 1 laboratory hour a week).

101. Intensive Introductory: Grammar, translation, dictation, oral practice, selected readings. (No prerequisite. First Year only). (4 lectures, 1 laboratory hour a week).

Note: Prerequisite for all courses: Spanish 030 or 050 or 101 or the equivalent or approval of the Department. For all majors and minors Spanish 113 or 116 is a prerequisite or co-requisite for all subsequent courses.

113. Advanced: Intensive grammar review. An introduction to Hispanic civilization. (Prerequisite: Grade 13 Spanish, the equivalent or approval of the Department). (3 hours a week).

116. Advanced: Intensive grammar review. An introduction to Hispanic civilization. (Prerequisite: Grade 13 Spanish, the equivalent or approval of the Department. Intended for those who may pursue major, minor or Honours course). (3 hours a week).

201y. Renumbered 310y in 1972.

212y. Phonetics. (1 hour a week; half course). [Not offered 1972-73].

213y. Criticism. (1 hour a week; half course). [Discontinued, 1972].

230. Renumbered 330 in 1972.

232. [249a] Survey of Spanish Literature: An introduction to Spanish Peninsular Literature through selected works of principal Spanish authors. **(3 hours a week).**

242. [279b] Survey of Spanish American Literature: An introduction to Spanish American Literature through selected works of principal Spanish American authors. **(3 hours a week).**

249a. Renumbered 232 in 1972.

279b. Renumbered 242 in 1972.

310y. [201y] Advanced Conversation: Systematic oral practice for developing fluency in speaking Spanish; laboratory work. **(2 hours a week; half course).**

311y. Advanced Composition. (2 hours a week; half course).

315. History of the Spanish Language: The evolution of the Spanish language. **(2 hours a week).** [Not offered 1972-73].

316. History of New World Spanish: The phenomena of the Spanish language in the New World. **(2 hours a week).** [Not offered 1972-73].

324. Renumbered 424 in 1972.

330. [230] The Eighteenth and Nineteenth Century: Prose, poetry and theatre: Peninsular Literature — Classicism; Romanticism, Costumbrismo; Realism; Naturalism. **(3 hours a week).**

334. The Generation of '98: Peninsular Literature: prose, poetry, theatre. **(3 hours a week).**

359. Spanish American Literature: From the Colonial period to Modernism. **(3 hours a week).** [Not offered 1972-73].

400. Seminar: Latin American Problems. (Special topics for Latin American Studies to be announced each year). **(2 hours a week).** This course is listed in the Department of Hispanic and Italian Studies; it is, however, an interdisciplinary and interdepartmental course. It will be given as a series of seminars organized by the several Departments of Economics, Geography, Hispanic and Italian Studies, History, Political Science, Sociology and Anthropology.

408y. Modern Spanish Usage and Syntax. (1 hour a week; half course). [Discontinued, 1972].

420. Medieval and Early Renaissance Literature: Prose, poetry, theatre, from their origins to the Golden Age. Emphasis on the historical development of the Spanish language. **(3 hours a week).**

424. [324] Literature of the Golden Age: Spanish Literature from the late Renaissance through the Baroque period. The prose, poetry and theatre of the Spanish masters of the Sixteenth and Seventeenth Century. **(3 hours a week).** [Not offered 1972-73].

440. Twentieth Century Literature: Contemporary literature of Spain. **(3 hours a week).** [Not offered 1972-73].

470. Spanish American Literature: From Modernism to the present. **(3 hours a week).**

HISTORY

Officers of Instruction:

Professors: Rev. D. J. Mulvihill, C.S.B., Ph.D.
Rev. J. P. O'Meara, C.S.B., Ph.D.
M. N. Vuckovic, Ph.D. (Head of the Department)

Associate Professors: J. K. O'Farrell, Ph.D.
K. G. Pryke, Ph.D.
*Rev. H. G. Hill, M.A.
A. I. Mouratides, Ph.D.
Br. Bonaventure Miner, Ph.D.
U. Sautter, Ph.D.

Assistant Professors: R. G. Hoskins, M.A.
Miss K. E. McCrone, Ph.D.

Lecturers: D. M. Klinck, M.A.
L. L. Kulisek, M.A.
I. C. Pemberton, M.A.
B. P. Nolan, M.A.

*On leave.

Notes:

1. History 115 is a prerequisite course for all other history courses, except when:
   (i) a single history course is taken as a free option, and
   (ii) when, in certain honours programs, History 225 is prescribed in the second or later years, and history courses are in the nature of an option.

2. Thereafter, all students in History shall select their courses from the respective areas of concentration; but they may take any course(s) within the areas, in consultation with the Department and in harmony with Faculty and/or Departmental regulations.

3. Senior courses, assigned at the discretion of the Department Head, may form part or all of the requirements for the first year of the two-year program leading to the degree of Master of Arts.

4. Students taking courses for the purpose of upgrading their general B.A. degree and who are contemplating entering a program leading to the degree of Master of Arts are advised that their admission into such courses does not of itself commit either them or the Department to their admission as candidates for the M.A. degree.

5. **Not all courses in History will be offered in every year. Students should consult the Department in advance of registration to determine the available courses.**

Major Requirements: History 115, and any additional four to six courses, but at least two in each area.

Minor Requirements: History 115, and any additional two to four courses, but at least one in each area.

For major in general program, p. E-19; for Honours History, p. E-44; for Honours History (Economics option), p. E-44; for Honours History (Philosophy option), p. E-45; for Honours History and Theology, p. E-45; for Honours Economics and History, p. E-30; for Honours English and History, p. E-34; for Honours German and History, p. E-41; for Honours Political Science and History, p. E-52; for Honours International Relations, p. E-46.

Course descriptions:

I. PREREQUISITE COURSE

115. History of Modern Europe (1555-1945). (3 hours a week).

II. AREA A — (AMERICAS)

222. History of Canada: Selected aspects of Canadian history from the beginning of the French regime to the present. (3 hours a week, lectures and seminars).

230. History of French Canada, 1760-present: Selected aspects of social, political, and cultural life. (3 hours a week, lectures and seminars).

235. History of Latin America: The colonial and republican periods; the cultural, institutional and political development of the Latin countries of the western hemisphere. Selected aspects of Latin American history in the 19th and 20th centuries. (3 hours a week, lectures and seminars).

332. British North America, 1783-1896: A regional and social approach. (3 hours a week, lectures and seminars).

333. History of the British Commonwealth: A study in the development of the British Empire from the period of Tudor expansion to the events of the modern British Commonwealth. (3 hours a week, lectures and seminars).

334. History of the United States: The colonial period, the revolution, making of the constitution, westward development, the slavery struggle, the Civil War, reconstruction and later political history to the present day; the character of federal and state governments. (3 hours a week, lectures and seminars).

342. The American Civil War, Its Antecedents and Aftermath: 1820-77: Sectional Conflict 1820-60: growing divergence of views in the political, social, economic and intellectual spheres of life in the Republic; the breakdown of co-operation between North and South in the 1850's; problems of slavery and emancipation; the Civil War itself and its military and diplomatic problems; the effects of war on both sides; Reconstruction. (3 hours a week, lectures and seminars).

358. Canada as an Autonomous State Since 1867: Completion of Confederation and Canada's emergence as a state; the development of regional communities and nations in British America. Particular emphasis will be placed on the intellectual and social development which accompanied the growth of the contemporary urban, technological society. (3 hours a week, lectures and seminars).

410. Selected Problems in Twentieth Century Latin America: Major trends and developments since the Spanish-American War, with particular emphasis on the A.B.C. Powers and Mexico. (3 hours a week, lectures and seminars).

438. Diplomatic History of the United States: The diplomatic aspects of the War for Independence; American international relations after 1789; occupation of the West; international aspects of the Civil War; American Imperialism; Spanish-American War; first World War; League of Nations; Caribbean and Pacific problems since 1920; foreign policy since 1933; Second World War; post-war problems and the United Nations. (Prerequisite: History 334 or permission of the Department). (3 hours a week, lectures and seminar).

446. Canada in the Twentieth Century: Laurier and Borden administrations; Liberal convention of 1919 and the subsequent prominence of Mackenzie King; the Depression years; the growth of Third Party movements; Canada in foreign affairs; the rise of the welfare state: King, St. Laurent, and Pearson; the "quiet" revolution in Quebec. (3 hours a week, lectures and seminars).

461. Canadian-American Relations, 1785 to 1962: Special emphasis on post World War II economic, defence and cultural interests. (3 hours a week, lectures and seminars).

III. AREA B — (EUROPE)

224. History of England: Political, social and economic history of England from 1485 to the present. (3 hours a week, lectures and seminars).

225. Modern Europe Since 1648: Selected aspects with emphasis on the main currents of thought; the emergence of the Great Powers; and the rise of dictatorships in the 20th century. (3 hours a week, lectures and seminars).

257. Ancient Civilizations: Greece and Rome. Selected problems with emphasis on the development of the Hellenic city-state; the Greek contributions to modern civilization; the Roman state and its legacy to civilization. (3 hours a week, lectures and seminars).

323. England in the Age of Tudors and Stuarts: Political, social, and cultural development of England 1485-1713. (3 hours a week, lectures and seminars).

326. Political and Social History of England, 1714—Present: Development of political institutions, agricultural and industrial revolutions, and resulting political, social and economic changes; the "age of reform"; Victorianism; rise of the Labour party; the effects of two world wars; the evolution of the welfare state. (3 hours a week, lectures and seminars).

336. Formation of Modern Europe: The Renaissance and Reformation, 1400-1648: Selected aspects in the development of social institutions, religion and culture; the changing character of social classes; the nature of humanism, etc. from the early 15th to the middle of the 17th centuries. (3 hours a week, lectures and seminars).

337. History of Russia: Origin to the Fall of Monarchy: (i) The political and economic growth, cultural and religious factors, the growth of foreign relations and the expansion of the State until the 19th Century. (ii) The history of Russia from the beginning of the 19th Century to the Fall of the Monarchy, with special emphasis on the development of the revolutionary movement in Russia. (3 hours a week, lectures and seminars).

350. Cities of Western Europe in the Later Middle Ages: The role of the city in later Mediaeval Society; the cities as centres of trade and civilization; the main civil and ecclesiastical contributions to the development of urbanization. (3 hours a week, lectures and seminars).

351. Intellectual and Cultural History of Western Europe, 1600-1789: Beginnings of modern science; seventeenth century Rationalism; the secularisation of political authority; the development of political thought; eighteenth century Enlightenment; the intellectual background to the French Revolution. (3 hours a week, lectures and seminars).

352. Institutions and Society in Medieval Europe. Medieval institutions relative to continental Europe; the influence upon society and the role of such factors as the Empire, the Papacy, feudalism, the guild, the dynastic state and others. (3 hours a week, lectures and seminars).

354. Development of Modern France, 1814-1940: The post-Napoleonic restoration; the revolutions of 1830 and 1848 and their respective aftermaths; the Second Empire; the Franco-Prussian War and the Paris Commune; French Positivism; the growth of ideologies; the Third Republic; the inter-war years. (3 hours a week, lectures and seminars).

356. History of Modern Germany, 1763-1960: The rise of Prussia under Frederick the Great; effects of the Napoleonic period; restoration and *Vormaerz;* revolution of 1848-49; the rise of Bismarck and the Second Empire; economic and social developments in the nineteenth century; the Weimar Republic; the Third Reich and its downfall; aftermath of World War II and recovery. Emphasis will be laid on institutional, social, economic and intellectual aspects. **(3 hours a week, lectures and seminars).**

360. History of the Byzantine Empire: Development of the Byzantine Empire to the 15th century; economic and social conditions; the influence on western and eastern Europe, stressing the cultural aspects. **(3 hours a week, lectures and seminars).**

362. Social and Intellectual History of France and Britain, 1789-1914: Science and the Industrial Revolution in France and England; intellectual developments; social problems; education, with special reference to the role and position of the Christian churches in that period. **(3 hours a week, lectures and seminars).**

420. History of European Diplomacy 1815 to Present: (i) Diplomacy in theory and practice; (ii) History of British Foreign Policy in Europe, 1815-1914; (iii) International relations and world problems in the 20th Century. **(3 hours a week, lectures and seminars).**

439. History of U.S.S.R.: Revolutionary trends of the 19th and early 20th centuries; Marxian and non-Marxian roots of the Revolution; the February and October Revolutions and the Civil War; doctrinal foundations of the new order and subsequent ideological changes; economic and political structure; international relations and foreign policy. **(3 hours a week, lectures and seminars).**

440. History of the Early Church to 500 A.D.: The development of the Church as an institution from the post-apostolic era until the sixth century. Special attention will be paid to the relationship of the Church to the pagan and Christian Empires, the development of Christian institutions with particular reference to the first four Ecumenical Councils and Christian life and thought. The course emphasizes use of documents. **(3 hours a week, lectures and seminars).**

453. Social and Constitutional History of England: The social and constitutional history of England to 1688, emphasizing the use of documents. Recommended for pre-law and political science students. **(3 hours a week, lectures and seminars).**

455. British Political Parties: The rise of the Tory, Whig, Conservative, Liberal, Irish Parliamentary, Unionist and Labour Parties. **(3 hours a week, lectures and seminars).**

HOME ECONOMICS

Officers of Instruction:

Associate Professor: Phyllis McDermott, M.S. (Head of the Department)

Assistant Professors: Mrs. Linda M. McKay, M.S.
Grace M. Engel, M.A.
S. M. Goerzen, M.S.
Mavis Milton, M.Sc.

Lecturer: Barbara Lanz, M.S.

Major requirements: Six or seven courses, including 110ab, 226, 227, and one of 220 or 223.

Minor requirements: Any three to five courses, provided prerequisites are met.

For major in the general program, see p. E-19.

Students intending to teach are advised to take Home Economics 110ab, 220, 223, 226, 227, 331.

All courses listed will not necessarily be offered in the coming year.

Course descriptions:

110a. Textiles: Study of textiles from raw materials through manufacturing; from fiber to the finished fabric. The identification, analysis, choice, use, and care of fabrics from the producer to the consumer. (2 **hours lecture, 2 hours laboratory a week, one semester; half course).**

110b. Clothing Construction and Selection: Basic clothing construction processes and procedures. Principles of selection and purchase of clothing for the individual and the family. (2 **hours lecture, 2 hours laboratory a week, one semester; half course).**

220. Family Relations: The factors influencing the changing roles of various members of the family in the twentieth century; the conservation and integration of family values, goals and standards; world trends in change and the future of the family. (3 **lectures a week).**

223. Home Management: A consideration of the fundamental principles involved in home management, including the importance and potential of the consumer in our economy, the utilization of human and non-human resources, consumer protection as provided at the federal, provincial and local levels of government. (2 **hours lectures, 2 hours laboratory a week).**

226. Housing and Interior Design I: The selection and planning of housing; the basic elements of interior design including design principles, color, fabrics, and furnishings; the selection of furnishings and accessories; the history of furniture. (3 **lectures a week).**

227. Basic Foods: A study of the structure, nature and composition of foods, principles underlying the selection and preparation of foods of standard quality; practical experience in meal management, such as menu planning, food purchasing, preparation and service; food preservation. (2 **hours lecture, 3 hours laboratory a week).**

230. Theory of Fashion Design and Clothing Production: Inter-disciplinary study of clothing, historic costume, clothing industry of Canada and other countries and principles and techniques of creating clothing design. Psychological, sociological, and economical implications of clothing behaviour patterns. (Prerequisite: Home Economics 110ab). (3 **lectures a week).**

326. Housing and Interior Design II. The application of housing design principles through architectural drawing; office planning and design; exterior perspective; interior design problem involving the basic elements of design; special requirements of the aged and handicapped. **(2 hours lecture, 2 hours laboratory a week).**

327. Man's Food—Past, Present, Future: A study of past and present problems of hunger and malnutrition in the world; solutions currently being tried at the national and international levels as well as by voluntary agencies; an understanding of food customs and the influence of culture and religion on food habits. **(3 lectures a week).**

330. Tailoring: Emphasis is placed on original designer patterns and the use of appropriate fabrics for such designs. A study of tailored apparel; specialized tailoring techniques applied to the construction of a garment from a commercial pattern; evaluation of methods used in tailored garments. (Prerequisite: Home Economics 110ab). **(2 lectures, 2 laboratory hours a week).**

331. Nutrition: A study of food nutrients as they affect the growth and development of humans, including causes and recognition of dietary diseases; nutritional implications at various age levels; and some aspects of community and world nutrition. **(3 lectures a week).**

336. Housing and Interior Design III: The application of the elements of interior design by the use of various presentation techniques; new trends in housing, decorating, and building materials; problems and experiments with lighting and arrangement; a remodelng project; student research covering the listing of, and new developments in housing and design. **(3 lectures a week).**

337. Experimental Food Cookery: Experimental food problems involving methods, ingredients, equipment, and the interpretation and evaluation of results; chemical and physical reactions of food components influencing the behaviour of food. (Prerequisite: Home Economics 227). **(2 lectures, 3 laboratory hours a week).**

ITALIAN

LATIN

LIBRARY ORIENTATION

Use of Books and Libraries: A basic course intended to acquaint students with the most efficient means of using library materials. The emphasis is placed on library research methods, including demonstration of techniques designed for use of the card catalogue, basic reference works, periodical indexes and abstracts. Seven lectures. (Required of all students entering the University in Preliminary or First Year). This course is offered on a Pass/Non-pass basis only.

LINGUISTICS

MATHEMATICS

Officers of Instruction:

Professors: Rev. D. T. Faught, C.S.B., M.A. (Head of the Department)
E. Zakon, Dr.Jur.
A. C. Smith, Ph.D.
D. S. Tracy, Sc.D.
N. Shklov, M.A.
P. N. Kaloni, Ph.D.

Associate Professors: H. R. Atkinson, Ph.D.
*K. A. Zischka, D.Sc.
J. F. McDonald, Ph.D.
O. P. Chandna, Ph.D.
K. L. Duggal, Ph.D.
C. K. Meadley, Ph.D.
S. K. Banerjee, Ph.D.
F. W. Lemire, Ph.D.
N. M. Wigley, Ph.D.

Assistant Professors: P. L. Manley, M.Sc.
R. Hrycay, Ph.D.
G. McPhail, M.Sc.
A. J. Gold, Doct. de Spéc.
M. A. Selby, Ph.D.
D. J. Britten, Ph.D.
T. E. Traynor, Ph.D.
C. S. Wong, Ph.D.

*On leave.

Major Requirements: Six or seven courses, including 120a, 191b, 211; and one of 110, 111, 113, 114, 115.

Minor Requirements: One of 110, 111, 113, 114, 115; and any other two courses.

For major in general science program, see p. E-65; for major in general arts course, p. ___ for Honours Mathematics, B.Sc., p. E-66; B.A., E-49; for Honours Physics and Mathematics, p. E-51; for Honours Economics and Mathematics, p. E-30.

#Courses designated by # may not be taken for credit as a major or minor towards a B.Sc. degree.

All courses listed will not necessarily be offered in the coming year.

Course descriptions:

010. Functions and Relations: Sets, permutations and combinations, functions and relations, conics, logic, induction, plane transformations. (Prerequisite: Grade 12 Mathematics). **(2 lectures a week).**

020. Calculus: Slopes, derivatives, anti-differentiation, applications, complex numbers and polar co-ordinates. (Prerequisite: Grade 12 Mathematics). **(2 lectures a week).**

030. Algebra: Mathematical induction, binomial theorem, matrices and linear transformations, systems of linear equations, vectors, equations of lines and planes. (Prerequisite: Grade 12 Mathematics). **(2 lectures a week).**

100a. Matrix and Vector Algebra: The algebra of matrices and vectors, equations of lines and planes. (Prerequisite: Mathematics 1, or corequisite: Mathematics 010). This course may not be taken for credit by students in Mathematics, Physics or Engineering. **(3 lectures a week, one semester; half course).** [Discontinued in 1972].

Not more than one of the courses numbered 110 to 115 may be taken for credit.

110. Calculus and Linear Algebra: Differential and integral calculus of algebraic and transcendental functions. Application to analysis of supply, demand, revenue and learning curves. Partial derivatives, maxima and minima. A variety of optimization problems. Introduction to matrices and vectors. Linear programming. Determinants, Cramer's Rule, systems of equations. (Recommended Prerequisite: Mathematics 020 or Grade 13 Mathematics 2). **(3 lectures, 1 hour laboratory a week).**

111. Calculus: Differential and integral calculus of algebraic and transcendental functions. Maxima and minima. Related rates. Area, volume. Techniques of integration. A variety of problems related primarily to the biological sciences. (Recommended Prerequisite: Mathematics 020 or Grade 13 Mathematics 2). **(3 lectures, 1 hour laboratory a week).**

113. Calculus: Incorporates the material of Mathematics 020 and 114 and 115. Problems relating to the Pure and Applied Sciences. (Prerequisite: Mathematics 010 or Grade 13 Mathematics 1). **(4 lectures, one tutorial hour a week).**

114. Calculus: Differential and integral calculus of algebraic and transcendental functions. Maxima and minima, related rates. Curve sketching in rectangular and polar coordinates. Area, volume, work. Techniques of integration. Approximate integration. A variety of problems related to engineering. (Prerequisites: Mathematics 010 and 020 or Grade 13 Mathematics 1 and 2). **(3 lectures, 1 hour laboratory a week).**

115. Calculus: Limits and Continuity: Derivatives and integrals of algebraic and transcendental functions. Maxima and minima, related rates, differentials. Mean value theorems. Fundamental theorem of calculus. Techniques of integration. A variety of problems related to physics and chemistry. (Prerequisites: Mathematics 010 and 020 or Grade 13 Mathematics 1 and 2). **(3 lectures, 1 hour laboratory a week).**

120a. Linear Algebra: Matrices and determinants, systems of linear equations. Inversion of matrices, quadratic forms. Eigenvalues and eigenvectors. Diagonalization. Vector spaces, linear dependence and independence. Linear transformations. (Prerequisites: Mathematics 010 and 030, or Grade 13 Mathematics 1 and 3). **(2 hours lecture, 1 hour laboratory a week, one semester; half course).**

121a. Linear Algebra: Incorporates the material of both Mathematics 030 and 120a. (Prerequisite: Mathematics 010 or Grade 13 Mathematics 1). **(3 lectures, 1 hour tutorial a week, one semester; half course).**

122a. Linear Algebra for Business Students: Basic properties of matrices, elementary matrix operations, systems of linear equations, linear transformations, determinants, inverses, linear inequalities, linear programming. Not to be taken for credit by a Mathematics major. (Prerequisite: One of Mathematics 010, 020, 030 or one of Grade 13 Mathematics 1, 2, 3). **(2 lectures, 1 tutorial hour a week, one semester; half course).**

130b. Vectors and Coordinate Geometry: Scalar and cross products with applications. Lines and planes. Conic sections and quadric surfaces. Translations and rotations. Polar coordinates. Cylindrical and spherical coordinates. Complex numbers. (Prerequisite: Mathematics 120a). **(2 hours lecture, 1 hour laboratory a week, one semester; half course).**

190.# Fundamental Concepts of Mathematics: A discussion of such topics as sets, logic, numbers, relations and functions, sequences and limits, counting. The idea of a mathematical system. Intended for non-mathematicians. Not to be taken for credit by Math major. (No prerequisite). **(3 lectures a week).**

191b. Basic Concepts of Mathematics: Set algebra using quantifiers and index sets. Relations and mappings. Ordered fields. Induction. Geometry of n-dimensions. Axiomatic method. (Prerequisite: Mathematics 120a or 121a). **(2 hours lecture, 1 hour laboratory a week, second semester; half course).**

193.# Celestial Navigation: Celestial and terrestrial sphere, navigational astronomy. Identification of celestial bodies. Spherical trigonometry. Solution of the navigational triangle. Practice of navigation. Not to be taken for credit by Science or Mathematics majors. (Prerequisite: Grade 12 Mathematics. **(3 hours a week).** [Offered in Extension Division only in 1972-73].

200. Foundations of Mathematics: Propositional calculus; vector spaces, subspaces and dimensions; finite dimensional Euclidean space and metric spaces. (Prerequisites: any first year calculus course; Mathematics 191b or consent of the instructor). **(3 hours a week).** [Offered in Extension Division only in 1972-73].

201. Structure of Arithmetic: Set theory, construction of the natural numbers, integers, rational and real numbers; positional notation and algorithms; elementary number theory. (This course may not be taken for credit subsequent to or concurrent with Mathematics 191b). **(3 hours a week).**

210. Foundations of Analysis: Sets, binary relations and mappings, ordered fields, the real number system, metric spaces, sequences, Bolzano-Weierstrass and Heine-Borel theorems, continuous maps, Riemann integration, differentiation, infinite series; vectors, planes and lines in the 3-space, quadratic surfaces, linear transformations of the 3-space, general quadratic equation, the n-space, vector spaces in general. (Prerequisite: Math 113 or 115; 191b). **(3 lectures, 1 tutorial hour a week).**

211. Intermediate Calculus, Differential Equations: Improper integrals, infinite series, multiple integration, partial derivatives, line and surface integrals, vector calculus, differential equations, LaPlace transforms. (Prerequisite: One of Math 110, 111, 113, 114, 115; either 130b or 191b). (Mathematics 211 and 213 may not both be taken for credit). **(3 lectures, 1 tutorial hour a week).**

212a. Intermediate Calculus: Sequences, improper integrals, indeterminate forms, infinite series, partial derivatives, line and surface integrals, volume integrals. (Prerequisites: Math 113 or 115; either 120a or 121a; 191b). **(4 lectures, 1 tutorial hour a week, one semester; half course).**

212b. Vector Calculus, Differential Equations: Gradient, divergence and curl with applications, Green's and Stokes' theorems, differential equations of first order, higher order differential equations with constant coefficients, series solutions of differential equations. (Prerequisite: Math 212a). **(4 lectures, 1 tutorial hour a week; one semester; half course).**

213. Intermediate Calculus; Differential Equations: Techniques of integration, improper integrals, indeterminate forms; partial derivatives, optimization of functions of several variables; multiple integration; infinite series; differential equations. Applications to business and Social Sciences. (Prerequisite: One of Mathematics 110, 111, 113, 114, 115). (Students taking this course may not take Mathematics 211 for credit). **(3 lectures, one tutorial hour a week).** [Not offered in 1972-73].

217c. Complex Variables: Analytic functions, integration, series, contour integration, conformal mapping, boundary value problems, integral transforms. (Prerequisite: Math 113, 114 or 115; corequisite: Math 211). **(3 lectures, 1 tutorial hour a week, one semester; half course).**

220. Linear Algebra: Algebraic structures, matrix calculus, vector spaces, linear systems, linear and quadratic forms, eigenvalue problems, linear groups and applications. (Prerequisite: Math 120a or 121a; 191b). **(3 lectures, 1 tutorial hour a week).**

240a. Finite Mathematics: Topics in logic, set theory, probability theory, and matrix algebra; partitions and combinatorics; Markov chains; Monte Carlo simulations; linear programming; theory of games. (Prerequisite: One of Mathematics 110, 111, 113, 114, 115; 120a or 121a; 130b or 191b). **(3 hours a week, first semester; half course).**

251a.# Introductory Statistics: Presentation of data, frequency distributions, measures of location and dispersion, probability, binomial and normal distributions, sampling distributions, tests of significance, goodness of fit, linear regression and correlation. Not available for a major or minor in Mathematics. (No prerequisite). **(2 lectures, 2 laboratory hours a week, one semester; half course).**

253c. Statistics: Probability theory and introduction to statistical inference. (Prerequisite: one of: Mathematics 113, 114 or 115). Students taking this course may not take Mathematics 251a or Mathematics 351 for credit. **(2 lectures, 1 laboratory hour a week; one semester; half course).**

290b. Number Theory: Divisibility; congruences; numerical functions; theorems of Euler, Fermat, Wilson; theory of primes; quadratic residues. (Prerequisite: Mathematics 191b). **(3 lectures a week, one semester; half course).**

310. Principles of Analysis: Differentiation of functions of several variables; indefinite integral, local behaviour of functions of one or several variables including implicit and inverse function theorems; Taylor's theorem and functions of bounded variation; Lebesgue measure and integration. (Prerequisites: Mathematics 210 and either 120a or 121a). **(3 lectures a week).**

311c. Real Analysis: Real numbers, principle of continuity, suprema and infima, sequences and series, functions of one real variable, continuous functions on a closed interval, theorems of Rolle and Lagrange, rigorous proof of chain rule, Taylor expansions, Riemann integration. (Prerequisite: Mathematics 211). **(3 lectures a week, one semester; half course).**

312a. Complex Analysis: Analytic functions, multiple-valued functions and branches, power series, singular points, residues, contour integration and applications, conformal mapping. (Prerequisite: Mathematics 211 or 212ab). **(3 hours a week, one semester; half course).**

314c. Ordinary Differential Equations: Existence and uniqueness theorems for ordinary and partial differential equations, comparison and oscillation theorems, methods of solution. (Prerequisite: Mathematics 212ab). **(3 hours a week, one semester; half course).**

320. Algebra: Fundamental algebraic structures. Groups, rings, domains, fields. Modules and vector spaces. (Prerequisite: Mathematics 220). **(3 hours a week).**

321. Algebra: Groups, rings, fields, the integers, rational numbers, polynomials, real numbers, complex numbers, group theory, vector spaces, matrices, linear groups, determinants, canonical forms, set theory, Galois theory. (Prerequisite: Mathematics 120a or 121a). **(3 hours a week).**

330b. Geometry: Geometric transformation groups, geometric invariants, analytic projective geometry, subgeometries of projective geometry; axiom systems, principle of duality; theorems of Ceva, Menelaus and Desargues, non-Euclidean geometries. (Prerequisite: Mathematics 220). **(3 lectures a week, one semester; half course).**

331a. Geometry: Elements of solid analytical geometry including lines and planes, quadrics, ruled surfaces, transformation to principle axes, and related topics. (Prerequisite: Mathematics 120a or 121a; 130b or 191b. Corequisite: Mathematics 211). **(3 hours a week, one semester; half course).**

331b. Geometry: Logical systems, axiomatic geometry, Menelaus' and Ceva's theorems, harmonic elements, projective geometry, non-Euclidean geometries. (Prerequisite: Mathematics 331a. Corequisite: Mathematics 211). **(3 hours a week, one semester; half course).**

332a. Tensor Calculus: Vector analysis in curvilinear coordinates; gradient, divergence, curl. Transformation laws of covariant, contravariant, relative tensors. Covariant and intrinsic differentiation. The Riemann-Christoffel tensors, Bianchi identities, Ricci and Einstein tensors. Applications to mechanics, elasticity, special relativity and differential geometry. (Prerequisite: Mathematics 211 or 212ab). **(3 hours a week, one semester; half course).**

334c. Introduction to Differential Geometry: Tensor algebra; differential geometry of curves and surfaces; introduction to Riemannian geometry. (Prerequisite: Mathematics 220). **(3 lectures a week, one semester; half course).**

340a. Probability: Mathematical models of random phenomena, combinatorial methods, probabilistic dependence, random variables and various probability laws. (Prerequisite: Mathematics 211 or 212ab or 213). **(3 lectures a week, one semester; half course).**

340b. Probability (2): Limit theorems, generating functions, recurrent events, random walk, Markov processes. (Prerequisite: Mathematics 340a). **(3 hours a week, one semester; half course).**

350. Statistics: Set theory and probability, frequency distributions, moments, moment generating function, transformation of variables, regression and correlation, random sampling, sampling distributions, testing hypotheses and estimation, goodness of fit, X^2, t and F distributions. (Prerequisite: Mathematics 211 or 212ab). **(3 lectures, 3 laboratory hours a week).**

351. Statistics: Elementary set theory and probability, empirical and theoretical frequency distributions of one variable, sampling theory, correlation and regression, goodness of fit, small sample distributions, testing hypotheses and estimation. (Prerequisite: Mathematics 211). (Students taking this course may not take Mathematics 251a or Mathematics 253c for credit). **(3 lectures, 3 laboratory hours a week).**

360b. Applied Complex Analysis: Riemann surfaces, applications of conformal mapping Schwarz-Christoffel transformation, integral formulas of Poisson type, analytic continuation, integral representations of functions, asymptotic expansions. (Prerequisite: Mathematics 312a). **(3 hours a week, one semester; half course).**

361a. Fourier Series and Partial Differential Equations: Fourier series and integrals, derivation of some partial differential equations of physics, separation of variables. (Prerequisite: Mathematcs 211). **(2 lectures a week, one semester; half course).**

362c. Special Functions: Series solutions of linear ordinary differential equations with emphasis on Bessel functions, Legendre polynomials, hypergeometric series, eigenvalue problems, Sturm-Liouville equations, Fourier series, orthogonal functions. (Prerequisite: Mathematics 211 or 212ab). **(3 hours a week, one semester; half course).**

363. Applied Mathematics for Engineers: Several topics selected from among the following: ordinary differential equations, vector analysis, probability, functions of a complex variable, Laplace transformations, Fourier series, partial differential equations, numerical analysis. **(2 hours a week).**

364c. Nonlinear Differential Equations: Classification of integrable types of nonlinear equations with methods of solution, method of the equivalent linear equation, phase plane and stability analysis, limit cycles, variational equation, nonlinear oscillation theory, existence and uniqueness theorems, perturbation theory, periodic solutions of nonlinear equations. (Prerequisite: Mathematics 211 or 212ab). **(3 hours a week, one semester; half course).**

371. Introduction to Applied Mathematics: Elements of dynamics of rigid bodies, moving axes, tops and gyroscopes, Foucault's pendulum, planetary motion. Two-dimensional inviscid irrotational incompressible flow, aerofoil theory, surface waves. Simple viscous flows. Isotropic elastic solids, Hooke's law, simple deformations, elastic and seismic waves. (Prerequisite: Mathematics 120a, 211, 217c). **(3 hours a week).**

381c. Introduction to Numerical Analysis: Errors in digital computation, approximations, numerical evaluation of functions, interpolation, nonlinear equations, simultaneous linear equations, numerical differentiation, numerical quadrature, numerical solution of ordinary differential equations. (Prerequisite: Mathematics 113, 114 or 115; Corequisite: Mathematics 211 or 212ab and C.S. 100). **(3 lectures a week, one semester; half course).**

398y. Honours Seminar I: Students will discuss mathematical topics under the guidance of one or more members of the staff. This seminar is required of all students expecting to graduate in Honours Mathematics. (Prerequisite: Consent of Department). **(2 hours a week).**

400. Mathematical Logic: Propositional and predicate calculus; axiomatic system; decision processes. (Prerequisite: Mathematics 210 or Mathematics 220 or consent of instructor). **(3 lectures a week).**

410. Real Variables: Measure and integration, point-set theory, Lebesgue-Stieltjes measures, measurable functions, integration, convergence theorems, Hilbert and Banach spaces. (Prerequisite: Mathematics 310). **(3 hours a week).**

420. Algebra (3): Structure and representation theory of finite groups. Groups with operators, modules, vector spaces, algebras. Group and field extensions, Galois theory. (Prerequisite: Mathematics 320). **(3 hours a week).**

430b. Convex Geometry: Convex sets, convex hulls, separation and support, extreme, exposed and fixed points; convex functions and inequalities; convex cones, convex polyhedrons. Euler, Riemann and Betti characteristics. (Prerequisite: Mathematics 220). **(3 lectures a week, one semester; half course).**

432. Differential Geometry: Differential manifolds, vector and tensor fields, affine connections, exterior differential forms. Riemannian manifolds and submanifolds, applicaton of tensor methods to the theory of curves and surfaces, newer methods in differential geometry. (Prerequisite: Mathematics 334c). **(3 hours a week).**

436. Topology: Metric spaces, completeness, Baire's Theorem, compact metric spaces, topological spaces, product and quotient spaces, separation axioms, compact spaces, connected spaces. (Prerequisite: Mathematics 310). **(3 hours a week).**

440. Probability Theory: Sample spaces, events, combinations of events, conditional probability, probability distributions, Bernoulli trials, random variables, laws of large numbers, generating functions, branching processes, renewal theory, random walks, Markov and time-dependent processes. (Prerequisite: Mathematics 340a). **(3 lectures a week).**

450. Statistics: Set theory, probability measure, random events, random variables, theoretical distributions, moments, characteristic functions, regression and correlation in n-variables, limit theorems, sampling distributions, sample moments, order statistics, theory of estimation, testing of hypotheses. (Prerequisite: Mathematics 340ab or 350). **(3 hours a week).**

452b. Experimental Designs: ANOVA models without and with interactions; randomized block, Latin square, factorial, confounded factorial, balanced incomplete block and other designs; response surface methodology. (Corequisite: Mathematics 350 or 351). **(3 lectures a week, one semester; half course).**

454b. Sampling Theory: Basic concepts; simple random, stratified, systematic and cluster sampling; ratio and regression estimates; sampling methods in social and economic surveys. (Corequisite: Mathematics 350 or 351). **(3 lectures a week, one semester; half course).**

460. Methods of Applied Mathematics: Integral transforms, introduction to the theory of distributions, some methods of solution of the partial differential equations of mathematical physics (separation of variables, eigenfunction expansions, integral transforms, Green's functions), introduction to integral equations, introduction to the calculus of variations. (Prerequisite: Mathematics 312a, 362c). **(3 hours a week).**

470. Hydrodynamics: Equations of motion; incompressible flow: streaming two-dimensional potential flow, aerofoils, sources and sinks, theorems of Schwartz and Christoffel, waves, vortex motion; viscous flow, Navier-Stokes equations, exact solutions, elements of boundary-layer theory; compressible flow: transonic and supersonic flow, hodograph transformation, characteristics, shock wave theory, examples in axisymmetric flow. (Corequisite: Mathematics 332a, 362c). **(3 hours a week).**

472. Elasticity: Analysis of strain, principal strains, general deformation, equations of compatibility; analysis of stress, stress tensor, equations of equilibrium, stress quadric; elasticity of solid bodies, strain-energy function, theory of isotopic elastic solids; two dimensional problems in different coordinates, complex variable techniques, three dimensional problems; torsion; vibration; elastic waves; general theorems, variational methods, theorem of minimum energy, theorem of work and reciprocity. (Corequisite: Mathematics 332a). **(3 hours a week).**

474c. Relativity: Special theory of relativity, relativistic dynamics, electromagnetic fields, retarded and advanced potentials, Lorentz, Dirac and Feynman classical theories, general theory of relativity and introduction of unified field theories (Prerequisite: Mathematics 332a). **(3 hours a week, one semester; half course).**

480. Numerical Analysis: Functional approximations, numerical solution of simultaneous linear equations, calculation of eigenvalues, and eigenvectors of matrices, numerical treatment of ordinary and partial differential equations, numerical solution of integral equations. (Prerequisite: Mathematics 381c). **(3 lectures a week).**

498. Honours Seminar II: Students will discuss mathematical topics under the guidance of one or more members of the staff. This seminar is required of all students expecting to graduate in Honours Mathematics. (Prerequisite: Consent of Department). **(2 hours a week).**

MUSIC

Officers of Instruction:

Professor: Paul McIntyre, Mus. Doc. (Head of the Department)

Associate Professor: J. Hanson, Ph.D.

Assistant Professors: E. Kovarik, M.M.
R. K. Mauch, M.M.
J. Tamburini, B.Mus.
D. Palmer, M.Mus.
I. Rozsnyai, M.M.A.

Special Instructors: Emilia Cundari, B.Mus.
Eleanor Felver, L.R.A.M.
Grace Henderson, A.T.C.M.
Raymond Makowski, M.Ed.
Mary Helen Richards, B.Mus.
Arlene Rozsnyai, M.Mus.
Sister Fleurette Sweeney, B.A.

Major and Minor Requirements:

Major: Music 111, 118, at least two from: 110y, 210y, 310y; and at least three from: 203, 221, 228, 303, 331, 338.

Minor: Music 111, 118, and at least one from 221, 228, 331, 338.

Options: Music 112, 120, 220 (no prerequisite); Music 111, 118, 203, 221, 228, 303, 331, 338 (with consent of Department).

For major in the general program, see p. E-19; for Bachelor of Music program, p. E-70.

All courses listed will not necessarily be offered in the coming year.

Course descriptions:

100y. Applied: Instruction in the student's principal performing medium. (½ hour a week; half course).

101y. Class Piano: Elementary piano instruction for the music degree candidate whose major instrument is not piano. This course may count as fulfillment of the Piano Proficiency requirement on p. E-70. (3 hours a week).

110y. Ensemble: Participation in one of: University of Windsor Singers; University Orchestra; Concert Band; OR a Chamber Ensemble. (Meeting times variable; half course each). Admission by audition. Offered on Pass/Non-pass basis only.

111. Materials of Music: Examination of music in various forms and styles in order to develop comprehensive analytical and creative techniques. (3 hours a week).

112. Music for the Classroom Teacher: Basic rudiments, sight-singing and group singing, introduction to the keyboard, elementary recorder and guitar techniques, examination of a variety of music teaching materials, broad survey of music literature in Western civilization and of non-Western musical styles. (3 hours a week).

115. Basic Skills: Intensive drills in sight singing, keyboard harmony, dictation and improvisation. (3 hours a week).

118. Music History and Literature: Studies in musical style; significant compositions in western music from the Middle Ages to the present day. (2 hours a week, plus 2 hours listening laboratory).

120. Fundamentals of Music: Study of intervals, scales, notation, and elementary harmony. Practice in reading music and ear training. No pre-requisites. May not count towards the B. Mus. nor the B.A. in Music. **(3 hours a week).**

125. Education Through Music I: Music as a central focus in the personal, social, and educational development of children. Course will be offered in two sections, one for classroom teachers, the other for music teachers. Offered only in Chatham in summer. **(Full course).**

200y. Applied: Instruction in the student's principal performing medium. **(½ hour a week; half course).**

203. Choral Techniques: Vocal technique in ensembles; rehearsal methods; repertoire. **(2 hours a week).**

210y. Ensemble: Participation in one of: University of Windsor Singers; University Orchestra; Concert Band; OR a Chamber Ensemble. **(Meeting times variable; half course each).** Admission by audition. Offered on a Pass/Non-pass basis only.

211. String Techniques: Introduction to the playing of string instruments with special attention to one instrument. Instruments will be provided for practice. **(3 hours a week).**

215. Basic Skills: Continuation of Music 115. **(3 hours a week).**

220. Music in Western Civilization: General survey of the development of major styles in western music. Designed for the non-specialist and open to all students in the University. **(3 hours a week).**

221. Materials of Music: Examination of music in various forms and styles in order to develop comprehensive analytical and creative techniques. **(2 hours a week).**

225. Education Through Music II: Continuation of Music 125 which is prerequisite. Course will be offered in two sections, one for classroom teachers, the other for music teachers. Offered only in Chatham in summer. **(Full course).**

228. History of Music: Special studies in music history of styles, periods, composers, etc., to be arranged by the instructor. **(2 hours a week).**

300y. Applied: Instruction in the student's principal performing medium. **(½ hour a week; half course).**

303. Choral Technique: Continuation of Music 203. **(2 hours a week).**

305y. Conducting: Principles of baton technique. **(1 hour a week; half course).**

310y. Ensemble: Participation in one of: University of Windsor Singers; University Orchestra; Concert Band; OR a Chamber Ensemble. **(Meeting times variable; half course each).** Admission by audition. [Offered on pass/non-pass basis only].

311. Instrumental Techniques: Continuation of 211; introduction to wind instruments; workshop ensemble. **(4 hours a week).**

325. Education Through Music III: Continuation of Music 125 and 225 which are prerequisite. Course will be offered in two sections, one for classroom teachers, the other for music teachers. Offered only in Chatham in summer. **(Full course).**

329y. Music Bibliography: Reference works, special studies, collected editions. (1 hour a week; half course).

331. Materials of Music: Contemporary techniques. (2 hours a week).

334y. Orchestration: Woodwinds, horns and strings in small ensembles; problems of transcription; score study. (1 hour a week; half course).

336. Counterpoint and Fugue: 16th-century style; 5-part counterpoint on a given cantus firmus. 18th-century fugue. (2 hours a week). [Discontinued in 1972].

338. History of Music: Special studies in music history of styles, periods, composers, etc., to be arranged by the instructor. (2 hours a week).

350. Seminar: Composition or history and literature, special problems to be set by instructor. (2 hours a week).

400y. Applied: Instruction in the student's principal performing medium. (½ hour a week; half course).

401y. Recital: A public recital of approximately 40 minutes playing time in length including representative solo pieces from a variety of styles and periods.

403. Choral Technique: Continuation of Music 303. (2 hours a week). [Discontinued in 1972].

410y. Ensemble: Participation in one of: University of Windsor Singers; University Orchestra; Concert Band; OR a Chamber Ensemble. (Meeting times variable; half course each). Admission by audition. [Offered on pass/non-pass basis only].

411. Instrumental Techniques: Continuation of 311; introduction to percussion instruments; workshop ensemble; formation of school ensembles. (5 hours a week).

441. Materials of Music Seminar: Current problems in Music Theory. Canadian studies. (2 hours a week).

444y. Orchestration: Scoring for large orchestra. Score study. (1 hour a week; half course).

447y. Choral Arranging: Methods of arranging various voices in various combinations. (1 hour a week; half course).

448. History of Music: Special studies in music history of styles, periods, composers, etc., to be arranged by the instructor. (2 hours a week).

450. Seminar: Composition OR history and literature to include a substantial paper; or an original composition. (3 hours a week).

NURSING

Officers of Instruction:

Professor: Mrs. Anna Gupta, M.Sc. (Admin.), Reg.N. (Director)

Associate Professors: Miss Leta G. Sanders, M.Ed., Reg.N.
Miss Mary E. Molloy, M.Sc.N. (Admin.), Reg.N.
Mrs. P. Margaret Wilson, M.N., Reg.N.

Assistant Professors: Mrs. Carol Batra, M.Ed., Reg.N.
Mrs. Juliana Mitra, M.Sc.N., Reg.N.
Mrs. Pansy Tewari, M.Sc., Reg.N.
Mr. P. Y. Abraham, M.P.H., Reg.N.
Mrs. Anna Temple, M.N., Reg.N.

Lecturers: Mrs. Barbara Campbell Thomas, B.N.Sc., Reg.N.
Miss Joyce Jones, B.S.N., Reg.N.
Mrs. Sheila McFarlane, B.Sc.N., Reg.N.

Sessional Instructors: Mrs. Joyce Irwin, B.Sc.N., Reg.N.
Mrs. Lila Mae Comiskey, B.Sc.N., Reg.N.
Mrs. Sharon Klinck, B.Sc.N., Reg.N.
Mrs. Carol Papiz, B.Sc.N., Reg.N.
Mrs. Mary Lou Poisson, B.S.N., Reg.N.
Mrs. Janet Rosenbaum, B.Sc.N., Reg.N.
Mrs. Georgina Baker, Dip. P.H.N., Reg.N.
Mrs. Barbara Brown, Dip.N.S.A., Reg.N.
Mrs. Margaret Linton, B.Sc.N., Reg.N.
Miss Edith Radigan, B.Sc.N., Reg.N.
Mrs. Carolyn Skimson, B.Sc.N., Reg.N.

Course descriptions

100D. Public Health: Concept and principles underlying the organization and delivery of community health services. **(3 hours a week).** [Discontinued in 1972].

101. Introduction to Nursing: Basic human needs of the "normal" individual as a member of the family and community. Introduction to medical-surgical nursing. Nutrition, pharmacology, rehabilitation, and available community services are included. Using problem-solving techniques and knowledge of communication, the student plans, gives and evaluates nursing care. The student develops skill in observation and in assessing patient needs. **(3 hours a week).**

102. Nursing Laboratory: To be taken concurrently with 101 in the related clinical and community agency areas. **(2 hours laboratory, 4 hours clinical experience weekly).**

110D. Public Health Nursing: Public health nursing for individuals and families and other groups in the community. **(2 hours weekly lecture; 6 hours weekly field work; 3 weeks terminal field work practice).** [Discontinued in 1972].

199. Clinical Nursing Laboratory: Related to nursing courses of Plan I First Year B.Sc.N. Taken in Intersession or Summer Session as determined by the School of Nursing. (Prerequisite: Nursing 101). **(4 weeks, 8 hours a day clinical experience).**

201. Nursing of Medical-Surgical Patients: To promote understanding of each patient with various types of the more common deviations from health from the standpoint of his altered physiological, psychological and pathological status; of the symptoms he experiences, and of the medical and nursing care applicable to him. Nutrition, pharmacology, rehabilitation, and available community services are included. **(4 hours a week).**

202. Nursing Laboratory: To be taken concurrently with 201 in the related clinical and community agency areas. **(7 hours clinical experience weekly).**

203. Trends and Issues in Nursing: An appreciation of the people in nursing and society who have contributed to nursing in the past. Main emphasis of the course is on current issues and trends, and our relationship to our professional organizations. **(2 hours a week).**

211. Trends in Health and Welfare Services: An examination of Canadian Health and Welfare Services with an emphasis on the basic principles and practices of community health. (Taught in cooperation with the School of Social Work). **(3 hours a week).**

220c. See 242 (220a).

221c. See 243 (221b).

230. Fundamentals of Administration: Principles and elements of administration as applied to health agencies and hospitals, particularly at all levels of the nursing service departments of these agencies. **(3 hours a week).**

231. Renumbered 336 in 1972.

232. Renumbered 337 in 1972.

233. Fundamentals of Administration: Field observation and discussion related to key administrative functions in the agencies and followed by seminars. **(2 seminars, 2 laboratory hours a week).**

242. [220a] Community Health Services: Survey of community health needs, services, problems and research. (Prerequisite: Biology 106). **(3 hours class a week, 4 hours field practice a week, one semester; half course).**

243. [221b] Community Health Nursing: Community health nursing for individuals, families and groups. (Prerequisite: Biology 106 and Nursing 242). **(3 hours class a week; 8 hours field practice a week; one semester; half course).**

299. Clinical Nursing Laboratory: Related to nursing courses of Plan I, Second Year B.Sc.N. Taken in Intersession or Summer Session as determined by the School of Nursing. (Prerequisite: Nursing 201). **(4 weeks, 8 hours a day clinical experience).**

301. Parental and Newborn Care: Course deals with the biological, psychological and sociological phenomena of child bearing; the family centered approach to care and therapy through gestation and the birth process, using various community agencies. **(2 hours a week).**

302. Nursing Laboratory: To be taken concurrently with 301 in the related clinical and community agency areas. **(4 hours a week).**

311. Community Mental Health and Psychiatric Nursing: Based on knowledge of personality development and structure related to the well person. Knowledge of the dynamics of behaviour. Establishment and maintenance of inter-personal relationships, including those of family and community. Understanding of the attempts of the individual to meet his own needs and how we can strengthen and support him. Therapy for the neurotic and psychotic patient. **(2 hours a week).**

312. Nursing Laboratory: To be taken concurrently with 311 in the related clinical and community agency areas. (**4 hours a week**).

321. Nursing of Children and Adolescents: Based on the knowledge of normal growth and development, this course focuses on the needs of children and their families in the prevention and treatment of health problems. (**2 hours a week**).

322. Nursing Laboratory: To be taken concurrently with 321 in the related clinical and community agency areas. (**4 hours a week**).

334. Comprehensive Nursing: Advanced clinical nursing study through selected specialities incorporating nursing research. (Prerequisites: Biology 106, and 304, Chemistry 109, Sociology 100, Psychology 222 and 231). (**3 hours theory a week**).

335. Nursing Practicum: To be taken concurrently with 334 in the related clinical fields. (**4 hours a week**).

336. [231] Principles of Teaching: Philosophy, aims and objectives in nursing education. The role of the teacher. Teaching methods, curriculum design and revision, planning course and lesson content, evaluation techniques. (Prerequisites: Biology 304, Chemistry 109). (**3 hours a week**).

337. [232] Practicum in Teaching: Seminars and practice teaching. (Prerequisite: Communication Arts 225). (**6 hours a week**).

399. Clinical Nursing Laboratory: Related to nursing courses of Plan I, Third Year B.Sc.N. Taken in Intersession or Summer Session as determined by the School of Nursing. (Prerequisite: Nursing 301, 311, 321). (**6 weeks, 8 hours a day clinical experience**).

401a. Prnciples of Teaching and Learning: Philosophy, aims and objectives in nursing education. Teaching methods, elements of curriculum development and revision. The role of the teacher in planning, teaching, and in evaluation. (**3 hours a week**).

402a. Nursing Laboratory: To be taken concurrently with 401a; involves activities of practical application of the teaching and learning principles and concepts. (**8 hours a week**).

411a. Community Health Nursing: Community health nursing principles with analysis of family group and community health situations. (**3 hours a week, one semester; half course**).

412a. Nursing Laboratory: To be taken concurrently with 411a in the related clinical areas. (**8 hours a week**).

421b. Advanced Clinical Nursing: Self-directed study of a selected area of clinical nursing incorporating nursing research. (**3 hours a week**).

422b. Nursing Laboratory: To be taken concurrently with 421b in the related clinical and community agency areas. (**8 hours a week**).

431b. Principles of Administration: Fundamentals of administration in hospitals, schools of nursing, public health agencies. (**3 hours a week**).

432b. Nursing Laboratory: To be taken concurrently with 431b in the related clinical and community agency areas. (**8 hours a week**).

499. Clinical Nursing Laboratory: Related to nursing courses of Plan I Fourth Year B.Sc.N. Opportunities to practise in a ward or health unit at the level of a team leader. Taken in Intersession or Summer Session as determined by the School of Nursing. (Prerequisites: Nursing 401a, 411a, 421b, 431b). (**3 weeks, 8 hours a day**).

PHILOSOPHY

Officers of Instruction:

Professors: P. F. Flood, Ph.D.
J. N. Deck, Ph.D.
The Rev. F. T. Kingston, D.Phil.
L. A. Kennedy, C.S.B., Ph.D.
H. A. Nielsen, Ph.D.

Associate Professors: J. V. Brown, Ph.D.
S. B. Cunningham, Ph.D.
P. F. Wilkinson, M.A. (Head of the Department)
J. U. Lewis, Ph.D.

Assistant Professors: R. C. Pinto, M.A.
*The Rev. T. J. Stokes, C.S.B., Ph.D.
R. H. Johnson, M.A.
J. A. Blair, B.A.
D. G. McCaskill, M.A.

*On leave.

Major requirements: five to seven courses including 115 or 116, or 122; and two of 223, 224, 327, 331. No more than two first year courses may count towards a major.

Minor requirements: three to five courses, with 115 or 116, or 122 recommended. No more than two first year courses may count towards a minor.

A student who wishes to major or honour in philosophy is urged to consult the Department concerning the selection of courses.

For major in general program, see p. E-19; for Honours Philosophy, see p. E-50; for Honours English and Philosophy (Language option), p. E-35; for Honours History (Philosophy option), p. E-45; for Honours Philosophy and Latin, p. E-50; for Honours Philosophy and Mathematics, p. E-51; for Honours Philosophy and Psychology, p. E-51; for Honours Theology and Philosophy, p. E-57.

NOTE TO STUDENTS: Philosophy 115 deals with a range of major philosophical issues; Philosophy 116 confines itself to analyses of man's nature and situation. Credit will NOT be given to a student for BOTH courses.

Not all courses are offered every year. Students should consult the Department in advance of registration to determine which courses will be available.

Course Descriptions

115. Basic Issues in Philosophy: Mind, knowledge, Nature, freedom, human destiny, the essence of the "real" as they have appeared to philosophical reflection. An introduction to rigorous thinking about such subjects through the writings of selected major philosophers—ancient, modern, and contemporary. **(3 hours a week).**

116. Philosophy and Man: An introduction to rival philosophical views of how man ought to regard his own existence and nature. Readings include classical as well as modern and contemporary statements of those competing views, ranging from Plato to Nietzsche and 20th century thinkers. **(3 hours a week).**

121. Applied Logic: The aim of this course is to teach the student how to discriminate between good arguments and bad ones. Among the topics to be considered are: the basic principles of deductive inference; the different kinds of fallacy; the nature of inductive inference; the difference between proof and persuasion. Examples will be taken not only from philosophical writings, but from political speeches, advertising, newspapers and periodicals. **(3 hours a week).**

122. Ethics and Human Values: An introduction to the fundamental concepts of ethics: freedom and responsibility; the right and the good, values and ideals; the notions of duty and virtue. Representative historical positions. **(3 hours a week).**

200. Philosophy of Language I: The nature of symbols and language; linguistic relativity ("Every culture makes its own world"); comparison of language structures to structures of the world and structures of the mind; theories of reference, predication, meaning and truth; speech acts; natural, formal, and interpreted languages; the indeterminacy of translation and the limits of cross-cultural communication. **(3 hours a week).**

221. Logic I: Introduction to Logical Systems: The basic phases of modern logical theory: propositional calculus, functional calculus. Emphasis is on the development of skills and techniques of deduction. **(3 hours a week).**

223. Early Modern Philosophy: The Renaissance background; Descartes, Spinoza, Leibniz, Locke, Berkeley, Hume. **(3 hours a week).**

224. Greek Philosophy: A study of Greek philosophers from the Ionians to the Neo-Platonists. Readings from the Pre-Socratics, Plato, Aristotle, the Epicureans, the Stoics, the Sceptics, and Plotinus. **(3 hours a week).**

225. Society and Revolution: The origins and development of the modern revolutionary concept of society viewed against the background of the naturalism of ancient civilizations. **(3 hours a week).**

226. Philosophy of Education: The moral and metaphysical purpose of the education of man. Perennial and contemporary problems in the philosophy of education. **(3 hours a week).**

229. Philosophy of Science: Scientific experience, law and theory and their relations to one another; induction and probability; causality and indeterminism; problems and explanations peculiar to biology, psychology and the social sciences. **(3 hours a week).** [Not offered in 1972-73].

327. Medieval Philosophy: The major philosophical currents from the fourth to the sixteenth century. Selections from St. Augustine, Avicenna, the thirteenth century Augustinians, Averroes, St. Thomas Aquinas, William of Occam, Peter Pomponazzi. **(3 hours a week).**

328. Philosophical Psychology: Topics such as: The mind-body problem ("Is thinking a brain process?"); the problem of personal identity ("Am I a mind, or a body, or a mind-body complex?"); modes of consciousness — thinking, perceiving, knowing, etc.; logical analysis of action, intention, desire, emotion and free will; varieties of behaviorism; the possibility of extra-sensory perception and disembodied existence. **(3 hours a week).**

330. Philosophy of History: I. Speculative philosophies of history: The problem of destiny in Augustine, Vico, Hegel, and Marx. **II.** Analytical philosophy of history: The problem of historical explanation readings from Walsh, Passmore, Hempel, Oakeshott, Hart and Mink. **(3 hours a week).**

331. Late Modern Philosophy: Classical modern philosophers from Kant to Bergson. **(3 hours a week).**

332. Philosophy of Art: The distinction between a "classical" and a "romantic" theory of art: the relationship between a theory of art and the study of aesthetics. Readings from classical and modern authors. **(3 hours a week).**

333. Political Philosophy: An examination of the meaning and adequacy of political theories and concepts, (e.g., human rights, liberty, public interest, social justice, political obligation). Contemporary theories and their historical antecedents will be studied critically. **(3 hours a week).**

334. Metaphysics: The dialectic of being and non-being; change, tendency and telos; the knower and the known; God and the world, the logical and the real. Readings from Plato, Aristotle, Avicenna, St. Thomas, Hegel, Sartre and Heidegger. **(3 hours a week).**

337. Advanced Ethics: The logic of moral discourse; the language of ethics; moral judgments and their justification. Representative readings from modern and contemporary writers. (Prerequisite: Philosophy 122 or permission of the instructor). **(3 hours a week).**

339. Contemporary Philosophy of Religion: A study of areas currently in dispute between philosophy and religious thought. The nature of religious claims; modern semantics and religious language; the analysis of such religious concepts as 'God', 'faith', and 'sin'. Philosophical roots of recent theological trends. Selected readings. **(3 hours a week).**

400. Philosophy of Language II: Recent developments in linguistics; finite state, phrase structure and transformational grammar; logical syntax, semantics, and depth grammar; critical analysis of the disputes among contemporary linguists, symbolic logicians, logical atomists, behaviorists, and ordinary language philosophers. Selections from the writings of Russell, Quine, Wittgenstein, Levi-Strauss, Whorf, and Chomsky. (Prerequisite: Philosophy 200 or consent of the instructor). **(3 hours a week).**

435. Twentieth Century British and American Philosophy: Logical atomism; logical positivism; linguistic analysis; readings from Russell, Moore, Ayer and Wittgenstein. Readings from American pragmatists: Peirce, James and Dewey. **(3 hours a week).**

436. Phenomenology and Existentialism: Husserl's phenomenology against the background of Descartes and Kant; Heidegger's Being and Time; an analysis of selected ideas from the writings of Sartre and other existentialists. (Prerequisite: Philosophy 115 or 116 or permission of the instructor). **(3 hours a week).**

438. Logic II: The Philosophy of Logic: The purpose of this course is to familiarize the student with some of the problems in the philosophy of logic; the nature of logic; the notions of logical truth, necessary truth, analyticity, and entailment; the philosophical significance of epistemic and deontic logic. **(3 hours a week).**

439. The Philosophy of Law: The nature and scope of law studied in historical perspective. Emphasis upon the epistemological foundations of major philosophies of law (legal idealism, natural law theory, legal positivism, the pure theory of law, historicism, scientific value of relativism). (Prerequisite: Permission of the instructor). **(3 hours a week).** [Not offered in 1972-73].

PHYSICS

Officers of Instruction:

Professors: Rev. N. J. Ruth, C.S.B., M.A.
Lucjan Krause, D.Sc., F.Inst.P. (Head of the Department)
Frank Holuj, Ph.D.
Geza Szamosi, D.Sc.
Mordechay Schlesinger, Ph.D.
J. W. McConkey, Ph.D., F.Inst.P.
R. K. B. Helbing, Dr. rer. nat.

Associate Professors: John Huschilt, Ph.D.
Edwin E. Habib, Ph.D.
*Nigel E. Hedgecock, Ph.D.
Arie van Wijngaarden, Ph.D.
Hisashi Ogata, Ph.D.
Mieczyslaw Czajkowski, D.Sc. (habil.)
W. E. Baylis, D.Sc.
G. W. F. Drake, Ph.D.
Darryl Leiter, Ph.D.

Research Appointments: J. B. Atkinson, D.Phil.
J. H. Gallagher, Ph.D.
M. Hender, Ph.D.
E. Hrycyshyn, Ph.D.
C. T. Kwan, Ph.D.
E. Lisicki, D.Sc.
S. K. Luke, Ph.D.
J. Pitre, F.S.C., Ph.D.
V. B. Sheorey, Ph.D.
J. Pascale, D.èsSc.
Y. B. Hahn, Ph.D.
R. W. McCullough, Ph.D.
A. Crowe, Ph.D.
M. Stupavsky, Ph.D.
T. Szczurek, Ph.D.
J. Szudy, D.Sc.

*On leave.

Major requirements: six and a half or seven courses, including Physics 110, 222, 223, 255b, 331, 334, 336.

Minor requirements: three to five courses, including Physics 110, 222, 223; or 110, 226ab, 336.

Available for minor in Physics for degrees other than B.Sc.; Physics 119, 180, 229, 339, 371.

For the general program with a major in Physics, see p. E-68; for Honours Physics. p. E-68; for Honours Biophysics, p. E-68.

All courses listed will not necessarily be offered in the coming year.

#Courses designated by # may not be taken for credit as a major or minor towards a B.Sc. degree.

Course Descriptions:

010. Basic Physics: Mathematical background. General concepts of physics. Mechanics. Electricity and magnetism. Waves. Elements of modern physics. The emphasis is on basic concepts of physical science. (2 lectures and one tutorial hour a week, both semesters, 3 laboratory hours a week for one semester).

110. Introductory Physics: Mechanics, properties of matter: gas laws and kinetic theory of gases; heat; wave motion and sound; light; atomic and nuclear physics. Provides an introduction to the wide spectrum of phenomena encountered in the physical universe, but stresses the unifying concepts which draw physics together. Emphasis is placed on modern physics and also on the relevance to everyday life of physics in general. (Corequisite: Mathematics 113, 114 or 115). **(3 lectures, 3 laboratory hours a week).**

113. General Physics for Biology and Premedical Students: Mechanics, properties of matter, heat and sound, light, magnetism, electricity and modern Physics. Emphasis is placed on an understanding of fundamental principles and their applications with frequent reference to Biology and Medicine. **(3 lectures, 3 laboratory hours a week).**

113z. General Physics for Geologists: The same basic course as Physics 113, but with emphasis toward applications of geological interest, and with laboratory in one semester only. Open to Geology Students only. **(3 lectures a week both semesters; 3 laboratory hours a week, one semester; full course).**

119.# Introduction to Astronomy and Space Science: The earth, planets, solar system, stars, galaxies and nebulae. Discussion of current theories of the structure of the universe, with references to the latest space experiments. This course is especially designed for the non-scientist. **(2 lectures a week).**

180.# Acoustics of Music: Wave motion and sound, vibrating strings, air columns, etc.; analysis of sound waves, the voice, musical instruments, orchestration; musical scales, harmony and dissonance; hearing; acoustic properties of rooms and materials; electronic recording, reproduction and synthesis of sound. This course is designed primarily for music students. No prerequisites. **(Not available for credit towards B.Sc. degree). (2 lectures, 1 laboratory hour a week).**

222. Optics: Reflection and refraction of light at plane and curved surfaces; properties of mirrors, prisms and lenses; optical instruments; interference, diffraction and polarization of light. (Corequisite: Mathematics 211 or equivalent). **(3 lectures a week first semester, 2 lectures second semester; 3 laboratory hours a week all year).**

223. Electricity and Magnetism: Theory of the electric field and potential with application to conductors and dielectrics. Magnetic effects of currents, electromagnetic induction, magnetism in matter. D.C. and A.C. circuit theory. Introduction to Maxwell's equations. (Corequisite: Mathematics 211 or equivalent). **(3 lectures a week first semester, 2 lectures second semester, 3 laboratory hours a week all year).**

226a. Optics: An elementary treatment of geometrical optics, wave motion and physical optics. (Prerequisites: Physics 110 and Mathematics 113, 114 or 115, or equivalent). **(3 lectures and 3 laboratory hours a week, first semester; half course).**

226b. Electricity and Magnetism: An elementary treatment of electrostatics, d.c. and a.c. circuit theory and magnetism. (Prerequisite: as for Physics 226a). **(3 lectures and 3 laboratory hours a week, second semester; half course).**

228a. Elements of Atomic Physics: Properties of waves, atomic structure, wave nature of matter. This course is recommended for students in the Faculty of Applied Science, and is not available for credit toward a B.Sc. Honours or major degree in Physics. (Corequisites: Mathematics 211, G.E. 101 and 104b, M.E. 202a or Ch.E. 202a or equivalent). **(2 lectures a week, 3 laboratory hours every second week, first semester; half course).**

228b. Elements of Solid State Physics: Bulk properties of matter, introduction to statistical physics with applications to properties of solids. This course is recommended for students in the Faculty of Applied Science, and is not available for credit toward a B.Sc. Honours or major degree in Physics. (Corequisites: Mathematics 211, G.E. 101 and 104b, M.E. 202a or Ch.E. 202a or equivalent). **(2 lectures a week, 3 laboratory hours every second week, second semester; half course).**

229.# Contemporary Physics: An outline is given of the aims, methods and conclusions of the physicist, with special reference to the recent theories about the behaviour of matter on the atomic and sub-atomic as well as on the cosmic scale. The course is especially designed for the non-scientist. **(2 lectures a week).**

255b. Mechanics: Conservation laws and conservative systems; the harmonic oscillator, central forces, rotating coordinates, angular momentum, kinematics of rigid bodies. (Prerequisite: Physics 110 or equivalent. Corequisite: Mathematics 211 or equivalent). **(2 lectures a week, one semester; half course).**

331. Thermodynamics and Statistical Mechanics: The nature of heat, the first, second and third laws of thermodynamics and their applications, equations of state, Maxwell's relations and applications of thermodynamics to the properties of matter. The statistical interpretation of thermodynamics, the perfect gas, Boltzmann, Fermi and Bose distributions. (Prerequisite: Physics 110 and Mathematics 211 or equivalent). **(2 lectures a week).**

334. Electronics: Thermionic emission and impurity conduction in semiconductors, the properties of vacuum tubes and transistors; rectifiers, amplifiers and oscillators; the general theory of feedback systems. Transmission lines, special circuits including wide band amplifiers, trigger circuits, multivibrators, discriminators, etc. (Prerequisites: Physics 223, Mathematics 211 or equivalent). **(2 lectures a week).**

336. Modern Physics: A selection of topics will be presented, including the atomic properties of matter, the conduction of electricity through gases, the quantum theory, atomic and nuclear structure, the special theory of relativity. (Prerequisites: Physics 222 and 223, Mathematics 211 or equivalent). **(2 lectures a week).**

339.# Physics and Society: The role of science in the development of western thought and civilization. Systems, feed-back, cybernetics; probability and statistical concepts; the scientific method. The influence of physics and physicists on philosophy, education, social science, military science, industry; the formation of aerospace and other physics-based industries. The economics of scientific research. Scientific policies of governments. The course is especially designed for the non-scientist. **(2 lectures a week).**

355. Classical Mechanics: Dynamics of particles and systems of particles; variational principles, Lagrange's equations and Hamilton's equations of motion; canonical transformations; small oscillations, dynamics of rigid bodies; elements of mechanics of deformable bodies. (Prerequisites: Physics 255b; Mathematics 362c or equivalent. **(3 lectures and one tutorial hour a week).**

370. Physics Laboratory: May be taken in whole or in part by students attending Physics 334 or 336. (Physics 370/1 indicates one half of the laboratory work, or 3 hours). (Prerequisites: Physics 222 and 223 or equivalent). **(6 laboratory hours a week).**

371.# The Development of Physical Thought: The impact of scientific ideas on present day philosophy and culture is treated in the light of their historical development. Ideas dealt with include: the structure of the universe; the nature of matter, living and non-living; the concepts of motion, space, time, causality; the gradual separation of physics and philosophy. **(2 lectures a week).**

410. Molecular Biophysics: (3 lectures a week).

411. Special Problems in Biophysics. (2 lectures a week).

450. Electromagnetic Theory: Maxwell's equations; retarded potentials; boundary value problems; Poynting's vector; electromagnetic waves in dielectrics and conducting media; guided waves; multipole moments and fields; Lorentz transformations; Maxwell's equations in moving media; special theory of relativity. (Prerequisites: Physics 223, Physics 255b, Mathematics 362c or equivalent). **(3 lectures a week).**

452a. Quantum Optics and Spectroscopy: Emission and absorption of optical radiation, the widths of spectral lines, stimulated emission and transition probabilities, atomic structure and angular momentum coupling, the Zeeman effect, introduction to molecular spectroscopy, optical coherence effects, theory of lasers. (Prerequisites: Physics 336, Mathematics 362c or equivalent). **(3 lectures a week, one semester; half course).**

454b. Introduction to Plasma Physics: Atomic collisions and kinetic theory, motion of charged particles, elementary processes in the production and decay of ionization in gases, continuum magnetohydrodynamics and elementary stability theory, transport processes; waves, oscillations and radiation in plasmas. (Prerequisites: Physics 336, Mathematics 362c or equivalent). **(3 lectures a week, one semester; half course).**

455. Introduction to Quantum Mechanics: Particle-wave duality, the uncertainty principle, the Schroedinger equation. The harmonic oscillator and the hydrogen atom. The linear operator, eigenfunctions and eigenvalues, potential well problems, scattering theory. The matrix formulation, perturbation theories and approximation methods; identical particles and spin. (Prerequisites: Physics 336, 355, Mathematics 362c or equivalent). **(3 lectures a week).**

466a. Solid State Physics: Elements of crystallography, X-ray diffraction, lattice vibrations and thermal properties, dielectric and optical properties of insulators, free electron theory of metals, band structure, transport phenomena and electronic structure of metals and semiconductors. (Prerequisites: Physics 336, Mathematics 362c or equivalent). **(3 lectures a week, one semester; half course).**

467b. Nuclear Physics: The interactions of radiation with matter, alpha, beta and gamma decay, nuclear sizes and moments, nuclear reactions, nuclear forces and structure, fission, instruments of nuclear physics. (Prerequisites: Physics 336, Mathematics 362c or equivalent). **(3 lectures a week, one semester; half course).**

470. Senior Physics Laboratory: May be taken in whole or in part by students attending Physics courses bearing numbers above 400. (Physics 470/1 indicates one-third of the laboratory work, or 3 hours; Physics 470/2 indicates two-thirds, or 6 hours). (Prerequisite: Physics 370 or equivalent). **(9 laboratory hours a week).**

POLITICAL SCIENCE

Officers of Instruction:

Professors: W. L. White, Ph.D.
V. C. Chrypinski, Ph.D.
R. C. Nelson, Ph.D.
D. Wurfel, Ph.D.

Associate Professors: E. D. Briggs, Ph.D.
R. H. Wagenberg, Ph.D. (Head of the Department)
*B. E. Burton, M.Soc.Sc.
L. W. LeDuc, Ph.D.
W. C. Soderlund, Ph.D.
A. Kubota, Ph.D.

Assistant Professors: T. Price, M.A.
C. L. Brown-John, Ph.D.
R. G. Price, M.A.
R. Krause, M.A.
H. D. Clarke, Ph.D.
T. A. Keenleyside, Ph.D.

*On leave.

For major in general program, see p. E-19; for Honours Economics and Political Science, see p. E-31; for Honours Political Science, p. E-52; for Honours Political Science and History, p. E-52; for Honours Political Science and Sociology, p. E-53; for Honours International Relations, p. E-46.

Major and Minor Requirements:

Major: five to seven courses, including 100 and 110.

Minor: three to five courses, including 100.

Students in any program may take any courses provided they have the prerequisites.

All courses listed will not necessarily be offered in the coming year.

Course Descriptions:

100. Introduction to Political Science. (3 hours a week).

110. Canadian Government and Politics: Emphasis is on federal institutions and processes. (3 hours a week).

200. Issues in Canadian Politics: This course will deal with current issues in the Canadian political system. (Prerequisite: Political Science 110 or permission of instructor). (3 hours a week).

230. Introduction to Comparative Politics: A survey of the literature on the comparative analysis of national political systems together with case studies drawn from all the major types of governments in the world to-day. (3 hours a week).

235. Government and Politics of the United States: A comprehensive survey of the American political system, with emphasis on the organization, operation and functions of the national government. (3 hours a week).

237. Soviet Government and Politics: Soviet political institutions, the structure and operation of the federal government, and the survey of current problems in Soviet domestic and international relations. (3 hours a week).

239. The Governments and Politics of Latin America: A survey of the major governmental systems and political relationships in Latin America. (3 hours a week).

241. African Government and Politics: Political problems of Africa with emphasis on selected countries. (3 hours a week).

243. Government and Politics of Western Europe: Analysis and evaluation of constitutional systems and political practices of selected Western European countries. (3 hours a week).

245a. Government and Politics of China: A survey course with emphasis on the period since 1949. (3 hours a week, one semester; half course).

245b. Government and Politics of Japan: A survey course with emphasis on the period since 1945. (3 hours a week, one semester; half course).

250. Development of Western Political Thought: A survey from the Greeks to the Rise of Liberalism. (3 hours a week).

260. Introduction to International Politics: Basic theories and methods in international politics, including influences on international behaviour, methods of conducting relations among nations, and techniques for the achievement of a more peaceful world. (3 hours a week).

270a. Introduction to Statistical Methods: A general introduction to the quantitative analysis of political and social data, measures of central tendency, probability, sampling, tests of significance, measures of association and correlation. (3 hours a week, one semester; half course).

270b. Research Methods in Political Science: An introduction to modern techniques in political research, including research designs, data processing. Attention is also given to current methodological issues in Political Science and the development of political theory. (2 lectures, 2 laboratory hours a week, one semester; half course).

295. Political Behaviour: An introduction to the study of inter-relationships between political attitudes and public policy formation. Particular attention is given to the substantive areas of voting, political socialization, legislative behaviour, and decision making. (3 hours a week).

311. Provincial Government: The role of provincial governments and the politics of Canada's principal regions—The Atlantic Provinces, Quebec, Ontario, The Prairie Provinces and British Columbia. (To be taught in alternate years). (3 hours a week).

312. Intergovernmental Relations: A study of the relationships of Federal, Provincial and Urban governments in Canada and their areas of overlapping jurisdiction. (To be taught in alternate years). (3 hours a week).

315. Urban Politics: A study of urban administration and urban political processes. The course will focus on metropolitan government, community power structure and significant problems of urbanism. (3 hours a week).

320a. Canadian Legislative Process: A comparative analysis of legislative bodies with particular emphasis on Canada. Attention will be given to representation, recruitment, legislative roles and leadership. (3 hours a week, one semester; half course).

320b. Canadian Electoral Behaviour: The study of public opinion and voting in Canada. Consideration will be given to the analysis of various types of election and survey data. (3 hours a week, one semester; half course).

325. Canadian Public Policy and Administration: An introduction to public policy management including organizational theory, personnel and financial management, the extent of government activity, and aspects of bureaucratic influence on the political system. (3 hours a week).

331. Politics of Anglo American States: A comparative study of politics and government in those states which are closely allied to the Anglo-Saxon political tradition, including Britain, U.S.A., Canada, Australia, New Zealand and South Africa. **(3 hours a week).**

337. Communist Political Systems: Examination of the operational ideals and institutions of selected communist countries, and the impact of the Soviet political model on them. **(2 hours a week).**

346a. Southeast Asian Government and Politics: A comparative analysis of institutions, culture and process in the major political systems of Southeast Asia, with special attention to national integration, the nature of leadership, and the difficulties of democracy. **(3 hours a week, one semester; half course).**

346b. South Asian Government and Politics: An analysis of the political systems of South Asia, with special attention to the processes of government and the cultural setting of politics in India and Pakistan. **(3 hours a week, one semester; half course).**

349. Political Development: A survey of major theories of political development and introduction to the political processes and problems in the developing areas. **(3 hours a week).**

350. Political Theory: The works of major political thinkers in modern times. **(3 hours a week).**

355. Marxism-Leninism and Other Variants of Socialism: Concentration on Marx and other Marxists as well as syndicalism, guild socialism, Christian socialism and Fabian socialism. **(3 hours a week).**

363a. Comparative Foreign Policies: A survey of theoretical and analytical literature and of methods for applying concepts in empirical study. (Prerequisite: P.S. 260 or P.S. 230 or consent of instructor and/or Department). **(3 hours a week, one semester; half course).**

363b. International Systems Analysis: A survey of contemporary theories of the interactions of the basic units of the international system. **(3 hours a week, one semester; half course).**

365. International Law: An introduction to the international legal system including theory, sources, practice and politics. Students will have the opportunity to gain practical experience through participation in Moot Court proceedings. **(3 hours a week).**

367. International Relations in Asia: The foreign policies and relations of Asian States; the interest and roles of outside powers; nationalism, communism and neutralism; alliances and alignments and "non-alignment". (Prerequisite: P.S. 260 or permission of instructor and/or Department). **(3 hours a week).**

369. International Relations in Latin America: An examination of the major problems of international relations as they affect Latin America. (Prerequisite: P.S. 260 or permission of Department). **(3 hours a week).**

374a. Survey Research: Introduction to the application of survey methods in political research including sampling questionnaire construction and interviewing techniques; coding and analysis of survey data. Classes will plan and carry out a survey project. **(3 hours a week).**

374b. Data Processing in Political Research: An introduction to the role of the computer in modern social science. Elementary analytical and programming concepts will be covered in addition to the main social science oriented software systems such as OSIRIS 11 and BMD. **(3 hours a week).**

390. Political Integration: A study of theory and practice in the formation of political communities at the national and international levels. (3 hours a week). [Discontinued in 1972].

395. Society and Polity: A theoretical and empirical investigation of societal factors in the political process in contemporary western societies. The main focus is on social structure and class conflict; political alienation and political violence; the nature of elites; the impact of corporate organizations; technology; analysis of mass society and pluralism. (3 hours a week).

412. Political Parties in Canada: An examination of the main theoretical approaches to the study of political parties and an intensive study of Canadian political parties. (3 hours a week).

437. Contemporary Politics of Communist States: An examination of selected political, social and economic issues of the communist ruled states with special emphasis on trends since World War II. (2 hours a week).

450. Contemporary Political Theory: Systematic thinking about the purposes of government as revealed in contemporary political theories, ideologies, and philosophies. (2 hours a week).

460. Foreign Policy of Canada and Other Middle Powers: The primary emphasis is on Canadian foreign policy but in addition various issues relating to the post-1945 foreign policy of "middle powers" in general, Canada included, are studied in a comparative perspective. (2 hours a week).

461. Foreign Policy of the Super Powers: The foreign policy of the United States and U.S.S.R. with emphasis on the post-war period. (2 hours a week).

466. International Institutions: An examination of the theory and practice of international organization, focusing in particular on the United Nations, regional institutions and such concepts as political integration. (2 hours a week).

468. Strategic Studies: Theories of bargaining and non-destructive coercion including defence strategies, alliance systems, collective security, and techniques of force short of violence. (2 hours a week).

PSYCHOLOGY

Officers of Instruction:

Professor Emeritus: Brother R. Philip, F.S.C., Ph.D.

Professors: R. C. Fehr, C.S.B., Ph.D.
J. A. Malone, Ph.D.
A. A. Smith, Ph.D.
V. B. Cervin, Ph.D.
M. E. Bunt, (Mrs.), Ph.D., (Head of the Department)
W. G. Bringmann, Ph.D.
L. E. La Fave, Ph.D.
J. LaGaipa, Ph.D.
M. L. Kaplan, Ph.D.
F. Auld, Ph.D.
P. Carpenter, (Mrs.), Ph.D. (Adjunct)
P. Riffel, Ph.D. (Adjunct)

Associate Professors: M. A. Record, C.S.B., M.A.
M. Starr, M.A.
*B. P. Rourke, Ph.D.
R. Engelhart, Ph.D.
G. Namikas, Ph.D.
C. J. Holland, Ph.D.
R. M. Daly, Ph.D.
W. D. G. Balance, Ph.D.
F. Schneider, Ph.D.
D. V. Reynolds, Ph.D.
A. Kobasigawa, Ph.D.
W. L. Libby, Ph.D.
H. L. Minton, Ph.D.

Assistant Professors: T. T. Hirota, Ph.D.
T. Horvath, Ph.D.
H. D. Woodyard, Ph.D.
J. S. Cohen, Ph.D.
D. M. Trott (Mrs.), M.A.
G. R. Frisch, Ph.D.
H. L. Gravitz, Ph.D.
M. E. Morf, Ph.D.
R. R. Orr, Ph.D.
K. H. Rubin, Ph.D.
J. Daly (Mrs.), M.S. (Part-time)

Sessional Instructors: J. W. Agar, Ph.D.
Rudolph Philipp, Ph.D.

Consulting Psychiatrist: R. Ancog, M.D.

Consulting Psychologists: J. Katz, M.A.
J. Keillor, Ph.D.
T. Mezei (Mrs.), M.A.

*On leave.

Major requirements: five to seven courses, including 115 and 228.

Minor requirements: three to five courses, including 115.

Courses assigned at the discretion of the Department Head, may form part or all of the requirements for the first year of the two year program leading to the degree of Master of Arts.

All courses listed will not necessarily be offered in the coming year.

Course Descriptions:

115. Introduction to Psychology: A general orientation to Psychology from the scientific viewpoint. **(3 hours a week).**

Psychology 115 is a prerequisite for all other courses in Psychology, except where noted. Psychology 228 is required of all majors.

222. Developmental Psychology: The development of the child and adolescent; reading and discussion in theories and research related to developmental psychology. **(3 hours a week).**

226a. Educational Psychology: Psychology of the learning processes and the variables that affect learning such as intelligence, motivation, attitudes, interpersonal relations, and cultural background. **(3 hours a week, one semester; half course).**

226b. Educational Psychology: Study of problem behaviour in the classroom; issues such as maladaptive behaviour, perceptual and learning handicaps, academic counselling, psychological testing. (Prerequisite: Psychology 226a). **(3 hours a week, one semester; half course).**

228. Psychological Statistics: Probability, sampling, estimation, tests of significance, chi-square, analysis of variance, correlation and regression. **(3 hours a week).**

230. Experimental Psychology: Introduction to laboratory methods. Human perception and animal learning: psychophysical methods, vision, classical and instrumental conditioning procedures, generalization and discrimination. **(2 lectures, 3 laboratory hours a week).**

231. Abnormal Psychology: Concepts of and criteria of the normal and abnormal. A consideration of the organic and psychological sources of mental illness with special emphasis on the etiology, symptoms and dynamics of neuroses, psychoses and psychopathies. **(3 hours a week).**

284. Renumbered 384 in 1972.

320. Renumbered 320ab in 1972.

320a. Psychological Testing: The principles of psychological testing, evaluation and interpretation of test results; a critical evaluation of research data obtained through the use of psychological tests. **(3 hours a week; one semester; half course).**

320b. Differential Psychology: Individual and group differences in behaviour. Special topics include consideration of psychological differences related to sex, age, intelligence, social class and culture. Extensive consideration of the heredity-environment issue. (Prerequisite: Psychology 320a). **(3 hours a week, one semester; half course).**

327. Behavioural Processes in Education and the Family: Behavioural principles applied to classroom problems and family processes. (Prerequisite: teaching experience or permission of the instructor). **(3 hours a week).**

329. Psychology of Personality: A consideration of empirical evidence and theoretical positions in personality. Research methods; basic concepts of trait, attitude, style, and motive; systematic approaches to personality, e.g. psychoanalytic, behaviouristic, existential, cognitive, etc. **(3 hours a week).**

332. Sensation and Perception: Introduction to psychophysics; theory and methods of measurement; sensory and perceptual phenomena. **(2 lectures, 2 laboratory hours a week).**

333. Physiological Psychology: A detailed study of the nervous systems and their relation to psychological functions. Study and review of recent trends in brain research related to sensory-motor systems, reticular formation, limbic systems and neocortex. (Prerequisite: Psychology 115 or consent of instructor). **(2 hours lecture, 2 hours laboratory a week).** (Limited Enrolment).

334. Social Psychology: The study of the individual in social context, with emphasis on attitude structure and change, motivation, conformity, small group processes and group norms. (Prerequisite: Psychology 115 or Sociology 100). **(3 hours a week).**

340c. Psychology of Social Change: A consideration of the psychological factors related to social change and the contribution that psychological theory and research can make towards implementing and evaluating social action programs. Emerging professional roles of psychologists in the implementation of social change. (Prerequisite: Psychology 115 or Sociology 100). **(3 hours a week, one semester; half course).**

341c. Contemporary Issues and Psychology: Psychological theory and research as it relates to issues of modern society such as conflict, alienation and identity. **(3 hours a week, one semester; half course).**

342. Environmental Psychology: The Psychological impact of the physical and social environments of urban and regional life; the interaction between technology, population patterns, environment, human needs, genetic endowment, attitudes, values, life styles, and social institutions; psychological aspects of environmental design; planning alternative future environments. (Prerequisite: Psychology 115 or consent of instructor). **(3 hours a week).**

344. Psychology of Communication: Pragmatic (behavioral) effects of human communication. Attitude formation and change; psycholinguistics and general semantics; language and non-verbal communication; mass media; cyberimages. **(3 hours a week).**

353. Learning: Introduction to basic principles of and experiments in individual and social learning and behaviour. Factors affecting changes in and maintenance of perceptual, motor, and emotional behaviour. **(2 lectures, 2 laboratory hours a week).**

384. [284] The Human Interactive Process: Exploration and development of interpersonal skills for effective group and social functioning. Concepts, small group laboratory experience and field observations; applications to educational work and community relations. **(3 hours a week).** (Limited enrolment).

410. Tutorial: Individual research and reading in specialized areas of Psychology. **(2 hours a week).**

420. Research Methods in Personality and Social Psychology: Introduction to correlational and experimental methods of research in personality and social psychology. Basic concepts of test theory, test construction, acturial and automated data processing. Consideration of issues and procedures in the design of experiments. Participation in research. (Prerequisite: Psychology 228). **(3 hours a week).**

422. Advanced Child Psychology: Theories, research methods and findings related to the cognitive, emotional, social and personality development of the child, including experimentation and demonstration. (Prerequisite: Psychology 222). **(3 hours a week).**

425. History of Psychology: The origin and development of Psychology. (3 hours a week).

431. Introduction to Clinical and Counselling Psychology: Concepts and research applied to mental health work in schools, clinics, hospitals, and communities. (Prerequisite: Psychology 231). (2 lecture hours and 2 laboratory hours a week).

450. Psychological Assessment: The selection, administration, scoring and integration of a variety of psychological assessment procedures used in applied settings. (Prerequisite: Psychology 231, Psychology 320a). (3 hours a week). (Limited enrolment).

451. Statistical Principles and Experimental Design: Tests of significance, non-parametric tests and analysis of variance. (3 hours a week).

452. Motivation: A survey of empirical principles and theoretical concerns in the area of motivation. (3 hours a week).

453. Psychology of Human Learning: An analysis of theory and research in human information processing, learning, memory, and symbolic behaviour. (Prerequisite: Psychology 353). (2 hours lecture, 2 hours laboratory a week).

454. Industrial Psychology: Personnel selection and performance appraisal, training, managerial decision-making, leadership, communications, job satisfaction, and consumer behaviour. (Prerequisite: Psychology 115 or consent of Instructor). (3 hours a week).

455. Comparative Psychology: Introduction to animal behaviour from the viewpoint of its role in the natural life of the individual and species. A survey of the contributions of comparative and physiological psychology, ethology, and ecology. (Prerequisite: Psychology 115 or consent of Instructor). (2 hours lecture, 2 laboratory hours a week).

RUSSIAN

SCANDINAVIAN

SOCIAL WORK

Officers of Instruction:

Professor: H. M. Morrow, M.S.W. (Director of the School)

Associate Professors: W. Y. Wassef, Ph.D.
J. Barnes, D.S.W.
Stewart Moore, M.S.W.
P. C. Subudhi, Ph.D.
B. J. Kroeker, M.S.W.
J. A. McIsaac, M.S.W.
J. P. Clarke, Ph.D.
Lola E. Buckley, D.S.W.
V. J. Cruz, M.S.W.

Assistant Professors: *R. G. Chandler, M.S.W.
Mrs. Patricia Taylor, M.S.W.
F. C. Hansen, M.S.W.

Sessional Instructors: R. J. Myers, M.S.W.
Miss M. Reavey, M.S.W.
S. Monoghan, M.S.W.

Field Instructors: Mrs. Mary Barnes, M.S.W.
Miss Marie Claire Brisebois, M.S.W.
J. C. Buhlman, B.S.W.
M. Dhar, M.S.W.
Peter Freel, M.A.
C. R. Goon, M.S.W.
Arthur Hicks, M.S.W.
Mrs. June Hurley, B.S.W.
J. P. Lupien, M.A.
Mrs. Gladys Luxat, M.A.
H. G. MacDonald
J. Malette, M.S.W.
Mrs. Margaret McAuliffe, M.S.W.
Mrs. E. Mazur, M.S.W.
M. Pfaff, M.S.W.
D. M. Polson, M.S.W.
Mrs. Mary A. St. Amand, M.S.W.
Miss Pilar Sanchez, M.S.W.
William Scott, M.S.W.
Patrick Shanahan, M.S.W.
Miss Mary Snelgrove, M.S.W.
Michael Stroud, M.S.W.
Miss Dale Swaisgood, M.S.W.
John Tallon, M.S.W.

*On leave.

For Honours program in Social Work, see p. E-75.

Social Work 115, 202b, and 301a are open to all undergraduate students in the University of Windsor. Students wishing to enroll in Social Work 235 and 245a must have permission of the instructor and registration will be limited to students enrolled in the Honours B.S.W. program.

All courses listed will not necessarily be offered in the coming year.

Course descriptions

115. Introduction to Social Welfare and Social Work: A survey course outlining the role of the social worker in meeting human needs in a changing society. Emphasis is on the inter-relationship of social science knowledge and professional practice. **(3 hours a week).**

202b. A Comparative Study of Social Welfare Policy: Welfare policies, programs and services of Canada. Great Britain and the United States will be compared and analyzed according to a model developed for the analysis of welfare programs and services. **(3 hours a week, one semester; half course).**

211. Trends in Health and Welfare Services: An examination of Canadian health and welfare services with an emphasis on basic principles and practices of community health. (Identical with Nursing 211). **(3 hours a week).**

235. Survey of Social Work Practices: Examination of historical and current modes of intervention and areas of practice, (problem areas and settings). A field experience introduces the student to community involvement. **(3 hours a week).**

245a. Self and Environment: Through the use of personal documents and class experience, the student is sensitized to the functioning of the Self as a base for methods of practice and social welfare courses. The functioning of the Self will be studied within the contexts of personal experience, and family and social environment. **(2 hours a week, one semester; half course).**

301a. Issues in the Delivery of Welfare Services: In this course issues in the delivery of social services that have been touched upon generally are examined more closely. Issues may change from year to year, but such questions as the evaluation of services, attempts to relate delivery systems more directly with community needs, the public-voluntary relations under the Canada Assistance Plan, and the use of advocacy by social workers will be examined. (Prerequisite: S.W. 202b). **(3 hours a week, one semester; half course).**

335. General Methods: (a) concepts and principles generic in all social work methods; (b) beginning familiarity with the techniques and problems in casework, group work, and community organization modes of intervention; and the services of administration, research and social action. Emphasis on relationship; lab sessions; field experience. **(4 hours a week).**

345. Human Behaviour and Social Environment: The factors that underlie an individual's social functioning. Personality growth and development; socio-cultural elements in human behaviour; physical and mental illness as factors affecting individual growth and development; the social consequences of ill health. **(3 lectures a week).**

401c. Services for Children: Issues in the present structure and functioning of services for children. The rights of children, and their need for services will be examined, in relation to existing services, such as protection, adoption, foster care, health services and compulsory education, with special attention being given to the trend toward extra-family parenting responsibilities. **(3 hours a week, one semester; half course).**

402c. Services for Families: Family functioning and family needs will be examined in relation to social service systems, including family counselling services; family and divorce courts; mental health services; day care; homemaker services, and others. **(3 hours a week, one semester; half course).**

403c. Service for Aging: The growing need for services to aging, and the Senate Report on Aging, will serve as foci for an examination of the discrepancies between the knowledge of needs of the aging and the community's readiness to meet those needs through voluntary and public action. **(3 hours a week, one semester; half course).**

404c. Correctional Services: Critical issues in social and correctional policy in Canada. The processes of probation, after-care, and parole will be examined, along with issues in the prevention and treatment of juvenile delinquency, treatment of the habitual offender, and sentencing policies. **(3 hours a week, one semester; half course).**

405c. Law and Social Welfare: Concepts and principles in legal and social provisions for the protection of family, children and adults and legal problems pertinent to the social work practice will be examined. **(2 hours a week, one semester; half course).**

436. Social Intervention: A unitary approach to intervention with individuals, families, and small groups. Emphasis upon operationalizing relationship and developing effective facilitative traits. Lab sessions provide experience component to complement field placement. **(4 hours a week).**

440c. Community Process: The Social Worker in the Community. This course is designed to help social workers understand the community and its social systems. We will also examine the relationship of Social Services to the community, and the relationship of the professional social workers to the community both inside and outside work situations. **(2 hours a week, one semester; half course).**

442c. The Organization and Administration of Social Service Programs: The professional and bureaucratic functions of the social worker are examined in the context of the organization and administration of social welfare agencies. **(3 hours a week, one semester; half course).**

445a. Social Work Statistics: Topics include: nominal, ordinal, interval and ratio scales: the use of calculators in statistical analysis. Emphasis is on statistical techniques adaptable to social work data, research designs, and the use in decision making. **(2 hours a week, one semester; half course).**

445b. Research Methods in Social Work: Meaning and goals of social work research. Formulation of social work problems in appropriate research, designs; identification of variables, selection and design of tools for data collection; tests for validity and reliability; sampling procedures; application of statistics to data collected. Report writing; data analysis by computers. Social work research compared to behavioural science research, (e.g. sociology and psychology). (Prerequisite: S.W. 445a). **(2 hours a week, one semester; half course).**

450. Field Practice: Field practice instruction will be given in selected agencies and departments under the direction of supervisors approved by the School of Social Work. **(16 hours a week; Fall and Winter terms; Fourth year).**

SOCIOLOGY AND ANTHROPOLOGY

I. SOCIOLOGY SECTION

Officers of Instruction:

Professor: R. A. Helling, Ph.D.

Associate Professors: A. H. Diemer, Ph.D.
M. L. Dietz, Ph.D.
V. Signorile, Ph.D. (Head of the Department)
J. D. Ferguson, Ph.D.
R. Whitehurst, Ph.D.
D. Booth, Ph.D.

Assistant Professors: D. Stewart, M.A.
C. Vincent, M.A.
M. J. Blair, Ph.D.
N. Layne, Ph.D.
H. Solomon, Ph.D.
J. Breaugh, M.A.
T. White, M.A.

Lecturers: S. Faber, M.A.
S. Ramcharan, M.Sc.
M. Stephenson, M.A.

Major requirements: Five to seven full courses or equivalent, including Sociology 100 and 335.

Honours major: Twelve full courses or equivalent, including the above and Sociology 327, 410, 411.

Minor requirements: Three to five courses, including Sociology 100.

For major in general program, see p. E-19; for Honours Anthropology and Sociology, p. E-26; for Honours Economics and Sociology, p. E-31; for Honours Political Science and Sociology, p. E-53; for Honours Psychology and Sociology, p. E-55; for Honours Sociology, p. E-56; for Honours Theology and Sociology, p. E-58.

All courses listed will not necessarily be taught in the coming year.

Course Descriptions

100. Introduction to Sociology and Research Methods: The study of social organization and the social process; the analysis of group life, social contacts, interaction, social forces, conflicts, accommodation, assimilation, amalgamation, and methods of social control; methods of sociological investigation. **(2 hours lecture, 1 hour laboratory a week).**

202. Sociology of Education: Sociological analysis of the function of educational institutions, the structure of education and a study of the interaction of education and other social phenomenon such as family and community. (Prerequisite: Sociology 100 or consent of instructor). **(3 hours a week).**

203. Social Problems: The study of diverse problem areas of complex industrial societies. The delineation of underlying forces through systematic and comparative theoretical analysis. (Prerequisite: Sociology 100 or consent of instructor). **(3 hours a week).**

204c. Sociology of the Family: A cross cultural study of family patterns with a consideration of social class variations, rural-urban patterns, and historic changes in the structure of the family. (Prerequisite: Sociology 100 or consent of instructor). **(3 hours a week, one semester; half course).**

205c. Sociology of Sex: A cross cultural analysis of sexual patterns and an analysis of pre-marital sexual behaviour in modern society with an emphasis upon future marital adjustment. (Prerequisite: Sociology 100 or consent of instructor). **(3 hours a week, one semester; half course).**

209c. Urban Community: History, nature and form of urban communities. Emphasis on theoretical formulations supported by empirical documentaries of: ecological and demographic characteristics; social organization and mass phenomena. (Prerequisite: Sociology 100 or consent of instructor). **(3 hours a week, one semester; half course).**

210c. Demography: A comprehensive assessment of particular issues in demography, such as fertility, mortality, population size, the aging of the population, and migration, both internal and external. Primary emphasis will be placed on the link between population and other parts of the social structure. An examination of some basic methods used in demographic studies will be included. (Prerequisite: Sociology 100 or consent of instructor). **(3 hours a week, one semester; half course).**

224. Intergroup Relations: The study of the interaction between various racial, ethnic, religious, and class groups, problems of biculturalism, cultural and structural assimilation, inter-generational mobility, immigration policies and other areas of culture contact (Prerequisite: Sociology 100 or consent of instructor). **(3 hours a week).**

225c. Formal Organization: Analysis of the goals, functions and consequences for the individual of modern organizations. Aspects of bureaucratization will be examined within business firms, public institutions, and private associations. (Prerequesite: Sociology 100 or consent of instructor). **(3 hours a week, one semester; half course).**

226c. Sociology of Work and Occupations: A study of the validity of current theories of conflict and cooperation within and between occupations, taking particular account of Canadian Studies, with special emphasis on career entry, socialization, resolution of role conflicts, resolution of strains between bureaucratic and professional norms, and changes in sex roles. Emphasis on replication of studies field work. (Prerequisites: Sociology 100 and 228c, or consent of instructor). **(3 hours a week, one semester; half course).**

228c. Social Stratification: Studies of sources of social inequality, sources of class-based emphases on conformity or self-direction, and options for economic and cultural change. (Prerequisite: Sociology 100 or consent of instructor). **(3 hours a week, one semester; half course).**

301a. Criminology: Crime and Delinquency: A study of the theories of causation of crime and juvenile delinquency, typology crime and delinquency prevention. (Prerequisite: Sociology 100 or consent of the instructor). **(3 hours a week, one semester; half course).**

301b. The Canadian Correctional System: Penology: The treatment of the convicted adult and young offender. The operation of the prison systems, probation and parole and other community based corrections. (Prerequisite: Sociology 100 and 301a or consent of instructor). **(3 hours a week, one semester; half course).**

327. Introduction to Statistics: The study of the basic statistical concepts and procedures relevant to social Sciences. **(2 hours lecture, 2 hours laboratory a week. Required of honours students, or those intending to pursue graduate studies in Sociology).**

330c. Social Change: Continuity and transformation of society; the emergence and establishment of new forms of social relationships; analysis of collective behaviour, social movements and reform efforts. (Prerequisites: Sociology 100, Sociology 224 or consent of instructor). **(3 hours a week, one semester; half course).**

331c. Collective Behaviour: Theories and study of mass behaviour; fads and crazes, crowds and mobs, religious cults, riots, rebellions, and revolutions. (Prerequisites: Sociology 100, Sociology 224 or consent of instructor). **(3 hours a week, one semester; half course).**

333c. Self and Society: A comparative introduction to human social conduct with emphasis on the interrelationships of the individual and the group. Included will be socio-cultural influences on the perceptual-cognitive structure and processes. The development and presentation of the self; social learning and social influence processes as reflected in attitudes, role behaviour, and intra/inter group interaction. (Prerequisites: Sociology 100 or Psychology 115, Sociology 225c and 228c, or consent of instructor). **(3 hours a week, one semester; half course).**

334c. Small Groups: An inquiry into the workings of the small group as a social system; modes and styles of interaction; inter-personal continuity and change; problems of measuring interaction and use of techniques for altering small groups through role playing; guided group interaction and sociodrama. (Prerequisites: Sociology 100 or Psychology 115, Sociology 225c and 228c, or consent of instructor). **(3 hours a week, one semester; half course).**

335. Development of Sociological Theory: Nineteenth and twentieth century Social theories. Emphasis is placed upon theories of social change, alienation, community, power, the sacred, functionalism and the theory of social action. (Prerequisite: Sociology 100 or consent of Instructor). **(3 hours a week).**

336c. Political Sociology: Theories of political behaviour and political systems, including studies of power elites, social stratification and political socialization. (Prerequisite: Sociology 100 or consent of instructor). **(3 hours a week, one semester; half course).**

390c. Selected Current Topics in Sociology: A lecture or seminar course designed to encourage study in newly developing areas of Sociology. Areas will be announced from year to year. **(3 hours a week, one semester; half course).**

Fourth-year Honours and Make-up year courses: Normally available to honours students and those accepted in the two-year graduate program. General prerequisites: Sociology 327 and 335.

400. Honours Seminar: Analysis of central concepts, principles, and methodologies in sociological thought. The focus may vary from year to year. (Prerequisites: three courses at the 300 level, including Sociology 327; honours standing or permission of instructor). **(3 hours a week).**

402. Social Deviance and Control: Theories and empirical studies of deviance and control, including developmental and social learning theories; deviant roles, careers and groups. Sociological analysis of the impact of societal reactions and institutions on deviant conduct. (Prerequisite: three courses at the 300 level or consent of instructor). **(3 hours a week).**

403. The Sociology of Knowledge: The theoretical and empirical study of the social basis of knowledge. The existential and epistemological bases of mental productions, reality constructions and belief systems. These include ideology, science, religion, literature and art. Major emphasis upon the theoretical and methodological location of the sociology of knowledge as a discrete perspective within the discipline of sociology. (Prerequisites: three courses at the 300 level or consent of instructor). **(3 hours a week).**

410. Advanced Research and Statistical Methods: Students will develop a research project and carry it through to completion during the year. Class discussions will also be concerned with analytic and nonparametric statistics, as well as problems of data collection. (Prerequisites: Sociology 327, three courses at the 300 level or consent of instructor). **(3 hours a week).**

411. Central Problems of Sociological Theory: A seminar with emphasis on intensive study of selected basic questions historically underlying sociological thinking such as the problem of order and integration of society, rationalization of social action, societal equilibrium and disequilibrium. Selected authors. (Prerequisite: three courses at the 300 level or consent of instructor). **(3 hours a week).**

412. Directed Readings: Independent study with members of the Sociology Department. Limited to final year students majoring in sociology, who have the approval of the Department. (Tutorial). (Prerequisite: three courses at the 300 level or consent of instructor). **(Full course).**

420c. Social Interaction and Small Group Theories: Basic theoretical approaches to group dynamics social interaction, and small group structure and process; including social power, social influence, conformity and deviation. **(3 hours a week, one semester; half course).**

421c. Analysis of Social Interaction and Small Group Research: Critical analysis of small group studies; characteristics of members; group size; leadership; group climate; interpersonal relations; group composition and capabilities; task performance role of individual and social factors on performance. **(3 hours a week, one semester; half course).**

490c. Seminar on Current Topics in Sociology: A seminar on a topic of current sociological interest. Analysis of current theories. Opportunity for independent critical analysis and research. **(3 hours a week, one semester; half course).**

II. ANTHROPOLOGY SECTION

Officers of Instruction:

Professors: M. C. Pradhan, Ph.D.
J. A. Theuws, Ph.D.

Associate Professors: R. Singh, Ph.D.
S. Snyder, Ph.D.

Assistant Professors: A. R. Orona, Ph.D.
A. Koloseike, M.A.
C. S. Peebles, Ph.C.

Major requirements: Six or seven full courses which should include Anthropology 110, 210 and 212.

Minor requirements: Three to five full courses which should include Anthropology 110.

For major in the General program, see p. E-19; for Honours Anthropology, see p. E-25; for Honours Anthropology and Psychology, p. E-25; for Honours Anthropology and Sociology, p. E-26.

Notes:

1. In each year students must choose their courses, including options, in consultation with the Department. Most options are expected also to be relevant to the major. Students are expected to abide by all Departmental regulations with respect to prerequisites.

2. Not all courses in Anthropology will be offered in every year. Students should consult the Department in advance of registration to determine the available courses.

3. Anthropology 110 or consent of instructor is the general prerequisite.

Course Descriptions:

110. Introduction to Anthropology: The study of man in both biological (Physical Anthropology) and cultural (Archaeology and Ethnology) aspects; human evolution; the nature of culture, including material culture, economics, social and political organization, language, and religion. (**3 hours a week**).

210. Principles of Physical Anthropology: Human population biology in the conceptual framework of evolutionary processes. Vertebrate and primate evolution and interpretation of the fossil human record. Concepts of race formation and classification in terms of human population genetics. (**3 hours a week**).

212. Principles of Archaeology: A survey of techniques, methods and accomplishments of anthropological archaeology; the evolution of man and culture from the early Pleistocene to the rise of food production and the urban states. (**3 hours a week**).

220c. Museum Methods: Techniques of display, methods of preparation and restoration of ethnological and archaeological materials. Will be conducted in the laboratory. (**3 hours a week, one semester; half course**).

230c. [430c] Indigenous Cultures of Canada: Emphasis will vary from archaeology to ethno-history to modern Canadian Indians. (**3 hours a week, one semester; half course**).

231c. Peoples of North America: Survey of selected cultures or culture areas. Content will change from year to year. **(3 hours a week, one semester; half course).** [Discontinued in 1972].

233c. Peoples of South America: Survey of selected cultures or culture areas. Content will change from year to year. **(3 hours a week, one semester; half course).**

235. Outline of cultural areas in Africa; which includes City-States; Kingdoms, Cattle-Complex, and Tribes without Rulers. Fundamental concepts and their symbolizations in African world views. **(3 hours a week).**

236c. Peoples of Asia: Survey of selected cultures or culture areas. Content will vary from year to year. **(3 hours a week, one semester; half course).**

237c. Peoples of Oceania: Survey of selected cultures or culture areas. Content will vary from year to year. **(3 hours a week, one semester; half course).**

238c. New World Negro: An anthropological analysis of Africans in the Americas; both slave-holding and post-slavery cultural systems will be examined. **(3 hours a week, one semester; half course).**

242c. Peasant Cultures of Latin America: A survey of the social and cultural organization of rural subsistence farming communities of Middle and South America; external relations with regional and national social systems. **(3 hours a week, one semester; half course).**

250. Kinship and Social Organization: Kinship systems, principally in non-Western societies, and their significance in the organization of social life. Theories of kinship, marriage regulations, and kinship role patterns. **(3 hours a week).**

260. Economic Anthropology: A survey of the ethnology of economic life, principally in non-Western societies, with an emphasis on the operation of systems of production and distribution within the diverse cultural contexts. **(3 hours a week).**

270c. Renumbered 300c in 1972.

271c. Renumbered 301c in 1972.

300c. [270c] New World Prehistory: Survey and analysis of New World archaeological data with emphasis on current problems in the pre-history of North and Meso-America. **(3 hours a week, one semester; half course).**

301c. [271c] Old World Prehistory: Survey and analysis of archaeological data of Eurasia and Africa with emphasis on current problems surrounding the origins and evolution of culture in the Old World. **(3 hours a week, one semester; half course).**

310. Field Methods in Archaeology: Field methods and techniques of modern anthropological archaeology. Course will include supervised excavations of local southwest Ontario sites. (Offered only in the summer). (Prerequisite: Anthropology 110 and permission of Instructor). **(Full course).**

320. Renumbered 320c and 321c in 1972.

320c. Biology, Society & Culture: Origins, mechanics and behaviour of living forms; selection and adaptation. Fundamentals of human genetics: the biology and culture of present day populations of man. **(3 hours a week, one semester; half course).**

321c. Primate Behaviour: A study in primate ecology; adaptation and behaviour of non-human primates, a comparative study in primate social organization. (No prerequisites). **(3 hours a week, one semester; half course).**

340. Primitive Religion: The origins, elements, forms, and symbolism of religion; the role of religion in society. **(3 hours a week).**

350. Anthropological Linguistics: A beginning course in the descriptive and historical study of language; linguistic analysis; linguistic structures, language classification; language families of the world; language in its social and cultural setting. **(3 hours a week).**

351. Language in Culture: The study of language as an aspect of culture; the relation of habitual thought and behaviour to language; the problem of meaning. **(3 hours a week).**

370. Traditional Political Systems: Political organization in non-Western societies of varying degrees of complexity. Law and the maintenance of order; corporate groups; ideology. The relationships of political to other institutions of society. **(3 hours a week).**

380. Laboratory Methods in Physical Anthropology: Somatometry; blood grouping techniques, PTC tests, saliva, etc. Osteometry and dermatoglyphics. **(2 lectures, 2 laboratory hours a week).**

381c. Comparative Osteology: Physiology of bone; functional aspects of bone formation, aging, sexing and identification; a comparative study of morphology of bones in primates. **(2 lectures, 2 laboratory hours a week; one semester, half course).**

385. Culture and Personality: Theories of the relationship between personality and culture and the development of such theories in the history of anthropology. The relationship of culture and personality research to general social and cultural research. A review of the modern sub-fields of psychological anthropology. **(3 hours a week).**

390. Culture-Contact and Culture Change: Problems of cultural and social change, including the impact of western civilization upon native societies. **(3 hours a week).**

410. Method and Theory in Anthropology: A critical examination of the various sub-fields of Anthropology (social-cultural, prehistoric, linguistic, and physical) in terms of theoretical content and analytical methods. Emphasis will be on contemporary anthropological works, historic figures, and "schools" of Anthropology. Modern philosophers of science will also be read for a comparative critical assessment of Anthropology. **(3 hours a week).**

430c. Renumbered 230c in 1972.

431c. European Populations in Canada: A seminar covering research on European populations in Canada. Emphasis will vary from archaeological to ethnohistorical to modern ethnic groups. Course may be repeated for credit. **(3 hours a week, one semester; half course).**

440c. Directed Readings: Designed for students considering graduate work. Independent study and readings with members of the anthropology staff. (Prerequisite: three courses at the 300 level or permission of Instructor). **(3 hours a week, one semester; half course).**

490. Problems of Anthropological Theory: Designed for students considering graduate work. A seminar with emphasis on the theories of technological, social, and ideational components of culture, including historical processes of contact and change. (Prerequisite: three courses at the 300 level). **(3 hours a week).**

SPANISH

(See p. E-138).

SPEECH

(See p. E-106).

THEOLOGY

Officers of Instruction:

Professors: E. J. Crowley, S.S.L. (Head of the Department)
E. R. Malley, S.T.D. (Vice-Dean, Humanities Division)
T. L. Suttor, Ph.D.
L. D. Kliever, Ph.D.
B. J. Cooke, S.T.D.

Associate Professors: J. C. Hoffman, Ph.D., Th.D.
D. L. Egan, S.T.L.
*T. C. Akeley, Ph.D.
H. I. Milton, D.Th.
G. H. Crowell, Th.D.

Assistant Professors: J. N. King, Ph.D.
J. T. Culliton, C.S.B., Ph.D.
T. I. Kelly, S.T.L.
R. C. Amore, Ph.D.
H. M. Rumscheidt, Ph.D.

*On leave.

For the general program, with a major in Theology, see p. E-19; for Honours Greek and Theology, see p. E-43; for Honours History and Theology, p. E-45; for Honours Theology and Philosophy, p. E-57; for Honours Theology and Psychology, p. E-57; for Honours Theology and Sociology, p. E-58.

Major requirements: five to seven courses including at least one each from three of the groups listed below.

Minor requirements: Three to five courses.

All courses listed will not necessarily be offered in the coming year.

Theology 100 is recommended as an introductory course for all students.

Students in any program may take any of the courses from the groups listed below with the exception of the Honours Seminars:

Group I

ETHICAL

200—Christian Living in the 20th Century

300—Christian Social Ethics

400—Honours Seminar: Theological Ethics

Group II

INTERDISCIPLINARY

221—Theology and the Arts

222—Theology and the Sciences

320—The Biological Revolution and Modern Ethics

321—The Churches and Society

Group III

THEMATIC

241—Life and The Sacraments

242—God Question and Modern Man

243—Images of Man

249—Catechetics: Communications in Theology

341—The Problem of Religious Knowing

345—Current Interpretations of Christianity

346—New Horizons in Religious Thought

440—Honours Seminar: Thematic Studies

Group IV

HISTORICAL

250—Christianity in Panorama

351—Greco-Roman Theologies

352—Medieval Theologies

353—Renaissance-Reformation Patterns of Christianity

354—Christianity and Modern Civilization

450—Honours Seminar: Historical Studies

Group V

BIBLICAL

270—Understanding the Old Testament

271—Understanding the New Testament

376—Prophetic Literature

377—Wisdom Literature

378—Pauline Theology

379—Johannine Theology

470—Honours Seminar: Biblical Studies

Group VI

COMPARATIVE

290—Encounter with World Religions

390—Patterns in World Religions

391—Comparative Buddhism

Course Descriptions:

100. **Theology and the Human Situation:** An examination of issues bearing on the meaning of life: personal development and community; evil, suffering and death; bases of morality; the future of man; Christianity and alternative possibilities. **(2 hours a week; periodic seminars).**

200. **Christian Living in the Twentieth Century:** A study of ethical issues confronting the individual: one's basic commitments, social pressures for conformity, legalism vs. situation ethics, sex, marriage, family life, work, leisure, response to the current social crisis. **(3 hours a week).**

201. Renumbered 300 in 1972.

220. Renumbered 290 in 1972.

221. **Theology and the Arts:** Basic questions about human life, its situation and meaning, as they are raised and answered by theists and atheists in significant modern literary works. **(3 hours a week).** (Taught alternate years; Not offered in 1972-73).

222. **Theology and the Sciences:** An examination of the impact of the physical and social sciences upon religion and religious thought coupled with the study of the humanistic questions posed for the sciences by theology. The course will deal with such matters as images of man, conceptions of truth, and social implications. **(3 hours a week).** (Taught alternate years).

241. **Life and the Sacraments:** A study of basic issues underlying the meaning of sacramentality and of the significance of sacramental acts as they involve God and man. **(2 hours a week; periodic seminars).**

242. **[342] The God Question and Modern Man:** An exploration of the question of God: its roots in man's experience and search for meaning, its context in human language and culture, its implications for man's relationships with others and the world. Approaches and concepts of both atheistic and Christian authors; such as Marx, Sartre, Freud, Tillich, Rahner, Macquarrie. **(3 hours a week).**

243. **[343] Images of Man:** Explorations in theological views of man, stressing recent thought. Relationships between these views and actual human behavior will be examined with reference to insights from psychology and sociology. **(3 hours a week).** [Not offered in 1972-73].

249. **[281] Catechetics—Communications in Theology:** History, structure, goal of catechetics; kerygma and catechetics. Psychic attitudes and psychological orientation in the art of communication. Great themes in catechesis —faith, sacraments, morality, sin, salvation history, etc. **(3 hours a week).**

250. **Christianity in Panorama:** A look at the most important turning points in the history of Christian life and thought. **(3 hours a week).**

270. **Understanding the Old Testament:** Introduction to the Old Testament, outlining its origin, formation and contents from the viewpoint of modern scholarship. The theologies of the Old Testament; the Old Testament and Christian faith; various biblical themes. **(3 hours a week).**

271. **Understanding the New Testament:** Introduction to the New Testament including the Apocrypha and Dead Sea Scrolls, the Kerygma; the Gospels, their formation, literary forms and theological ideas, exegesis of selected passages of the New Testament. **(3 hours a week).**

281. Renumbered 249 in 1972.

290. [220] Encounter with World Religions: A comparative study of various types and functions of religion as evidenced in early Hinduism and Buddhism, early Confucianism and Taoism, West African religion, Islam and Judaism. **(3 hours a week).**

300. [201] Christian Social Ethics: Analysis of current social problems, such as: racism, war, poverty, urban crisis, management vs. labour, air and water pollution, the population explosion in the light of Judeo-Christian social concern. Concrete possibilities for individual initiative toward needed social change will be stressed. **(3 hours a week).**

320. The Biological Revolution and Modern Ethics: An investigation, with a view of specific action, of directions biology is taking in fields such as transplants, eugenics, fertility-control, environmental pollution, etc. (This course is given together with the Biology Department. **(2 seminar hours a week).**

321. The Churches and Society: Christian institutions and thought in relation to the wider society; a historical and sociological approach, emphasizing varying responses of churches to major social issues, especially in recent times, and considering possible future patterns of interaction. **(3 hours a week).**

330. Renumbered 345 in 1972.

331. Types of Philosophical Theology: A study of three or four philosophical interpretations of religion, e.g., Aquinas (classical theism), Spinoza (pantheism), Hume (skepticism), Kant (moral theism), Kierkegaard (existentialism), Hartshorne (panentheism). **(3 hours a week).** [Discontinued in 1972].

341. The Problem of Religious Knowing: An examination of the character and validity of religious knowledge (about God, ethical norms, human destiny). This is done by critical analysis of the media (language, myth, symbol, etc.) used in religion. **(3 hours a week).**

342. Renumbered 242 in 1972.

343. Renumbered 243 in 1972.

344: Theological Ethics: A study of the fundamental principles of ethics from Judaeo-Christian viewpoints. **(3 hours a week).** [Discontinued in 1972].

345. [330] Current Interpretations of Christianity: An examination of selected systematic accounts of Christian faith, e.g., Temple, Macquarrie, Barth, Tillich, Rahner, Küng. **(3 hours a week).**

346. New Horizons in Religious Thought: A study of new movements in contemporary life and thought; e.g., theologies of hope, process theology, theologies of play, radical theology, Christian-Marxist dialogue, the Jesus Movement. **(3 hours a week).**

351. Greco-Roman Theologies: Selected themes in Christian and non-Christian writers from the close of the scriptural period to the year 800. **(3 hours a week).**

352. Medieval Theologies: Western and Eastern schools of thought from the year 800 to the Renaissance. **(3 hours a week).** [Not offered 1972-73].

353. Renaissance-Reformation Patterns of Christianity: The rise of Catholic and Protestant vernacular theological cultures in Europe between 1400 and 1750. **(3 hours a week).** [Not offered in 1972-73].

354. Christianity and Modern Civilization: Developments in Christian thought since 1780. **(3 hours a week).** [Not offered in 1972-73].

376. Prophetic Literature: Study of the Old Testament prophets, including the origins and rise of prophecy, its nature and forms, its impact and influence in Biblical times, major theological motifs and relevance for today. **(3 hours a week).** (Taught alternate years).

377. Wisdom Literature: Its rise and development within Israel, its relation to ancient Near East wisdom, its distinctive ideas and contribution to Biblical thought, its contemporary nature in a secular, cosmopolitan age. **(3 hours a week).** (Taught alternate years; not offered in 1972-73).

378. Pauline Theology: Modern trends in Pauline interpretation. Formative influences in Pauline theology: Judaism, Hellenism, the Kerygma, apostolic experience, the road to Damascus. Pauline soteriology, anthropology and Christian existence. **(3 hours a week).** (Taught alternate years; not offered in 1972-73).

379. Johannine Theology: Study of the Fourth Gospel, the Epistles and Apocalypse of John, including background, form and content; theological questions such as eschatology, sacramentalism, ecclesiology, wisdom and symbolism. **(3 hours a week).** (Taught alternate years).

390. Patterns in World Religions: A comparative investigation of mysticism, initiation, magic, meditation, sacrifice, etc., in primitive, agricultural, and technological societies; based on data from Canadian Indian, African, Indian, Chinese and Semitic religions. Prerequisite: Theology 290 [220] or instructor's permission. **(3 hours a week).** (Taught alternate years; not offered in 1972-73).

391. Comparative Buddhism: A comparative study of the major schools of Buddhism beyond India; especially the Zen schools of China and Japan, and the Theravada school of Ceylon and Southeast Asia. (Prerequisite: either Theology 290 [220], Asian Studies 227 or permission). **(3 hours a week).**

400. Honours Seminar: Theological Ethical Studies. **(2 hours a week).** (Taught alternate years).

430. Honours Seminar: Systematic Studies: **(2 hours a week).** [Discontinued in 1972].

440. Honours Seminar: Thematic Studies. **(2 hours a week).** (Taught alternate years).

446. Renumbered 480 in 1972.

450. Honours Seminar: Historical Studies. **(2 hours a week).** (Taught alternate years; not offered in 1972-73).

470. Honours Seminar: Biblical Studies. **(2 hours a week).** (Taught alternate years).

480. [446] Directed Readings in Theology. (2 hours a week).
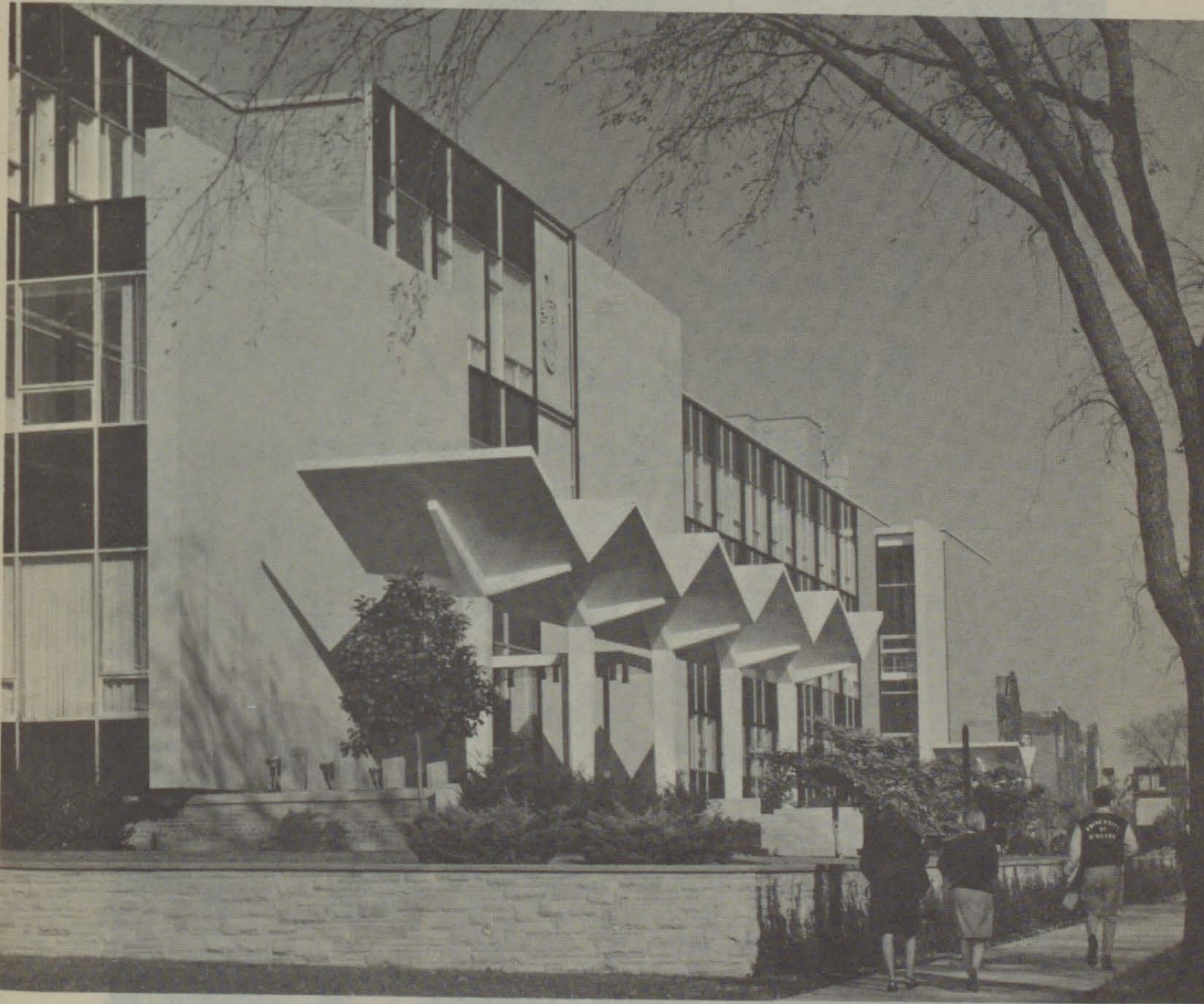
UKRAINIAN

(See p. E-136).

ZOOLOGY

(See p. E-91).

PART F

SCHOOL OF COMPUTER SCIENCE

SCHOOL OF COMPUTER SCIENCE

School Council: The Director of the School (Chairman); all full time faculty members of the School; one representative from each of the following: the Faculty of Applied Science, the Faculty of Business Administration, the Division of Humanities, the Division of Science, the Division of Social Sciences, the Department of Electrical Engineering, the Department of Mathematics; student representatives.

Officers of Instruction

Channen, Eric Wyllis; B.A., Ph.D. (Toronto). Professor and Director—1960.

Grandy, Thomas B.; B.A. (Ed.), B.Sc., M.Sc. (Memorial), Ph.D. (Alberta). Assistant Professor—1970.

Lasker, George E.; M.S. (Inst. of Tech., Prague), Ph.D. (Charles U., Prague). Professor—1968.

Teiling, Bernard; M.Sc. (Paris), Ph.D. (Ecole Centrale de Paris). Assistant Professor—1970.

GENERAL INFORMATION

Over the past few years, there has been a rapid growth in the theory and application of electronic computers that has led to Computer Science being a separate discipline in this and many other universities.

There are many aspects of Computer Science ranging from programming and design of hardware and supporting software to applications in the scientific and business fields such as automata theory, pattern recognition, operations research, business games and strategy, on-line control of processes and systems and many others.

This leads to the main objectives of the programs offered through the School of Computer Science which are designed to provide a student with a good background to follow one of several paths; to go directly to industry, commerce or teaching with an adequate background, to undertake graduate work in computer science, to contribute to the rapidly growing fields of systems programming, applications programming and computer design or to undertake work in another field introducing computer methodology into these fields.

The School of Computer Science offers programs leading to the degree of Bachelor of Computer Science as described below. These programs have been designed to allow the student to combine the study of Computer Science with a specialized study in a related discipline or with a more widely distributed selection of courses that interest him. This flexibility is a desirable attribute in the study of Computer Science, which is so closely related to so many other areas of study. It is achieved by limiting the number of compulsory courses and by allowing wide freedom in the selection of courses to complete the total number required for graduation.

Students who wish guidance in the selection of courses are encouraged to consult counsellors designated by the School.

Some students in the four-year program may wish to concentrate their selection of elective courses in one of these areas closely related to Computer Science. For the benefit of these students, special cognate programs, called options, are identified in Mathematics, Business and Computer Design. If a student elects to include the courses contained in one of these options in his program, the fact will be noted officially on his record. It should be emphasized that while these options allow the student to specialize in a second area, they do not in general include all courses that would be required for a major in that subject area.

Students intending to enter the teaching profession through the Ontario Colleges of Education should consult the Director for guidance in the selection of courses that would allow him to qualify for the Ontario High School Assistants Certificate, Type A or Type B.

ACADEMIC REGULATIONS

I. Admission Requirements
A 60% average on a full Grade XIII level program, including Mathematics 1 with a minimum of 60%, or equivalent Preliminary Year. Mathematics 2 and Mathematics 3 are strongly recommended, and for each of these which is lacking an extra hour per week of lectures must be added to the I Year program. (Math 1 - Functions & Relations; Math 2 - Calculus; Math 3 - Algebra).

Preliminary Year:
English 110 or 115 or option from Group A, B, or C (see p. E-16)
Mathematics 010, 020

Three options (Mathematics 030 strongly recommended).

For admission to First Year Computer Science an overall average of C is required.

II. General Regulations: see p. D-4.

III. Particular Regulations:

(a) Examination and Grading

All students are subject to the general regulations pertaining to examinations (see page D-12).

The grading for individual subjects is as follows:

A+, A, A— .... Excellent
B+, B .... Good
C+, C .... Fair
D+, D .... Pass
F, F— .... Failure

All grades below D are considered failures. If a student is permitted a supplemental examination, it will be so indicated.

(b) Academic Performance

A student registered in the School of Computer Science must obtain a grade of C or better in each compulsory Computer Science course. If he fails to do so on his first attempt, he may be allowed to repeat it once. If he fails to obtain a grade of C on his second attempt he will be required to withdraw from the School.

A full-time student who fails to obtain an average of 55% on his year's work will be allowed to continue for one year on probation, and will be allowed to retain credit in courses in which he obtained a grade of C or better.

A student on probation must obtain an average of 60% during his probationary year. If he succeeds the probation will be removed, if he fails he will be required to withdraw from the School.

A student who has been required to withdraw from the School will not be considered for readmission for a period of one year.

(c) Graduation

In order to be admitted to the Bachelor's degree, the student must have a grade of C in all compulsory Computer Science courses, and a cumulative average of 60% in the complete program. For general requirements see page D-14.

BACHELOR OF COMPUTER SCIENCE

Four-Year (Honours) Program

Note: Each student's program must be approved by the Director of the School prior to registration.

24 full courses (or equivalent in half-courses) including the following:

First Year

Math 113 or 115 (Calculus)
Math 120a or 121a (Linear Algebra)
Math 191b (Set Algebra)
C.S. 100 (Algorithmic Processes)*
1 of: Economics 102, Bus. Ad. 115 or 119
2 full course electives (or equivalent in half courses).

Second Year

Math 211 or 212ab (Calculus)
Math 251a or 253c (Statistics)
Math 240a (Finite Mathematics)
C.S. 201a (Assembly Language I)
C.S. 201b (Assembly Language II)
C.S. 231b (Data Structures)
2½ full course electives (or equivalent in half courses).

Third Year

Math 381c (Numerical Analysis)
C.S. 310 (Logical Design of Computers)
C.S. 332 (Operating Systems)
**3½ full course electives (or equivalent in half courses).

Fourth Year

C.S. 422 (Automata and Formal Languages)
C.S. 450 (Project)
†two full courses from
    C.S. 421 (Systems Theory)
    C.S. 431 (Language Processors)
    C.S. 301a (Simulation)
    C.S. 331b (Special Programming Languages)
    E.E. 425b (Computer Systems II)
    E.E. 433a (Analogue and Hybrid Computing)

2 full course electives (or equivalent in half courses).

*An advanced placement examination covering the material of this course may be offered. Students whose performance is sufficiently good may replace C.S. 100 with an elective.

**If a full year Computer Science course is chosen as one of these electives, a student will have at the end of this year the requirements for a three-year (General) degree.

†Not all of these courses will necessarily be offered every year.
In applying academic regulations, E.E. 425b and E.E. 433a are considered as C.S. courses.

The ten electives mentioned in the above program may be chosen from any credit courses offered by the University at the level of 100 or higher provided that the appropriate prerequisites have been obtained, and provided that they

include no more than four at the level of 100 and at least two at the level of 300 or 400. If specific prerequisites for a course are not listed in the Calendar, it is the responsibility of the student to ascertain from the Department concerned that he is adequately prepared to take the course.

If two or more courses cover essentially the same material, only one of them can be chosen as an elective.

Unspecified Option:	Any ten courses subject to the limitations above. Students not following one of the cognate programs listed below will be considered to be in this option.
Mathematics Option:	Ten courses subject to the limitations above, and including Math 220 (Linear Algebra) Math 311c (Real Analysis) Math 320 or 321 (Abstract Algebra) Math 340ab (Probability) Math 350 or 351 (Statistics) Math 480 (Numerical Analysis)
Computer Design Option:	Ten courses subject to the limitations above, and including G.E. 104b (Electricity and Magnetism) Math 217c (Functions of a Complex Variable) E.E. 200a (Electrical Networks and Systems) E.E. 202b (Circuit Analysis I) E.E. 205b (Elec. Materials & Devices I) E.E. 300b (E.M. Theory) E.E. 302b (Circuit Analysis II) E.E. 306 (Electronic Circuits) E.E. 407 (Control Theory) E.E. 409ab (Communications)
Business Option:	Ten courses subject to the limitations above, and including Bus. Ad. 115 (Accounting) Bus. Ad. 119 (General) Bus. Ad. 225b (Statistical Applications) Bus. Ad. 231 (Marketing) Bus. Ad. 251 or 260 (Accounting) Bus. Ad. 273 (Finance) Bus. Ad. 320ab (COBOL) Bus. Ad. 340a (Production Management I) Bus. Ad. 490 (Business Policy) Economics 222 or 232

Three-Year (General) Program

Note: Each student's program must be approved by the Director of the School prior to registration.

First Year
> Math 113 or 115 (Calculus)
> Math 120a or 121a (Linear Algebra)
> Math 191b (Set Algebra)
> C.S. 100 (Algorithmic Processes)*
> One of: Economics 102, Bus. Ad. 115 or 119
> Two full course electives (or equivalent in half courses)

Second Year
> Math 211 (Calculus)
> Math 251a or 253c (Statistics)
> C.S. 201a (Assembly Language I)
> C.S. 201b (Assembly Language II)
> C.S. 231b (Data Structures)
> Two full course electives (or equivalent in half courses)

Third Year
> Math 381c (Numerical Analysis)
> C.S. 332 (Operating Systems)
> Two C.S. courses
> One-and-a-half electives (or equivalent in half courses)

*An advanced placement examination covering the material of this course may be offered. Students whose performance is sufficiently good may replace C.S. 100 with an elective.

The electives mentioned in the above program may be chosen from any credit courses offered by the University at the level of 100 or higher provided that the appropriate prerequisites have been obtained and that they include no more than three at the level of 100. If two or more courses cover essentially the same material, only one of them can be chosen as an elective.

DETAILS OF SUBJECTS

Officers of Instruction:

Professor: E. W. Channen, Ph.D. (Director of the School)
G. E. Lasker, Ph.D.

Assistant Professors: T. B. Grandy, Ph.D.
B. Teiling, Ph.D.

(For details of courses other than those described below, see the listings of the appropriate Faculty or Department).

Not all courses listed below will necessarily be offered every academic year.

C.S. 100. Introduction to Computer Programming: An introduction to the concept of algorithms. Description of algorithms in flow charts. Conversion of flow charts to programs in the FORTRAN language. Emphasis is on problem solving. **(3 lectures a week).**

C.S. 101a. Fundamentals of Flowcharting and Fortran Programming I: This course provides a fundamental understanding of how to program a digital computer through the formulation and solution of problems in the Fortran Language. **(3 lectures a week, one semester; half course).**

C.S. 101b. Fundamentals of Flowcharting and Fortran Programming II: A continuation of C.S. 101a, extended to the use of Subprograms in Fortran and to non-numerical applications of the Computer. NOTE: C.S. 101a and C.S. 101b are designed primarily for students not intending to specialize in Computer Science, and can be used as a replacement for C.S. 100 in the Computer Science program only on the basis of performance. **(3 lectures a week, one semester; half course).**

C.S. 200c. Renumbered 300a in 1972.

C.S. 201a. Machine and Assembly Language Programming I: An introduction to the principles of operation of a digital computer and to methods of programming it in its own language or in an assembly language. (Prerequisite: One of: C.S. 100, 101ab or G.E. 200a). **(2 lectures, 2 tutorial hours a week, one semester; half course).**

C.S. 201b. Machine and Assembly Language Programming II: A continuation of C.S. 201a, extended to more advanced concepts. IBM S/360 Assembly language will be used. (Prerequisite: C.S. 201a). **(2 lectures, 2 tutorial hours a week one semester; half course).**

C.S. 231b. Information Structures: An introduction to the abstract structural qualities of information itself, and to methods of representing and using these in a computer; lists, trees, etc. (Prerequisite: one of C.S. 100, 101ab or G.E. 200a). **(3 lectures a week, one semester; half course).**

C.S. 300a. [200c] Computer Programming: Introduction to FORTRAN programming and its application to numerical techniques. Not available for credit in the Computer Science program. (Prerequisite: Math 115 or consent of instructor). **(3 lectures a week, one semester; half course).**

C.S. 301a. Simulation and Simulation Languages: An introduction to discrete and continuous simulations of physical systems, and special languages used for this purpose. (Prerequisite: C.S. 231b, Math 211). **(2 lectures, 2 laboratory hours a week, one semester; half course).**

C.S. 310. Logical Design of Digital Computers: Design of combinational and sequential switching circuits. Boolean Algebra. Simplification of switching functions. Computer organization and control. Arithmetic unit, memory and input/output. Interrupts. **(2 lectures, 2 laboratory hours a week).**

C.S. 331b. Specialized Computer Languages: An introduction to a number of specialized computer languages, including those intended for list processing and string manipulations. (Prerequisite: C.S. 231b). **(2 lectures, 2 laboratory hours a week, one semester; half course).**

C.S. 332. Operating Systems: An introduction to the function and structure of operating systems; introduction to time-sharing systems. (Prerequisite: C.S. 231b). **(2 lectures, 2 laboratory hours a week).**

C.S. 421. System Theory: The concept of general system. State-space representation of the system. Modeling and simulation of system behaviour. Adaptive systems. Modeling and simulation of system interaction. Structural, functional and temporal analysis of system interaction. Information systems. Systems for dynamic detection. Pattern-recognition systems. Systems for computer diagnostics. (Prerequisite: C.S. 310). **(2 lectures, 1½ laboratory hours a week).**

C.S. 422. Theory of Automata and Formal Languages: Deterministic and probabilistic automata, Turing machines, other types of automata, languages and their representations, grammars and their relationships to automata. (Prerequisite: C.S. 231b and C.S. 310). **(2 lectures, 1½ laboratory hours a week).**

C.S. 431. Language Processors: An introduction to language translators and interpreters. Methods of implementation. (Prerequisite: C.S. 231b). **(2 lecture hours, 2 laboratory hours a week).**

C.S. 450. Project: A project in the area of Computer Science will be chosen, subject to faculty approval, by the student who will make a literature survey, design and test the project, and present a written report upon which he will be orally examined. The project work will be supervised by a member of the faculty. **(Full course).**