UNIVERSITY OF WESTERN ONTARIO

LONDON - CANADA



FACULTY of ARTS and SCIENCE



UNIVERSITY COLLEGE
HURON COLLEGE
URSULINE COLLEGE
ST. PETER'S and
CHRIST THE KING COLLEGES
WATERLOO COLLEGE
MUSIC TEACHERS' COLLEGE

ANNOUNCEMENT 1956 - 57

THE VALUE OF A UNIVERSITY

"There are few earthly things more splendid than a University. . . . Wherever a University stands, it stands and shines; wherever it exists, the free minds of men, urged on to full and fair enquiry, may still bring wisdom into human affairs.

"There are few earthly things more beautiful than a University. It is a place where those who hate ignorance may strive to know, where those who perceive truth may strive to make others see; where seekers and learners alike banded together in the search for knowledge, will honour thought in all its finer ways, will welcome thinkers in distress or in exile, will uphold the dignity of thought and learning and will exact standards in these things. They give to the young in their impressionable years the bond of a lofty purpose shared, of a great corporate life whose links will not be loosed until they die. They give young people the close companionship for which youth longs, and that chance of the endless discussion of the themes which are endless, without which youth would seem a waste of time."

—JOHN MASEFIELD, *in an address at the University of Sheffield.*

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THE WHOLE UNIVERSITY

THE FACULTIES, SCHOOLS AND COLLEGES

The University of Western Ontario is composed of the following units: The Faculty of Arts and Science (University College), the Faculty of Medicine, the Faculty of Graduate Studies, the School of Nursing, and the School of Business Administration. Affiliated with the University are the following colleges: Ursuline College, London (Arts); St. Peter's Seminary and Christ the King Colleges, London (Arts); Huron College, London (Theology); Music Teachers' College, London (Arts and Music); Waterloo College, Waterloo (Arts). Music Teachers' College also supervises the work of the Western Ontario Conservatory of Music.

A BRIEF HISTORY

Western University, through the efforts of the Bishop of the Diocese of Huron of the Church of England in Canada, received its charter from the Legislature of the Province of Ontario in 1878. In 1923, by Act of the Provincial Legislature, its name was changed from "Western University" to "The University of Western Ontario." By the Act of 1955 its powers were further defined.

The first classes graduated in Arts and in Medicine in 1883.

The Medical School has maintained an unbroken existence since it was first opened. In 1912 control by a joint stock company ceased and it became the Faculty of Medicine, under the direct control of the same Board of Governors as the rest of the University. In 1921 it occupied its present buildings.

The Faculty of Arts, for financial reasons, was forced to close from 1885 to 1895. Revived in the latter year, it was for some time compelled to struggle for existence, but in 1908 its charter was so amended that it became undenominational and was permitted to receive financial assistance from the London City Council. Later, when the student body had increased to such an extent that local finances could not possibly meet the demands, the Province assumed part of the load of current expense. The Kingsmill property, about 260 acres, north of the City of London, was bought, buildings were erected, and the Faculty of Arts was moved to the present location in 1924. In 1943 it was re-named the Faculty of Arts and Science.

The Institute of Public Health was opened in 1912 in a building erected and equipped by the Government of the Province of Ontario and given to the University. In 1917 it became the Faculty of Public Health, the first independent Faculty of Public Health of any University in the British Empire; in 1946 one section of it became a Provincial Laboratory and the other section the University School of Nursing, which moved to the north campus in 1951.

In 1947 a separate Faculty of Graduate Studies was first created, although masters' degrees in Arts, Science, Medicine and Business Administration had been conferred for many years.

The School of Business Administration was not formally founded until 1950, although Business Administration as a major course had been offered in the Faculty of Arts from 1920 to 1950.

THE LIBRARIES

Since sound learning is impossible without good books, the library is basic in a university. There are two libraries at the University of Western Ontario, the general library and the medical library, as well as two special reading rooms in the Science Building and the School of Business Administration, respectively. All divisions use the Library of Congress system of classification.

The main collection of books, amounting to 172,000 volumes, is housed in the Lawson Memorial Library building, erected in 1934. The Medical School library consists of approximately 50,000 volumes. Thus the combined libraries now contain 222,000 volumes.

Although this is a fairly large collection, which compares favorably in point of numbers with other university libraries in Canada, the number of volumes is not the best criterion of a library's value. The quality of the books on the shelves, their accessibility and condition, the policy of selection, the number of current literary and scientific journals, and the reading room accommodation are the real standards by which to judge a library. In most of these particulars the University libraries rank high. Few volumes are on the shelves without a good reason. Book purchases are subject to a rigorous selection policy which takes into account both immediate and prospective value. In the general library there is space for nearly three hundred students, and over 300,000 volumes. Third year Honors and all fourth year students may secure permits to enter the stacks on the recommendation of their professors.

It is impossible for a university library to make exhaustive collections of all kinds of printed material. In some respects, however, the libraries of the University of Western Ontario are outstanding. The general library is conspicuously rich in Canadiana, Americana, and books relating to Shakespeare. The nucleus of this material came as a gift in 1918 from the late Dr. John Davis Barnett. The Regional Collection of local history contains much material valuable for graduate work in history and economics. There are also important newspaper files, and a large number of early agricultural journals, as well as printed and manuscript sources of the social and religious history of Canada. The Medical School library is particularly rich in medical journals and has an extensive collection in the field of medical history.

THE DEGREES OFFERED

By its charter the University of Western Ontario may confer degrees in Arts, Medicine, Science, Dentistry, Agriculture, Law, Education, Music, and Theology, upon persons who, having complied with the requirements are admitted to such degrees by the Senate.

The degrees at present conferred by the University are:

1. Honorary Degrees: *Doctor of Divinity; Doctor of Science; Doctor of Laws; Doctor of Letters; Doctor of Music; Doctor of Civil Law.

2. Degrees by examination: Bachelor of Arts (B.A.); Bachelor of Science (B.Sc.); Bachelor of Science in Nursing (B.Sc.N.); *Bachelor of Divinity (B.D.); Master of Arts (M.A.); Master of Laws (LL.M.); Master of Science (M.Sc.); Master of Clinical Science (M.Cl.Sc.); Master of Business Administration (M.B.A.); Doctor of Medicine (M.D.) *Doctor of Divinity (D.D.); Doctor of Philosophy (Ph.D.).

The diplomas awarded by the University are:

Diploma in Business Administration; Diploma in Journalism; Diploma in Public Health Nursing (D.P.H.N.); Diploma in Nursing Education (D.N.E.); Music Graduate in Paedagogy (Mus. G. Paed.).

*The degrees so indicated are conferred by the University only on the recommendation of an affiliated theological college. The degree of Doctor of Divinity by examination is under the jurisdiction of the Board of Theological Colleges of the Church of England in Canada.

The Board of Governors

Ex officio Members:

THE CHANCELLOR, THE PRESIDENT, THE VICE-PRESIDENT, HIS WORSHIP THE MAYOR OF LONDON, THE WARDEN OF THE COUNTY OF MIDDLESEX.

Appointed Members:

By The Lieutenant-Governor-in-Council: MR. W. L. DUFFIELD, MR. E. P. DIGNAN, LIEUT.-COL. D. B. WELDON, M.C., MR. W. H. HEMPHILL.

By the London City Council: LIEUT.-COL. GORDON INGRAM, LIEUT.-COL. J. E. SMALLMAN, LIEUT.-COL. J. GORDON THOMPSON, MR. JOSEPH JEFFERY.

By the Board of Governors: MR. LOUIS L. LANG, MR. C. F. STEVENS, LIEUT.-COL. GEORGE W. LITTLE, DR. A. R. FORD.

By the Alumni Association: MR. CLAUDE MCCALLUM, DR. J. T. BOWMAN.

Officers of the Board

DR. A. T. LITTLE,	*Chairman Emeritus*
LIEUT.-COL. GORDON INGRAM,	*Chairman*
LIEUT.-COL. D. B. WELDON,	*Vice-Chairman*
MR. ROSS B. WILLIS,	*Secretary*

The Senate

Officers of the Senate:

The President and Vice-Chancellor (Chairman), the Vice-President (Vice-Chairman), the Registrar (Secretary).

Ex officio Members:

The Chancellor, the Dean of each Faculty and School of the University, the Principal of University College, the Principal or other head of each affiliated college, the Chairman of the Board of Governors, the Librarian, the Director of the Summer School and Extension Department, the Director of the French Summer School, the President of the General Alumni Association (or his deputy).

Elected or Appointed Members:

Ten representatives of the General Alumni Association.

Six representatives of the City of London (three appointed by the City Council, two by the Board of Education, and one by the Separate School Board).

Four representatives, to be elected from their own number by the Principals of the Secondary Schools in the fourteen counties of Western Ontario listed below.

The following number of representatives of each Faculty and School of the University (in addition to its Dean): The Faculty of University College - three; the Faculty of Medicine - two; the Faculty of Graduate Studies - one; the School of Nursing - one; the School of Business Administration - one.

One representative of each of the following:

The Board of Governors; each affiliated college which offers a degree-program; each City Council and each County Council in the Counties of Brant, Bruce, Elgin, Essex, Grey, Huron, Kent, Lambton, Middlesex (except the City of London), Norfolk, Oxford, Perth, Waterloo and Wellington; the Graduates of each affiliated college.

UNIVERSITY OFFICERS

(Date of first appointment is given. Unless otherwise stated, the degrees are from the University of Western Ontario.

Visitor

HIS HONOR, THE LIEUTENANT-GOVERNOR OF ONTARIO, TORONTO, ONTARIO

Chancellor

RICHARD G. IVEY,
Q.C., LL.D. 1955

President and Vice-Chancellor

GEORGE EDWARD HALL,
B.S.A., Toronto, M.S.A., *ibid.*, M.D., *ibid.*, Ph.D., *ibid.*, D. ès Sc., Laval; F.R.S.C. 1944

Vice-President and Dean of Graduate Studies

RONALD ALEXANDER ALLEN,
B.A., Toronto, M.A., *ibid.*, Ph.D., Chicago. 1923

Comptroller

ROSS BAXTER WILLIS,
B.A., M.A. 1939

Librarian

JAMES JOHN TALMAN,
B.A., M.A., Ph.D., Toronto, F.R.S.C. 1939

Physician

HELEN MARGARET ROSSITER,*
M.B.Ch.B., Edinburgh, D.A., London. 1948

RICHARD JOHN BOWEN,**
B.A., M.D. 1956

Registrar

HELEN M. B. ALLISON,
B.A., M.A., Minnesota. 1924

Dean of Women

LEOLA ELLEN NEAL,
B.A., M.A., Ph.D., Toronto. 1933

Dean of Men

THOMAS LESLIE HOSKIN,
B.A., M.A., Northwestern. 1945

Director of Extension and Summer School Department

STAR FLOYD MAINE,
B.A., B.D., Victoria, M.A., Chicago, Ph.D., *ibid.* 1926

Assistant Librarians

LILLIAN REA BENSON,
B.A. 1934

*First term.

**Second term.

KATE M. GILLESPIE,
B.A., McGill. 1922

JOHN R. W. GWYNNE-TIMOTHY,
B.A., Toronto, M.A., *ibid.*, D. Phil., Oxford. 1953

Assistant Registrar

MARGARET P. MAY,
B.A. 1945

Curator of the Museum of Indian Archaeology
MR. WILFRID JURY

Honorary Curator of the Jeffery Stamp Collection
DR. HOWARD CROCKER

Honorary Curator of Art
MR. B. M. GREENE

Honorary Curator of Ceramics
MR. EMERSON NICHOLS

FACULTY OF ARTS AND SCIENCE

Dean
FRANK STILING, M.A., Ph.D.

UNIVERSITY COLLEGE

(*London, Ontario*)

Principal
FRANK STILING, M.A., Ph.D.

Secretary of the Faculty
PROFESSOR W. W. JUDD, M.A., Ph.D.

Representatives on the University Senate
PROFESSORS A. G. DORLAND, M.A., Ph.D., G. R. MAGEE, M.S., Ph.D., and R. W. TORRENS, M.A., Ph.D.

Representatives on the Athletic Directorate
PROFESSORS D. A. MCLARTY, Ph.D., J. W. BURNS, M.Sc.
MARY GILLESPIE, M.A., G. H. REAVELY, M.A.

UNIVERSITY COLLEGE FACULTY

1955-56

(The year of first appointment in the University is given. Unless otherwise indicated, the degrees have been granted by this University.)

BOTANY

Professors:

NELSON COLLINS HART, B.A. and M.A. Toronto, Head of the Dept. 1919
ANSON ROBERTSON WALKER, B.A. Queen's, M.A. Toronto (Plant Pathology) 1925

Associate Professor:

DUNCAN ARCHIBALD MCLARTY, B.A., Ph.D. Columbia 1943

Honorary Lecturers (part-time):

RALPH ANTHONY LUDWIG, B.S.A. and M.Sc. Alberta, Ph.D. McGill 1951
WILLIAM HAROLD MINSHALL, B.S.A. Toronto, M.Sc. and Ph.D. McGill 1951

Lecturer:

FRANKLAND SHAW COOK, B.A., Toronto 1952

Instructor:

JOHN K. JOHANNESEN, Diploma, Royal Agricultural College, Copenhagen (Plant Culture) 1950

Demonstrators:

ALFRED THOMAS BOLTON, B.Sc. and M.Sc. 1954
JOHN DOUGLAS LOCKREY, B.Sc. 1954

Graduate Fellow:

JOHN RUSSELL, B.Sc. Durham, Ph.D. London 1954

BUSINESS ADMINISTRATION

(Members of the School of Business Administration)

Professor:

JOHN JACOB WETTLAUFER, B.A. and M.B.A. 1950

Lecturer:

JOHN TREVOR NICHOLSON, B.S. Cornell, M.B.A. Harvard 1953

CHEMISTRY

Professors:

JOHN ABERDEEN GUNTON, B.A. and M.A. McMaster, Ph.D. Illinois, Head of the Dept. 1923
JAMES WENDEL BURNS, B.Sc. New Brunswick, M.Sc. Queen's (Organic Chemistry) 1922
HUBERT MARTIN, M.Sc. and D.Sc. London, Honorary (part-time) 1951

Associate Professors:

KENNETH WILLIAM HUNTEN, B.A. Bishop's; B.Sc., M.Sc. and Ph.D. McGill 1928

FREDERICK LEWIS MAITLAND PATTISON, B.A., M.A. and Ph.D. Cantab. 1948
CHRISTIAN SIVERTZ, B.Sc. British Columbia, M.Sc. and Ph.D. McGill 1926
JAMES KEITH WATSON, B.A. McMaster, M.A. and Ph.D. Toronto 1937

Honorary Lecturers (part-time):

CHARLES R. ENGEL, D.Sc. Swiss Fed. Inst. Tech. 1951
ELVINS SPENCER, M.Sc. Alberta, Ph.D. Toronto 1951
DAVID MILROY MILLER, B.Sc. and M.Sc. Alberta, Ph.D. McGill 1955

Lecturer:

ARMAS JOHN SUKAVA, B.Sc. and M.Sc. Manitoba, Ph.D. McGill 1954

Demonstrators:

WILLIAM ARTHUR SAUNDERS, B.Sc. McGill 1954
HENRY SCHNEIDER, B.Sc. Sir George Williams 1955

Fellows and Scholars:

EDGAR ALFRED FRANCIS BOWDEN, B.Sc. London, D.I.C. and Ph.D. Imperial College, London; WILLIAM JOHN COTT, B.Sc.; JAMES FREDERICK CHARLES MILLIER, B.Sc.; WILLIAM HAROLD STOVER, B.Sc.; ROBERT GRAHAM WOOLFORD, B.Sc. 1955
ROBERT HARRIS PALLEN, B.Sc. Sir George Williams, M.Sc. 1954

Research Assistants:

WALTER WARREN HUCULAK, B.Sc. Manitoba; GEORGE JUST, Diploma, Fed. Inst. Tech., Zurich; ALBERT AUGUST LANG, B.Sc. Sir George Williams 1955

CLASSICS
(Greek and Latin)

Professors:

JOHN DANBY RALPH, B.A. Queen's, Ph.D. Chicago, Head of the Dept. 1925
ROBERT EDWARD KINGSDOWN PEMBERTON, M.A. Oxon. 1926

Associate Professor:

ALFRED ERNEST RAYMOND, B.A.; M.A. Toronto, Ph.D. Chicago 1944

ECONOMIC AND POLITICAL SCIENCE

Professors:

MARK KEITH INMAN, B.A. Acadia, M.A. and Ph.D. Harvard, Head of the Dept. 1929
WALTER BENNETT HARVEY, B.A., M.A. and LL.B. Manitoba, Ph.D. Chicago 1938
EDWARD ERNEST REILLY, B.S.A., Toronto, M.S. Wisconsin 1926

Associate Professor:

DAVID IVOR, B.A. and M.A.; Ph.D. London 1946

Lecturers (part-time):

JOHN ROWLAND WILLIAM GWYNNE-TIMOTHY, B.A. and M.A. Toronto, D. Phil. Oxon. 1953
ARTHUR GORDON HUSON, B.Sc. (Econs.) London) 1953
ELEANOR GRAVES TORRENS (Mrs. R. W.), A.B. and M.A. North Carolina 1945

Instructors:

KENNETH JOHN DUNCAN, B.A. and M.A. Toronto 1954
JOHN EDGAR KERSELL, B.A. and M.A. Queen's 1954
STEVE GABRIEL PEITCHINIS, B.A. and M.A. 1955

ENGINEERING SCIENCE

Professor:

LYMAN STUART LAUCHLAND, B.A.Sc. and M.A.Sc. Toronto 1954

Instructor:

MELLOR P. POUCHER, B.Sc., M.Sc. and D.I.C., London 1954

ENGLISH

Professors:

CARL FREDERICK KLINCK, B.A.; M.A. and Ph.D. Columbia, (Canadian Literature) 1928
ALFRED BRANDON CONRON, B.A. and M.A.; A.M. and Ph.D. Harvard, D.S.O. 1946
MALCOLM HUGH MURDOCH MACKINNON, B.A., M.A. and Ph.D. Toronto; Chairman of the Dept. 1946

Assistant Professors:

WILLIAM ERIC DUNCAN ATKINSON, B.A. Cantab., Ph.D. Chicago 1945
GEORGE E. BUCKLEY, B.A. Mt. Allison, M.A. Columbia 1946
JOHN WHICHELLO GRAHAM, B.A. Manitoba, M.A. and Ph.D. Toronto 1949

Lecturers:

IAN ARNOLD MCDONALD, B.A. Sask., M.A. Northwestern 1948
JOHN REIDY, B.A. and M.A. London 1949
FRANK STILING, B.A. McMaster; M.A.; M.A. and Ph.D. Michigan (part-time); Dean of Arts and Science; Principal of University College 1928

Instructors:

JANICE DOUGALL FERGUSON (Mrs. D. A.), B.A. (part-time) 1955
RICHARD FREDERICK KENNEDY, B.A. Assumption (part-time) 1955
HUGH REID MACCALLUM, B.A. and M.A. Toronto (part-time) 1955
CLIFFORD EARLE SANBORN, B.A. and M.A. Toronto 1948
ROSS GREIG WOODMAN, B.A. British Columbia, M.A. Manitoba (on leave) 1950

Graduate Assistant:

MORLEY SPEIGEL, B.A. Manitoba 1955

(For **FRENCH**, see **ROMANCE LANGUAGES**)

GEOGRAPHY

Professor:

EDWARD GUSTAV PLEVA, B.A., M.A. and Ph.D. Minnesota, Head of the Dept. 1938

Associate Professor:

ROBERT WILFRED PACKER, B.A. and M.A. Cantab., F.R.G.S. 1949

Instructors:

ALLAN JONES BARKER, B.A.; M.A. Wisconsin (part-time) 1951
PAUL MARTIN LOUIS BRUER, B.A.; M.A. Illinois (part-time) 1955
OSMUND PER LANGTVET, C. Phil. Oslo 1953

Preceptor:

STEPHEN ROUSSEL BYLES, B.A. Toronto 1953

Graduate Assistants:

MARGARET ELIZABETH BELL, B.A., ROBERT FERRIS FLEMING, B.A., WILLIAM DONALD GRAY, B.A. 1954
DOUGLAS EUGENE LONG, B.A. 1955

GEOLOGY

Professor:

GEORGE HAROLD REAVELY, B.A. and M.A., D.I.C. London, Head of the Dept. 1928

Associate Professor:

GEORGE GORDON SUFFEL, B.Sc. and M.Sc. Queen's, Ph.D. Stanford 1946

Assistant Professors:

ALEKSIS DREIMANIS, M. Nat. Sc. Riga 1948
ROBERT JAMES UFFEN, B.A.Sc. and M.A. Toronto; Ph.D.; P. Eng. 1950

Lecturer:

CHARLES GORDON WINDER, B.Sc.; Ph.D. Cornell 1953

Preceptor:

J. P. PAUL SAWYER, B.Sc. Manchester 1955

GERMAN

Professor:

HERBERT KARL KALBFLEISCH, B.A.; A.M. New York, A.M. and Ph.D. Michigan, Head of the Dept. 1931

Lecturers:

RONALD ALEXANDER ALLEN, B.A. and M.A. Toronto, Ph.D. Chicago, (part-time); Dean of Graduate Studies; Vice-President of the University 1923
SHALOM WEYL, B.A. Cologne, M.A. McGill, Ph.D. Toronto 1946

For **GREEK**, see **CLASSICS**

HEALTH

The University Physician:
RICHARD JOHN BOWEN, B.A., M.D. 1955

For **HEBREW**, see Huron College

HISTORY

Professor:
ARTHUR GARRATT DORLAND, B.A. Queen's, M.A. Yale, Ph.D. Toronto, F.R.S.C., Head of the Dept. 1920

Associate Professors:
WALTER BALDERSTON, B.A. and Ph.D. Cornell 1945
HARTLEY MUNRO THOMAS, B.A. Queen's, M.A. and Ph.D. Harvard 1931

Lecturers (part-time):
JOHN ROWLAND WILLIAM GWYNNE-TIMOTHY, B.A. and M.A. Toronto, D. Phil. Oxon. 1953
STAR FLOYD MAINE, B.A.; B.D. Victoria, M.A. and Ph.D. Toronto; Director of Extension and Summer School Dept. 1926
ALFRED ERNEST RAYMOND, B.A.; M.A. Toronto, Ph.D. Chicago 1944
JAMES JOHN TALMAN, B.A. and M.A.; Ph.D. Toronto, F.R.S.C.; University Librarian 1939

For **HOME ECONOMICS**, see Ursuline College

For **ITALIAN**, see **ROMANCE LANGUAGES**

JOURNALISM

Professor:
JOHN LESLIE WILD, B.A., Head of the Dept. 1947

Associate Professor:
ISABEL TURNBULL DINGMAN (Mrs. J. J.), B.A. and M.A. Manitoba 1948

Lecturers (part-time):
RANDOLPH JOHN CHURCHILL 1946
JOHN KERR ELLIOTT, B.A. 1946
ARTHUR RUTHERFORD FORD, B.A. and LL.D. Toronto 1946
ORLO MILLER 1953
EARL HUBERT SLATER, B.A. Toronto, Barrister-at-Law, Osgoode 1951
JAMES JOHN TALMAN, B.A. and M.A.; Ph.D. Toronto, F.R.S.C.; University Librarian 1939
C. ROBERT TURNBULL 1952

For **LATIN**, see **CLASSICS**

LIBRARY SCIENCE

Lecturers (part-time):

OLGA BISHOP, B.A. and M.A. Mt. Allison; B. Pub. Admin. Carleton; A.M.L.C. Mich. 1953
CATHERINE CAMPBELL, B.A. 1923
CAROLINE MACKENZIE, B.A. Sask., B.L.S. McGill 1951
JAMES JOHN TALMAN, B.A. and M.A.; Ph.D. Toronto, F.R.S.C.; University Librarian 1939

MATHEMATICS AND ASTRONOMY

Professors:

GORDON RICHEY MAGEE, B.A.; M.S. and Ph.D. Chicago, Head of the Dept. 1927
RANDAL HUDIE COLE, B.A.; M.A. and Ph.D. Wisconsin 1940
ARTHUR WOODS, B.A. and M.A. Queen's 1920

Assistant Professor:

GEORGE PHILIP HENDERSON, B.A., M.A. and Ph.D. Toronto 1948

Instructor:

ARWEL EVANS, B.Sc. Swansea, M.Sc. Wales 1954

Graduate Fellow in Astronomy:

WILLIAM H. WEHLAU, A.B. and Ph.D. California 1955

For **MODERN LANGUAGES**, see **ROMANCE LANGUAGES**

For **MUSIC**, see Music Teachers' College

PHILOSOPHY

Professor:

ALLISON HEARTZ JOHNSON, B.A. Mt. Allison, M.A. and Ph.D. Toronto, Head of the Dept. 1937

Lecturers:

JOHN ANDREW BRUCE, B.A. and M.A.; Ph.D. London 1952
HAROLD JOSEPH JOHNSON, B.A. Alfred 1950

Instructors:

WILBERT CAMERON HENRY, B.A. and M.A. 1952
PERRY RONALD ROBINSON, B.A. and M.A.; Ph.D. London 1954

Graduate Assistants:

JAMES ROBERT HORNE, B.A. 1955
FORSYTHE GEORGE TODD, B.A. 1955

PHYSICAL, HEALTH, AND RECREATION EDUCATION

Professor:

EARLE FREDERICK ZEIGLER, A.B. Bates, A.M. and Ph.D. Yale, Head of the Dept. 1949

Assistant Professors:
JOHN RUSSELL FAIRS, B.Sc.; M.A. Columbia 1947
WILLARD JOSEPH L'HEUREUX, B.A.; M.A. Michigan 1950

Lecturers:
ELFRIDA KUKAINIS (Mrs.), M.M. Riga 1952
MICHAEL YUHASZ, B.A.; M.S. Illinois 1954

Lecturers (part-time):
THEODORE HENRY COFFEY, D.P.E. Harvard, M.D.C.M. Queen's 1948
WILLIAM JOHN PILLSWORTH, B.A.; M.A. New York 1951

Instructors:
ELIZABETH ANNE ALLAN, B.P.H.E. Toronto 1954
CATHERINE MILES EASUN (Mrs. R. N.), B.A. 1954
MURRAY MCNIE 1948

PHYSICS

Professors:
AUSTIN DONALD MISENER, B.A. and M.A., Toronto, Ph.D. Cantab., F.R.S.C., Head of the Dept. 1949
RAY LEROI ALLEN, B.A. and M.A. Mt. Allison 1921
RAYMOND COMPTON DEARLE, B.A., M.A. and Ph.D. Toronto, F.R.S.C., M.B.E., Research Professor 1919

Associate Professors:
A. M. I. A. W. DURNFORD, B.A. and M.A.; Ph.D. Toronto 1930
ERIC BRANNEN, B.A. and M.A. Toronto, Ph.D. McGill 1949

Assistant Professors:
JOHN HENRY BLACKWELL, B.Sc. Melbourne; M.Sc. and Ph.D. (on leave) 1947
RALPH WILLIAM NICHOLLS, B.Sc. and Ph.D. London, A.R.C.S. 1948
ERIC HAROLD TULL, B.A.Sc. British Columbia; M.Sc.; P. Eng. 1945
ROBERT JAMES UFFEN, B.A.Sc. and M.A. Toronto; Ph.D.; P. Eng. 1950

Preceptor:
CHARLES MURRAY CARMICHAEL, B.Sc. and M.Sc. 1947

Research Associates:
RAYMOND HOWARD ADLINGTON, B.Sc. and M.Sc. 1953
WILLIAM ROSS JARMAIN, B.A. 1950
GEOFFREY V. MARR, B.Sc. and Ph.D. Manchester; DAVID ROBINSON, B.Sc. and M.Sc. Belfast 1954

Research Fellows:
CHRISTOPHER CROWE, B.Sc.; HARRY IAN SYMONS FERGUSON, B.Sc. and M.Sc.; DERK PLEITER, B.Sc. and M.Sc. 1953
MERRILL ARTHUR EDWARDS, B.Sc., New Brunswick; GERARD HEBERT, B.Sc. Ottawa; FARUQ AZIZ KHAN, B.Sc. and M.Sc. Dacca; RAYMOND HENRY LADU KOENIG, B.Sc. McMaster 1955

Demonstrator:
GEORGE WAUGH HUDSON, B. Eng. McGill 1955

For **POLITICS**, see **ECONOMIC AND POLITICAL SCIENCE**

PSYCHOLOGY

Professor:

GORDON HASLAM TURNER, B.A., M.A. and Ph.D. Toronto, Head of the Dept. 1955

Associate Professors:

LEOLA ELLEN NEAL, B.A.; M.A. and Ph.D. Toronto; (part-time); Dean of Women 1933

MARY JEAN WRIGHT, B.A.; M.A. and Ph.D. Toronto 1946

Lecturers:

CHARLES HART AHARAN, B.A. and M.A. (part-time) 1954

KINGSLEY GEORGE FERGUSON, B.A.; M.A. Toronto (part-time) 1945

EILEEN WILKIN, B.Sc. London 1955

Instructors:

JOHN ANDERSON WAINWRIGHT, B.A. and M.A. 1950

OTTO WEININGER, B.A. McGill, M.A. and Ph.D. Toronto 1954

Graduate Assistant:

HUBERT JOHN THURLOW, B.A. 1955

For **RELIGIOUS KNOWLEDGE**, see the Affiliated College section which follows this list

ROMANCE LANGUAGES
(French, Italian and Spanish)

Professors:

ROBERT WARREN TORRENS, B.S. Dartmouth, M.A. Harvard, Ph.D. Cornell, Head of Dept. 1944

HERBERT EDWARD JENKIN, B.A., London, D. ès L. Laval, F.R.S.A., Director of the French Summer School 1929

ADA DOROTHY TURVILLE, B.A.; M.A. and Ph.D. Columbia, *certificato della R. Universita di Firenze* 1925

Associate Professors:

WILLIAM EDWIN COLLIN, L. ès L. Toulouse, M.A. 1923

FRANCES KATHLEEN MONTGOMERY, B.A. and M.A.; *D. de l'U de Paris*

Lecturers:

LIONEL JACQUES SEYMOUR METFORD, B.A. and M.A. British Columbia, *D. de l'U de Paris* 1949

ROBERT NEWTON SHERVILL, B.A.; M.A. North Carolina 1946

Instructors:

MAXIMINO ALVAREZ, B.A. Valladolid (Spain) 1955

ISIDORE GOLDSTICK, M.A. and D. Paed. Toronto; (part-time) 1955

JEAN CROSS NEWMAN (Mrs. R.), B.A. McGill; A. M. RADCLIFFE, *D. de l'U,* Madrid; (part-time) 1951

Graduate Assistant:

DON RICHARD LUNNEY, B.A. 1955

RUSSIAN STUDIES

Lecturer (part-time):

MICHAEL LAWNIKANIS 1955

SECRETARIAL SCIENCE

Professor:

MARY HAMILTON GILLESPIE, B.A.; M.A. Columbia, Head of the Dept. 1935

Assistant Professor:

ELAINE WOODROW CHAPMAN (Mrs. C. B.), B.A. 1945

Instructor:

MRS. ROMA LUCILLE WALLER, B.A.; M.A. Columbia 1953

Assistant:

PAULINE GRIFFIN 1955

ZOOLOGY

Professors:

ANTHONY WILLIAM ALDRIDGE BROWN, B.Sc.F., M.A. and Ph.D., Toronto; M.B.E., Head of the Dept. 1947

HELEN IRENE BATTLE, B.A. and M.A.; Ph.D. Toronto 1924

Associate Professors:

WILLIAM WALLACE JUDD, B.A. McMaster; M.A.; Ph.D. Toronto 1950

DAVID MAXWELL SCOTT, B.Sc. and Ph.D. McGill 1951

Assistant Professor:

ROBERT HARVEY STINSON, B.A. McMaster, Ph.D. Toronto 1950

Honorary Lecturers (part-time):

WILLIAM CHEFURKA, B.Sc., Manitoba, M.S. Montana State, Ph.D. Harvard 1953

ROBERT WILLIAM FISHER, B.Sc. (Agr.) and Ph.D. McGill 1953

HECTOR ALEXANDER URQUHART MONRO, B.Sc. (Agr.) and M.Sc. McGill 1951

BEVERLEY NORTHCOTTE SMALLMAN, B.A. Queen's, M.A.; Ph.D. Edinburgh 1951

Preceptor:

BARBARA LOUISE SHAW, B.A. Mt. Allison, M.Sc. 1952

Graduate Demonstrators:

LUCY JARVIS CONNELL, B.Sc. New Brunswick; KAYE HAYASHIDA, B.A. McMaster; MARGARET CATHERINE MACNAUGHTON, B.Sc. New Brunswick; PERCIVAL MOUNT POWLES, B.A. McGill, B.Sc. 1955

THE AFFILIATED COLLEGES

HURON COLLEGE

(*London, Ontario*)
(Founded in 1863)

Principal
THE REVEREND W. R. COLEMAN, M.A., D.D.

Registrar
THE REVEREND R. K. HARRISON, M.Th., Ph.D.

MUSIC TEACHERS' COLLEGE

(*London, Ontario*)
(Founded and affiliated in 1945)

Principal
HARVEY ROBB

Registrar
MARJORIE THOMAS, B.A.

ST. PETER'S AND CHRIST THE KING COLLEGES

(*London, Ontario*)
(Founded in 1912; affiliated in 1923)

Rector
RT. REV. A. P. MAHONEY, P.A., V.G., LL.D.

Registrar and Dean of Arts
THE REVEREND L. A. WEMPLE, B.A., Ph.L.

URSULINE COLLEGE

(*London, Ontario*)
(Affiliated in 1919)

Dean
MOTHER M. ST. JAMES, M.A., LL.D.

Registrar
MOTHER M. MARINA, B.A.

WATERLOO COLLEGE

(*Waterloo, Ontario*)

President
J. GERALD HAGEY, B.A.

Dean and Registrar
THE REVEREND LLOYD H. SCHAUS, M.A., B.D.

FACULTY MEMBERS OF THE AFFILIATED COLLEGES

(The year of first appointment in the University is given. Unless otherwise indicated, the degrees have been granted by this University. "H" designates Huron College, "M" Music Teachers' College, "P" St. Peter's and Christ the King Colleges, "U" Ursuline College, and "W" Waterloo College.)

For **BOTANY**, see **SCIENCE**

BUSINESS ADMINISTRATION

Associate Professor:

HERMAN OLAF JOHAN OVERGAARD (W), B.A. Manitoba, M.S. Columbia 1947

Lecturers (part-time):

JONAS BINGEMAN (W), B.A. 1951
RONALD BUDDELL (W), B.A. Queen's, C.P.A. 1954

For **CHEMISTRY**, see **SCIENCE**

CLASSICS

Professor:

THOMAS R. HARRIS (H), B.A. Toronto, B.D. Union Theological Seminary, M.A. Columbia 1955

Assistant Professors:

JAMES ALLAN STEWART EVANS (W), B.A. Toronto, M.A. Yale 1955
ARTHUR BERNARD LITTLE (W), B.A. and B.D.; M.A. Toronto, S.T.M. and S.T.D Chicago Lutheran Seminary 1954

Lecturers:

FERGUS JOSEPH PATRICK LAVERTY (P), B.A. 1942
MOTHER M. ST. CATHERINE (U), B.A. 1945

Instructor:

JOSEPH PETER FINN (P), B.A.; Ph.D. Catholic U. of America 1953

ECONOMIC AND POLITICAL SCIENCE

(Economics, Politics and Sociology)

Professor:

MOTHER M. ST. MICHAEL (U), A.T.C.M.; B.A.; M.A. Catholic U. of America; Ph.L. and Ph.D. Laval 1938

Associate Professors:

FRANCIS GEOFFREY WADDINGTON ADAMS (W), B.A. and M.A. Toronto, Ph.D. Chicago 1953
HERMAN OLAF JOHAN OVERGAARD (W), B.A. Manitoba, M.S. Columbia 1947

MOTHER M. ROSANNA (U), A.T.C.M.; B.A.; M.A. Catholic U. of America; Assistant Registrar, Ursuline College 1935

Lecturers:

WILLIAM JOHN BLOWES (W), B.A. and M.A. 1955
GEORGE FREDERICK DURST (W), B.A. and B.D.; M.A. Toronto 1951
ALBERT BENJAMIN MCCONNELL (P) (part-time), B.Sc. Southern California 1955

ENGLISH

Professor:

MOTHER M. ST. JAMES (U), B.A. and M.A. Queen's; LL.D. 1925
FLORA ROY (W), B.A. and M.A. Sask. 1948

Associate Professor:

JAMES MCNAB CLARK (W), B.A. and M.A. Manitoba 1948

Lecturers:

ANTHONY JOSEPH DURAND (P), B.A. and M.A.; Ph.L. and Ph.D. Laval 1939
ANNA MARGARET EVANS (Mrs. W. D.) (W), B.A.; M.A. Toronto 1935
STANLEY EDWARD MCGUIRE (P), B.A.; M.A. Toronto 1956
GEORGE ELMORE REAMAN (W), B.A. Toronto, Ph.D. Cornell 1954

Instructors:

JAMES JOSEPH CARRIGAN (P and U), B.A.; S.T.L. and S.T.D. Montreal 1948
MOTHER MARY AGNES (U), B.A.; M.A. Toronto 1939
MOTHER M. ST. CATHERINE (U), B.A. 1945

GEOGRAPHY

Lecturers:

WILLIAM JOHN BLOWES (W), B.A. and M.A. 1955
GEORGE FREDERICK DURST (W), B.A. and B.D.; M.A. Toronto 1951
HERMAN OLAF JOHAN OVERGAARD (W), B.A. Manitoba, M.S. Columbia 1947

For **GEOLOGY**, see **SCIENCE**

GERMAN

Assistant Professor:

KURT NABERT (W), B.A. and M.A. Toronto 1951

Instructor:

MOTHER MARY AGNES (U), B.A.; M.A. Toronto 1939

HEBREW

Professor:

ROLAND KENNETH HARRISON (H), B.A., M.Th., and Ph.D. London, Registrar of Huron College 1949

Lecturers (part-time):

PAUL WILLIAM BROUSE (W), A.B. and B.D. Gettysburg 1955
LLOYD HENRY SCHAUS (W), B.A. and B.D.; M.A. Columbia, Dean and Registrar of Waterloo College 1947

HISTORY

Professor:

MOTHER M. MERCEDES (U), B.A. and M.A. 1930
JOHN GORDON ROWE (H), B.A. and B.D. Harvard, M.A. and Ph.D. Toronto, Dean of Residence at Huron College 1955

Associate Professor:

FRANCIS GEOFFREY WADDINGTON ADAMS (W), B.A. and M.A. Toronto, Ph.D. Chicago 1953

Lecturers:

PAUL EUGENE CRUNICAN (P), B.A.; M.A. Toronto 1956
GEORGE FREDERICK DURST (W), B.A. and B.D.; M.A. Toronto 1951
ANNA MARGARET EVANS (Mrs. W. D.) (W), B.A.; M.A. Toronto 1935

Instructor:

FRITZ WIEDEN (P) 1955

HOME ECONOMICS

Professor:

MOTHER M. DOMINICA, (U), B.A. and M.A. Toronto 1945

Associate Professor:

MOTHER M. ST. DOMINIC (U), B.Sc. Marywood 1946

Instructors:

MOTHER M. VICTORIA (U), B.Sc. Chestnut Hill 1949
ADELE MCEACHERN (U), B.Sc. St. Francis Xavier 1954
ISABEL PARK (U), B.A. and M.A. Toronto 1947

LIBRARY SCIENCE

Lecturers:

ANTHONY JOSEPH DURAND (P), B.A. and M.A.; Ph.L. and Ph.D. Laval 1939
DORIS IRENE LEWIS (Mrs. M. E.) (W), B.A. Toronto 1949
MOTHER M. ROSANNA (U), A.T.C.M., B.A.; M.A. Catholic U. of America 1935

MATHEMATICS

Assistant Professors:

HAROLD KENNETH ELLENTON (W), B.Sc. M.A. Toronto 1952
ALICE MARIE METZGER (W), B.A.; M.A. Queen's 1954

Lecturer:

JOHN JOSEPH BENSETTE (P), B.A.; M.A. Detroit 1955

Instructor:

MOTHER M. CARMELITA (U), B.A.; M.A. Notre Dame 1955

MUSIC

Professors:

HARVEY A. ROBB (M), D.D.S. Toronto, Principal of Music Teachers' College and the Western Ontario Conservatory of Music 1945

CLIFFORD POOLE and MARGARET PARSONS POOLE, Heads of the Piano Department in Music Teachers' College 1949

ALFRED ROSE, B.A., Head of the Voice Dept. of Music Teachers' College 1948

Lecturers:

JOHN COOK, A.R.C.M., F.R.C.O. 1954

ULRICH LEUPOLD (W), Ph.D. Berlin, Director of Music in Waterloo College 1945

PHILOSOPHY

Professors:

WILLIAM SPARKES MORRIS (H), B.A. Bristol, Ph.D. Chicago 1955

LESTER ALBERT WEMPLE (P), B.A.; Ph.L. Angelicum (Rome), Dean and Registrar of Christ the King College 1934

Associate Professors:

ANTHONY JOSEPH DURAND (P), B.A. and M.A.; Ph.L. and Ph.D. Laval 1939

MOTHER M. ST. MICHAEL (U), A.T.C.M., B.A.; M.A. Catholic U. of America, Ph.L. and Ph.D. Laval 1938

Lecturers:

OTTO WILLIAM HEICK (W), A.B. and D.D. Wittenberg; B.D. Hamma Divinity School; A.M. and Ph.D. Nebraska 1947

ROBERT BRUCE LANGEN (W) (part-time), B.A. and M.A. Toronto 1955

Instructors:

LEO JAMES FLYNN (U and P), B.A.; S.T.D. Angelicum (Rome), S.S.L. Biblical Institute 1936

ARNOLD FRANCIS LOEBACH (U and P), B.A.; J.C.L. Catholic U. of America 1950

WILLIAM JOSEPH RING (P), B.A.; Ph.L. Laval 1951

MARK JOSEPH WILDGEN (U and P), B.A.; Ph.L. Laval; S.T.L. Angelicum (Rome) 1949

PSYCHOLOGY

Associate Professor:

MOTHER M. ST. MICHAEL (U), A.T.C.M., B.A.; M.A. Catholic U. of America, Ph.L. and Ph.D. Laval 1938

Assistant Professor:

WILLIAM HAROLD BEXTON (W), B.A. McMaster, M.A. Sask., Ph.D. McGill 1954

Lecturers:

JOSEPH PETER FINN (P), B.A.; Ph.D. Catholic U. of America 1953
HENRY WILKES WRIGHT (W), B.A. and Ph.D. Cornell, LL.D. Manitoba 1953

Instructors:

MOTHER M. CARMELITA (U), B.A.; M.A. Notre Dame 1955
WILLIAM JOSEPH RING (P), B.A.; Ph.L. Laval 1951
MARK JOSEPH WILDGEN (P), B.A.; Ph.L. Laval, S.T.L. Angelicum (Rome) 1949

RELIGIOUS KNOWLEDGE

Professor:

THE RIGHT REVEREND ANDREW PARNELL MAHONEY (P), LL.D., Rector of St. Peter's Seminary 1920

Associate Professors:

JAMES JOSEPH CARRIGAN (U), B.A.; S.T.L. and S.T.D. Montreal 1948
GEORGE FRANCIS CHILDS (U), B.A.; J.C.B. Catholic U. of America, J.C.L. Angelicum (Rome) 1939
MOTHER M. ST. MICHAEL (U), A.T.C.M., B.A.; M.A. Catholic U. of America, Ph.L. and Ph.D. Laval 1938

Lecturers:

JOHN JOSEPH BENSETTE (P), B.A.; M.A. Detroit 1955
PAUL EUGENE CRUNICAN (P), B.A.; M.A. Toronto 1956
EUGENE PHILIP LAROCQUE (P), B.A.; M.A. Laval 1956
ULRICH LEUPOLD (W), Ph.D. Berlin 1945
LLOYD HENRY SCHAUS (W), B.A. and B.D.; M.A. Columbia, Dean and Registrar of Waterloo College 1947

Instructor:

MOTHER M. ST. CATHERINE (U), B.A. 1945

ROMANCE LANGUAGES

(French, Italian and Spanish)

Professor:

WILLIAM FRANCIS SIMPSON (P), B.A. and M.A. 1935

Associate Professors:

MOTHER M. ROSANNA (U), A.T.C.M., B.A.; M.A. Catholic U. of America 1935
JAMES BERNARD SANDERS (W), B.A. and M.A. Manitoba, *D. de l'U de Paris* 1954

Assistant Professor:

JAMES CUTHBERT MCKEGNEY (W), B.A.; M.A. Oregon 1955

Lecturers:

JEAN GRACE BRIGGS (Mrs. T.) (W), B.A. and M.A. Toronto 1955
EUGENE PHILIP LAROCQUE (P), B.A.; M.A. Laval 1956

SCIENCE

(Botany, Chemistry, Geology, Physics and Zoology)

Professor:

BRUCE WEYLER KELLEY (W), B.A. Queen's, M.Sc. Chicago 1946

Assistant Professor:

HAROLD KENNETH ELLENTON (W), B.Sc.; M.A. Toronto 1952

SECRETARIAL SCIENCE

Assistant Professor:

WINNIFRED ELVY BENO (W), B.A. 1947

Lecturer:

MARION BURGESS (W), B.A. 1955

For SPANISH, see ROMANCE LANGUAGES

THEOLOGICAL OPTIONS

Professors:

WILLIAM ROBERT COLEMAN (H), Professor of Divinity, B.A. and M.A. Toronto, B.D. and D.D. Wycliffe, S.T.M. Union Theological Seminary, F.R.S.A., Principal of Huron College 1952

WILLIAM THOMAS THOMPSON HALLAM (H), Professor of New Testament, B.A. Dalhousie, M.A. King's, B.D. Wycliffe, D.D. Emmanuel and Wycliffe, LL.D. Sask. 1949

THOMAS R. HARRIS (H), Professor of Religious Education, B.A. Toronto, B.D. Union Theological Seminary, M.A. Columbia 1955

ROLAND KENNETH HARRISON (H), Professor of Hebrew and Old Testament, B.A., M.Th. and Ph.D. London, Registrar of Huron College 1949

WILLIAM SPARKES MORRIS (H), Professor of Philosophy, B.A. Bristol, Ph.D. Chicago 1955

JOHN GORDON ROWE (H), Professor of Church History, B.A. and B.D. Harvard, M.A. and Ph.D. Toronto, Dean of Residence at Huron College 1955

Lecturers:

KENNETH GEORGE ANSDELL (H), Church Music 1954

ALICE L. GRAVES (H), Voice Culture 1949

JOHN LANCELEY HENDERSON (H), Liturgics and Church History, B.A. and B.D. 1954

JOHN GRAHAM LETHBRIDGE (H), Pastoral Theology, B.A. and B.D.; B.S.W. Toronto 1954

For ZOOLOGY, see SCIENCE

Calendar for 1956

JANUARY

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FEBRUARY

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MARCH

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APRIL

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MAY

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JUNE

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JULY

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AUGUST

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SEPTEMBER

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OCTOBER

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NOVEMBER

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DECEMBER

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Calendar for 1957

JANUARY

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FEBRUARY

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MARCH

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APRIL

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MAY

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JUNE

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JULY

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AUGUST

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SEPTEMBER

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OCTOBER

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NOVEMBER

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DECEMBER

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ACADEMIC CALENDAR

FACULTY OF ARTS AND SCIENCE, 1956-57

July 3, Tuesday	Summer Session begins.
August 2 and 3, Thursday and Friday	Supplemental examinations.
August 11, Saturday	Summer Session examinations end.
September 1, Saturday	Last day for receiving applications and certificates for the Winter Session.
September 4, Tuesday	Aptitude tests for prospective students without the full admission requirements.
September 17, Monday	Conference of the Faculties of all Arts and Science Colleges.
September 18, Tuesday	Registration of new students from Brant, Elgin,
8:30 to 12:30	Essex, Lambton and Middlesex Counties.
1:00 to 4:00	Physical examinations of the same students.
September 19, Wednesday	
8:30 to 12:30	Registration of new students from other centres.
1:00 to 4:00	Physical examinations of the same students.
8:00 p.m.	Official welcome and Faculty reception.
September 20, Thursday	Registration of second, third and fourth year Arts
8:30 to 12:00	and Science students from Brant, Elgin, Essex,
1:00 to 5:00	Lambton and Middlesex Counties, including physical examinations of new students.
	Prescribed meetings for new students.
September 21, Friday	Registration of second, third and fourth year Arts
8:30 to 12:00, 1:00 to 5:00	and Science students from other centres.
	Prescribed aptitude tests for all new students who have not already taken them.
September 24, Monday	Lectures begin for all students, graduate and undergraduate. (Graduate students may attend classes without registering until October 4.)
	Late charge of two dollars begins for undergraduates.
October 1, Monday	Last day of application for degrees and diplomas at the Autumn Convocation.
October 4, Thursday	Registration of graduate students.
October 8, Monday	Thanksgiving Day, holiday.
October 9, Tuesday	Last day of registration for full-time students, graduate and undergraduate; late charge of two dollars continues for all late registrants.
October 26, Friday	Autumn Convocation.
November 9, Friday	Remembrance Day ceremony.
December 19, Wednesday, 5 p.m.	Christmas vacation begins.

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January 3, Thursday	Lectures resume.
January 14, Monday	Second term begins.
March 7, Thursday	Founders' Day ceremonies.
April 13, Saturday	Second term classes close.
April 19, Friday	Good Friday; University buildings closed.
April 20, Saturday	Examinations begin in Arts and Science.
April 27, Saturday	Last day of application for degrees and diplomas at the Spring Convocation.
May 4, Saturday	Examinations end.
May 25, Saturday	Spring Convocation.

FEES

Fees are paid in full on registration day, but if necessary they may be divided after consultation with the Comptroller, into two instalments payable on the first day of each term. The extra charge for this division is $5.00. Students must pay their fees as above before attending any lectures or examinations, except by permission of the Dean of the Faculty and the Comptroller. No student shall be recommended for any diploma or degree until his tuition fees and other accounts owed to the University are paid.

The Board of Governors reserves the right to amend fees after the printing of this list.

Annual Tuition and Prescribed Accessory Fees

For FULL-TIME intramural undergraduate students

(this annual sum includes registration, regular examination and graduation fees, laboratory and microscope charges, University College Council, University Concert Series, Athletic Association, Thames Hall facilities and Students' Health Insurance and Health Service fees, for the following courses):

Business Administration (last two years)	$400.00
All first year students	375.00
Students in second and subsequent years in Honors courses in the Humanities and the Social Sciences (excluding Business Administration and P.H.R.E.)	335.00
Students in second and subsequent years in all other courses	375.00

(1) This sum is increased by $5.00 if payment is not made in one instalment.

(2) For DVA students these sums will be $385, $360 and $320, respectively, because Student Health Insurance and Health Services are not included.

For PART-TIME Students

Tuition—Intramural, each course including examination (laboratory fees extra)	$ 50.00
Tuition—Correspondence, *Extension, Summer School, each course, including examination	48.00
Half-course	24.00
Tuition—non-credit (non-refundable), each course	12.00
Laboratory and microscope fees, each science	10.00

Examinations

(Payable at time of application for any of the following):

Supplemental, each paper $5.00, maximum	$ 15.00
Presiding fee at an outside centre, each half-day	3.50
Graduate Record Examination (institutional plan)	5.00
Aptitude Test, at date other than September testing-period	3.00
Special examination, at date other than May or August, each paper	15.00

Late Registration

For intramural students only, including late physical examination	$ 2.00

Certificates

Evaluation of non-Canadian certificates for admission	$ 2.00
Transcript of record, each copy	1.00

Degrees and Diplomas

(Payable May 1st for Spring graduation, October 1st for Fall):

Degree of B.D.	$ 24.00

STUDENT EXPENSES

A statement of annual expenses can at best be approximate; purely personal items (*e.g.*, laundry, clothes) are not included in the summary below and in other items individual tastes may vary. The following is a suggestion only:

Tuition and incidental fees	$335.00 to $ 375.00
Board (32 weeks)	480.00 to 600.00
Books and supplies	60.00 to 80.00
	$875.00 to $1,075.00

*Payable in full during the first week in November; $1 extra is charged for each course if fees are divided into two instalments.

EXPLANATION OF COURSE-NUMBERS

A course whose number is lower than 10 is, in difficulty and weight, equal to a Secondary School Grade XII (Ontario) course in the same subject.

First year general courses are numbered between 10 and 19; they are, in difficulty and weight, equal to a Secondary School Grade XIII (Ontario) course in the same subject.

Second year general courses are numbered between 20 and 29; second year honors courses, between 200 and 299.

Third year general courses are numbered between 30 and 39; third year honors courses between 300 and 399.

Fourth year general courses are numbered between 40 and 49; fourth year honors courses, between 400 and 499.

In the General Course, 20 to 29 indicate introductory courses at the college level, called Junior courses; 30 to 49 indicate Senior courses.

A course whose number is followed by -a is given in the first term only; followed by -b, in the second term only; followed by --x is given in an affiliated college only.

A half course is one which meets less than two hours a week throughout the academic year, or less than four hours a week in one term.

REQUIREMENTS FOR B.A. AND B.Sc. DEGREES

For the general admission requirements, see page 107.

An applicant presenting the full requirements may expect to graduate with a General Course degree in three years, or with an Honors Course degree in four years, subject to the provisions of each course.

Every prospective Honors Course student enters Junior Group 1 *or* Junior Group 2 of the General Course, for one year. Every other student enters Junior Group 1 or Junior Group 2 or one of the specialized courses (II-VIII on pages 35-38).

The purpose of the Junior Group system is to postpone a freshman's decision regarding his course until the end of his first year, when he is more likely to choose intelligently than if his decision is made while he is still in the secondary school.

THE JUNIOR GROUPS

Junior Group 1

(a first year composed mainly of Mathematics and Science subjects)

Requirements for Admission: Grade XIII standing in English, Mathematics (three papers), French or German or Latin, Chemistry and Physics. For admission to Honors Biology, it is advisable to take Botany or Zoology (or both) instead of Trigonometry and Statics.

Subjects	*Subjects**
Chemistry 20	English 29
English 20	Health Lectures
Physics 20	Library Science
Three options from: Botany 20, Geology 20, Mathematics 24, Zoology 20	Physical Education
	*These are half-courses or less than half-courses, in weight

This group is the prerequisite of all the Honors Natural Science courses and Honors Mathematics and Physics. It is *one* of the Junior Groups acceptable for Honors Geography, Honors Mathematics, Honors Philosophy and Honors Psychology.

A student expecting to enter an Honors Course should consult the program of his proposed course before selecting his options in Junior Group 1.

Junior Group 2

Requirements for Admission: Grade XIII standing in English, Latin or Mathematics (any two of Algebra, Geometry, Trigonometry and Statics), and two of: History, Biology, Physical Science (Physics and Chemistry), Music, one or more languages other than English. In 1957 a Grade XIII language other than English will be essential for admission.

NOTE: If it is permitted by the Admissions Committee, a deficiency in one subject of Grade XIII may be made up, in the first year, through the completion of an appropriate University course.

Subjects
English 20
French 20 *or* another language 20
Latin 20 *or* Mathematics 20 *or* a Natural Science at the 20-29 level
Two of: Economics 20, History 20, Philosophy 20
One of: Business 20, Economics 20, Geography 20, History 20, Journalism 20, Mathematics 20, Music 20, Philosophy 20, Psychology 20, another language, another science.

*Subjects**
English 29
Health Lectures
Library Science
Physical Education

*These are half-courses or less than half-courses, in weight

(1) This group is the prerequisite of the following Honors Courses: Business Administration, Business Administration and Secretarial Science, Classics, Economic and Political Science, English and French, English and German, English and Latin, English and Philosophy, English Language and Literature, French and Latin, History, Journalism, Modern Languages, Psychology, and Honors Physical, Health and Recreation Education.

Junior Group 2 is acceptable for Honors Geography, Honors Mathematics (without Physics), Honors Philosophy, and Honors Psychology.

A student expecting to enter an Honors Course should consult the program of his proposed course before selecting his options in Junior Group 2.

(2) No Grade XIII or Junior Matriculation standing is to be allowed to substitute for a natural science in a Junior Group.

(3) No course numbered between 1 and 9 may be counted toward a degree unless followed by a second course in the same subject.

(4) Not more than one course from those numbered between 10 and 19 may be counted toward a degree in the General Course.

I. THE GENERAL COURSE WITH JUNIOR AND SENIOR DIVISIONS

(1) The Department of Education of Ontario accepts a degree in the General Course as the academic qualification for a High School Assistant's Certificate, Type B, for teaching in the elementary or secondary schools of Ontario.

(2) Any student who entered the University before September, 1954, may complete the old General Course or the new course (see next page). For details of the old General Course, see the Registrar's Office.

Senior Groups A and B (see page 32)

Group A follows Junior Group 1 (on previous page); Group B follows Junior Group 2 (above)

THE NEW GENERAL COURSE IN ARTS AND SCIENCE

JUNIOR AND SENIOR GROUP COURSES WHICH CONSTITUTE THE SEVENTEEN-COURSE PROGRAM

(Six full courses in each Junior Group, six in the second year, and five in the final year)

JUNIOR COURSES

DIVISION A

(The Humanities)

AT LEAST FOUR COURSES ARE TO BE SELECTED (three of which must be Senior Courses)

Departments

Classics:
- Greek 1, 10, 20, 29
- Latin 1, 10, 20

English 20
German 1, 10, 20
Hebrew 1-10 or 1 and 10, 20
Music 10, 20 or 20S
Philosophy 20
Romance Languages:
- French 10, 20
- Italian 1, 10, 20
- Spanish 1-10 or 1 and 10, 20

DIVISION B

(The Social Sciences)

AT LEAST FOUR COURSES ARE TO BE SELECTED (three of which must be Senior Courses)

Departments

Economic and Political Science:
- Economics 20
- Sociology 28

Geography 20
History 20
Psychology 20

SENIOR COURSES

Classics:
- Greek 30, 40
- Latin 30, 39, 40

English 32, 36, 38, 45, 49 (39, 46 under specific conditions)
German 22, 30, 40, etc.*
Hebrew 200, 30 (300), 40 (400)
Music 30
Philosophy 30, 31, 35, 36, 42, 43, 44, 47, 48, etc.* *OR***
Romance Languages:
- French 30, 40, 48, 270 or 271, 290, etc.*
- Spanish 30, 31, 40, 41, 250, 360*

Economic and Political Science:
- Economics 30, 33, 34, 44, 46, 257, 351a, 353, 355, 450, 453, 455
- Politics 32, 42, 351b, 452, 462b
- Sociology 38, 39x, 48, 49

Geography 30 (330), 35 (335), 39 (239), 40 (440), 44 (444), 45 (445)
History 31, 33, 35, 36, 44, 354b or 356a, and 30 (see the conditions below)****
Psychology 30, 35, 36, 38, 39, 46, 48, 49 (30 is for Science students only, and 38 is only for those who have had 35)

English 35 is acceptable as the one by English of taking as part of 2nd year Honors Program. M. M. K.

*Honors Courses by permission of the Head of the Department only.

**In the affiliated colleges, Philosophy 30x-36x, 42x-47x.

***If the prerequisites of the corresponding Honors courses have been satisfied.

****History 30 may not be taken by anyone who has credit for History 20 or 36 or 21 or 45, 46.

THE NEW GENERAL COURSE IN ARTS AND SCIENCE

JUNIOR AND SENIOR GROUP COURSES WHICH CONSTITUTE THE SEVENTEEN-COURSE PROGRAM

(Six full courses in each Junior Group, six in the second year, and five in the final year)

JUNIOR COURSES

DIVISION C

(The Natural Sciences)

AT LEAST TWO COURSES ARE TO BE SELECTED (one of which must be a laboratory Science)

Departments

Botany 20
Chemistry 20
Geology 20 or 21
Mathematics and Astronomy 20, 24, 29
Physics 20, 21
Zoology 20, 21, 24

DIVISION D

(Other Subjects)

These subjects may not be used as Major or Minor subjects and NOT MORE THAN TWO COURSES may be counted toward a General Course degree.

Departments

Business Administration 20
Home Economics 23, 24, 25, 26
Journalism 20
Military Studies
Physical, Health and Recreation Ed. 20
Religious Knowledge (in the affiliated colleges) 10x, 20x, 21x
Secretarial Science (not available for General Course students; those who have transferred from Secretarial Science to the General Course may count their two best courses from Secretarial Sc. 28, 29, 30, 36, 37, 38, 39)

SENIOR COURSES

Botany 31a, 32b, 33a, 36b, 43b, etc.*
Chemistry 32, 33, 44, 46
Mathematics 30, 33, 34, 35, 42, 45***
Physics 31, 41 etc.*
Zoology 34, 37, 41, 43, 45

Biblical Literature (Old or New Testament 40x)
Business Administration 250
Home Economics (not available for General Course students)
Journalism*
Physical Health and Recreation Ed. 251, 258, 266, 352, 353, 375, 382
Religious Knowledge (in the affiliated Colleges) 30x, 31x, 32x, 37x, 40x, 42x, 43x, 44x, 47x
Secretarial Science (not available for General Course students)

NOTE: Students who plan to enter professional Schools of Social Work must include Economics 20, Politics 32, Psychology 20 and Sociology 28 in their Arts programs.

The Senior Groups

When a student enters a Senior Group, he must select a Major and a Minor subject from the Humanities (Division A), the Social Sciences (Division B), or the Natural Sciences (Division C).

See the previous page for a complete list of the subjects in each Division.

After a student has selected his Major subject, he must consult with the Head of that Department regarding his choice of options. Some Heads of Departments will permit General Course students to do some Honors work.

The Major and the Minor subject may not be selected from the same Division nor from Division D. A Major subject consists of three (but not more than four) "Senior" options in one Department; a Minor subject consists of two "Senior" options in another Department and another Division.

Two of the Major options shall be taken in the final year. Either one or two Major options may be taken in the second year.

Senior Group A

(open to any student who has completed Junior Group 1)

Second Year

Subjects

French 20 or German 20 or Latin 20
Economics 20
One option from the Major subject (presumably from Division C)
One option from the Minor subject (presumably from Division A or B)
*One option from English (32, 36, 38, 45, 49), History 36, Philosophy 30 or 32, Psychology 30
Another option from the Major subject or a Senior option from any Division in which another is needed (see section 2 on the next page)

*All four subjects must be taken ultimately; if one of them is selected as a Minor subject, another ought to be taken as the sixth subject in the second year.

Third Year

The courses not selected previously from: Senior Group English, History 36, Philosophy 30 or 32, Psychology 30
Two options from the Major subject
One option from the Minor subject

Note: It may be necessary to take one more option (see section 2 on the next page). If you wish to take any work from Division D, you may do so, but only as an extra course.

Senior Group B

(open to any student who has completed Junior Group 2

Second Year

Subjects

One option from the Major subject
One option from the Minor subject
*English 32 or 36 or 45 or 49
**Two subjects not previously selected from: Economics 20, History 20 or 36, Philosophy 30, Psychology 20, a Laboratory course in Natural Science
Another option from the Major subject or a Senior option from any Division in which another is needed (see section 2 on the next page)

*This course may be counted as a Major or a Minor option in English. The student majoring in English must limit himself to two Senior English courses in the Second Year.

**All five subjects must be taken ultimately; if Phil. 20 was not selected in the Junior Group, Phil. 30 must be studied in the Senior Group.

Third Year

A Laboratory course in Science (unless both courses from Division C have been done, in which case a Senior option should be selected instead)
Two options from the Major subject
One option from the Minor subject
One option from Senior courses in any Division in which another is needed (see section 2 on the next page)

General Regulations Regarding the Whole Course

(1) If any course has been taken in a Junior Group, it may be counted once only towards a degree and will not count also in the Senior Group.

Edmonton University Women's Club Report of the Education Committee, 1956-57:

Manitoba Department of Education Examinations are marked on a curve

June 1956 Alberta Math 30 paper was definitely inferior in difficulty and scope to all the other senior matriculation papers. Trigonometry taught in a non-examination course, Math. 31, with credit given by the individual schools.

Biology - Grade XII content good, but text is poor

Classics - Latin cut to two meagre years; Greek entirely eliminated

Modern Languages - only French and German; French in Grade 9 is oral only - no text book. Grade XII Alberta comparable to Sr. Matric. in Sask. and Atlantic provinces.

German taught in only a few schools and begins in Grade 11.

Chemistry - as good as any - comprehensive background of organic & inorganic Chemistry; Physics - high also. Only a few students enrol in science courses and only University-bound students attempt these subjects in Grade XII. But these students are retarded by a lack of Mathematicalknowledge

Social Studies - compares favourably with Ontario and others.

English - not a good indication of fitness for University English.

see over

U.B.C. accepts Alberta Grade XI courses as junior matriculation, except in Latin and French where Grade XII Alberta is required

THE UNIVERSITY OF WESTERN ONTARIO
LONDON, CANADA

OFFICE OF THE REGISTRAR

(2) At least three Senior courses must be taken from Division A and three Senior courses from Division B. Two courses (one a laboratory course) must be taken from Division C. No more than two courses may be taken from Division D.

(3) No more than five courses may be taken from one Department (including Junior and Senior Group work). In English, five courses may be taken in addition to Public Speaking 29.

(4) Sometime before graduation in the General Course, there must be included in every program: Economics 20, History 20 or 36, a course (beyond the Grade XIII level) in a language other than English, a laboratory course in a natural science, Philosophy 20 or 30 (30 or 32 for Science Students), Psychology 20 (or 30 for Science Students), a Senior course in English to be selected from 32, 36, 38, 45, 49.

(5) Eight of the eleven courses of the two final years must be "senior" courses. At least six of them must be taken at this University (transfer credit from other colleges or universities cannot cancel these six).

(6) In the two final years, *an average of 60% must be obtained in the Major subject, with 60% in each of six courses* out of the eleven courses required in the Senior Group. The average in the work of the final year is also important.

II. GENERAL COURSE WITH SECRETARIAL SCIENCE OPTIONS

Second Year

The registrations in this year are limited in number. To secure admission students must present certificates of standing in Grade XIII English; one modern language (French preferred); Latin or Mathematics (two papers); and Biology or History or Music or Physics and Chemistry. Applicants with standing in five Grade XIII subjects (not papers) will be given a preference for admission. Students must clear all the courses of the second year before beginning any work of the third year.

Subjects	*Subjects*
Business 20	A survey course in Science
English 20, 29	One of: French 20, German 10 or 20, Spanish 20
Health Lectures	Secretarial Science 28, 29
Library Science	
Physical Education	

Third Year

Economics 20	One of: French 33, German 20 or 30, Spanish 30, 31
English 35	Secretarial Science 30, 37, 38, 39
Philosophy 30 or Psychology 20	

Fourth Year

English 32 or 38 or 49	One of: French 43, German 30, or 40, Spanish 40, 41
History 31	
Secretarial Science 47, 48, 49	

III. PRE-THEOLOGICAL GENERAL COURSE

Requirements for Admission: Secondary School Graduation Diploma, and Grade XIII (or equivalent) standing in English, History, and two of the following (one of which must be a language): Latin, French, Greek, German, Spanish, Music, Mathematics (any two) or Science (Botany and Zoology, or Physics and Chemistry).

This course leads to the degree of Bachelor of Arts and is the normal requirement for admission to the three-year course leading to the title of L.Th. from Huron College. If, however, a student wishes to take another course leading to a General or an honors degree, Huron College will give its consent. In such cases the students should include Greek 1, 10 and 35x in his undergraduate program.

For the substitution of two courses in place of Hebrew, the consent of the Board of Studies at Huron College is required.

Course numbers followed by "x" indicate a Theological Option approved by the University and taught by Huron College only.

Second Year

Subjects	*Subjects*
English 20, 29x	Philosophy 20 or 30
Greek 1	Psychology 20
Library Science	Geological Science 21 or Physical Science 21 or Biological Science 21
Physical Education	

Third Year

Economics 20	History 30
English 32 or 36 or 38	Philosophy 31 or 36
Greek 10	Psychology 36 or 39

Fourth Year

English 44 or 45 or 49	History 31 or 44
Greek 35x	Philosophy 42 or 47
Hebrew 1-10	Psychology 48 or 49

For the Huron College B.A. General Course with Theological Options (for those students over twenty-one years of age), see the Huron College section, page —.

IV. GENERAL COURSE WITH HOME ECONOMICS OPTIONS

Requirements for Admission: Secondary School Graduation Diploma (page 107).

This four-year course leading to a Bachelor of Arts degree in Home Economics is offered jointly by University College and Ursuline College. University College students in the course will take all their classes at University College except in Home Economics; Ursuline College students will take all their science courses in University College.

After the completion of the course, students may take dietetic interne training in institutions approved by the Canadian Dietetic Association for professional standing.

Students who have obtained 60% or more in the work of the fourth year may, if they enter the High School Assistants' Course of the Ontario College of Education, elect the supplementary course offered for Intermediate Home Economics certificates.

Grade XIII standing in English, French, Latin, Mathematics will cancel English 10, French 10, Latin 10, Mathematics 11. Grade XIII Chemistry, Botany, Zoology with Second Class standing will cancel Chemistry 11N, Botany 11N and Zoology 11N, which are essential for graduation in three years.

Home Economics and Chemistry courses must be taken in the order and the year designated.

First Year*

Subjects	*Subjects*
Botany 11N	Library Science
English 10, 29	Math. 11 or Latin 10
Chemistry 11N	Physical Education
French 10 or German 10 or Spanish 1-10	Zoology 11N
Health Lectures	

Second Year

Botany 36b	Home Economics 23x, 24x, 25x, 26x,
Chemistry 32a	Religious Knowledge 20x (for Ursuline College students only)
English 20	Zoology 24a
French 20 or German 20 or Spanish 20	

*In September, 1957, and perhaps before that time, students may not enrol in University College for any part of the first year which can be studied in Grade XIII classes or in one of the affiliated colleges.

Third Year

Chemistry 33
Economics 20
English 32 or 36 or 38
Home Economics 30x, 31x, 32x, 33x
Psychology 20

Fourth Year

Chemistry 46
Home Economics 40x, 41x, 42x, 45bx, 46x, 47x, 48x

V. GENERAL COURSE WITH MUSIC OPTIONS (See Pages 97-8)

VI. PREMEDICINE

Requirements for Admission: Grade XIII standing in English and Mathematics (Algebra and Geometry), French or German or Latin, Chemistry and Physics, Botany or Zoology, preferably both. If neither Botany nor Zoology is available, Trigonometry and Statics should be taken.

This University is not merely offering a training in Medicine as a technology, nor is it requiring a full academic degree for admission to Medicine. In common with most universities it has adopted a compromise course, which insists on some cultural background.

The Faculty of Medicine believes that while the science of Medicine is built on the physical and biological sciences, the art of Medicine is dependent on the humanities and the social sciences. For this reason these courses are rightly included as stepping stones and not merely as hurdles. When a medical student realizes this fact, he will derive greater benefit in medicine and a broader outlook on life in general, which is essential if he is to be successful in the broadest sense.

First Year

Subjects

Chemistry 20
English 20, 29
Health Lectures
Library Science
Physical Education
Physics 20
Zoology 20

Subjects

Two options from:
Botany 20
Economics 20
Geography 20
History 30
Mathematics 24
Philosophy 20
~~Sociology 20~~

Second Year

Chemistry 203M, 204M
English 33M
Mathematics 35
Physics 204M
Psychology 30
Zoology 200M

One option from (1956-57 list):
Botany 31a, 36b
Economics 20
Geography 20
History 30
Philosophy 30
Physics 251 (if Math. 24 is complete)
Sociology 28

On the completion of this program, those accepted by the Admissions Committee of the Faculty of Medicine must be prepared to register with the College of Physicians and Surgeons, and to submit a birth certificate for this purpose.

Any students who are not accepted for admission to Medicine proper may proceed, if their records are satisfactory, to one of the Honors Science courses, or to the General Course with Science options. On completion of the Honors third year or the General Course final year, they may again apply for admission to the Faculty of Medicine.

VII. ENGINEERING

Requirements for Admission: Grade XIII or equivalent standing in English, another language, Algebra, Geometry, Trigonometry and Statics, Physics and Chemistry, preferably with 66% average in Mathematics and Science.

For details of this course consult a separate pamphlet to be obtained from the Registrar's Office.

VIII. DEGREE COURSES IN NURSING

Leading to the degree of Bachelor of Science in Nursing (B. Sc. N.)

COURSE A

Requirements for Admission: Secondary School Graduation Diploma (page 107). and Grade XIII (or equivalent) standing in English, a foreign language (French preferred), Botany, Chemistry and Zoology (with 66% in the Science examinations).

The length of this course is approximately forty-eight months. It is made up of three parts as follows:

Part A: One academic year in the Faculty of Arts and Science:

Subjects	*Subjects*
Botany 36b	Health Lectures
Chemistry 32a	Library Science
Sociology 28	Physical Education
English 20, 29	Psychology 20
Language of Grade XIII continued	Zoology 24

Part B: Thirty-two continuous months in a hospital School of Nursing where there shall be a course that is in all its details approved by a Committee of which the Dean of the School of Nursing is Convener.

Part C: One academic year in the Graduate Division of the School of Nursing of this University. The student may choose the Public Health Nursing or the Nursing Education option. She must inform the Dean of the School of Nursing by June 30th of the option she has chosen for her final year's work.

No conditions may be carried from Part A to Part B, or from Part B to Part C, of this course without the written permission of both the Dean of the School of Nursing and the University Registrar.

COURSE B

(For Graduate Nurses Only)

Requirements for Admission:

(1) Secondary School Graduation Diploma (page 107) and Grade XIII (or equivalent) standing in English, one language (preferably French), and any four additional papers. Equivalent standing includes first year college courses available for adult special students over twenty-one years of age.

(2) Proof of graduation from a hospital School of Nursing in which the program of education and clinical experience is approved by a committee of which the Dean of the School of Nursing is Convener.

(3) Proof of registration as a graduate nurse in good standing.

(4) The completion of one academic year in one of the specialized professional programs (Public Health Nursing or Nursing Education) in this University's School of Nursing. Applicants who hold certificates or diplomas of specialized professional study at another University are required to complete one term (or semester) of study in this University's School of Nursing in addition to the Arts and Science subjects of the degree course.

Subjects	*Subjects*
Chemistry 11N or Botany 11N and Zoology 11N	Options (continued)
English 20, 29	English 36, 38
Language of Grade XIII continued	Geography 20
Physical Education	History 30, 31
Three courses (or the equivalent) from:	Journalism 20, 260, 355, 460
Sociology 28, 48 (if not chosen previously)	Politics 42a
	Psychology 20, 48, 49

HONORS COURSES

The Honors Courses in Biology, Chemistry, Chemistry and Physics, Geology, Physics, including Radio Physics, lead to the degree of Bachelor of Science (B.Sc.); other Honors Courses to Bachelor of Arts (B.A.).

Biology

Requirements for Admission: Junior Group 1, page 30, with an average of at least 60% in the Science subjects, and not less than 60% in Botany 20 and 60% in Zoology 20.

This course satisfies the academic requirements for the High School Assistant's Certificate, Type A, Science, of the Department of Education of Ontario. See page 113.

Second Year

Subjects	*Subjects*
Botany 250	Physics 204
Chemistry 200	Zoology 250
German 5 or Russian 1	One of: Economics 20
Mathematics 35 or 245a (the latter for those who have completed Math. 24)	English 32 or 35
	Philosophy 20
	Psychology 30

Third Year

For admission to the Third Year an average of 60% in the Biology of the Second Year and an average of 60% in all other subjects is required.

Subjects	*Subjects*
Botany 352a	Zoology 337, 350
Chemistry 303	Three of: Botany 354, 361, Zoology 354, 360b
German 35 or Russian 10	

Fourth Year

For admission to the Fourth Year an average of 60% in the Biology of the Third Year and an average of 60% in all other subjects is required.

(a) Botany Option

Subjects	*Subjects*
Botany 453a, 453b or 454b, 460, 461a, 466b, 452 (optional)	French 45
Chemistry 406	German 45 or Russian 45
	Zoology 455

(b) Zoology Option

Botany 453a or 453b or 466b	German 45 or Russian 45
Chemistry 406	Zoology 452, 453, 454, 455, 456, 460
French 45	One of: Zoology 462, 470

Business Administration

Requirements for Admission: Group 2, page 31, with at least 60% in Economics and 60% in Business.

This course leads to a Bachelor of Arts degree.

Credit is given by the Institute of Chartered Accountants for work done in this course.

Second Year

Subjects

Business 250 (Accounting)
English 35
Two of:
Economics 233, 257, 300, 346
Politics 232
Econ. Geog. 239

Subjects

Two courses (or the equivalent) from English 32, 36, 38, 44, French 20, 30, 33, 43, History 31, 35, 44, Philosophy 30 or 32, Psychology 20, 46, 49, Spanish 20, 30, 31, Religious Knowledge (one course at Waterloo College)

Third Year

Admission to the Third Year (the School of Business Administration) is by permission of the Dean. 60% in Business 250 and an average of 60% in the other subjects of the Second Year are required without conditions in any subjects of the first two years, unless exceptional circumstances are given exceptional treatment by the Dean.

Business 351 (Marketing)
Business 353 (Business Finance)
Business 354 (Production Management
Business 357 (Control)

One course (or the equivalent) chosen from the Humanities and the Social Sciences, as approved by the Dean of Business Administration

Fourth Year

For admission to the Fourth Year see the requirements as listed in the School of Business Administration calendar.

Business 458 (Administrative Practices)
Two courses (or the equivalent) from the Humanities and the Social Sciences, as approved by the Dean
Three courses (or the equivalent) from Business Administration courses, as approved by the Dean:
450 (Industrial Accounting)
451a (Sales Management)
452a (Personnel Administration)
453a (Financial Management)
453b (Investment Management)
454a (Production Policy)
454b (Factory Management)
455a (Management Statistics)
455b (Statistical Quality Control)
456 (Commercial Law) (either 456a alone or 456a and b)
459 (Research, by permission only)
460b (Auditing)
461a (Retailing)
462 (Industrial Relations)
464b (Purchasing)
465a (Business Conditions)
470a (Financial Accounting)
471b (Advertising)
481b (Market Analysis)

Information concerning Graduate Courses in Business Administration and additional information concerning undergraduate courses will be found in the School of Business Administration Announcement. A copy may be obtained from the Registrar on request.

Business Administration and Secretarial Science

Requirements for Admission: Group 2, page 31, with at least 60% in Economics and Business.

This course, with the addition of Penmanship and Methods, satisfies the academic requirements for the High School Assistant's Certificate, Type A, in Commercial Subjects, of the Department of Education of Ontario.

Second Year

Subjects

Business 250 (Accounting)
Geography 39

Subjects

Economics 233, 257
Secretarial Science 28, 29, 36

Third Year

For admission to the Third Year an average of 60% in Second Year Business and Secretarial Science is required, and an average of 60% in all other subjects.

Business 351 (Marketing) and 357 Control)

English 35
Secretarial Science 37, 38, 39

Fourth Year

For admission to the Fourth Year an average of 60% is required in the Business and Secretarial Science of the Third Year, and an average of 60% in all other subjects.

Subjects	*Subjects*
Business 456 (Commercial Law and Documents of Commerce) and 460b (Auditing)	Economics 46 or English 32 or 44 or 49 History 30 or 31 or 44 or Philosophy 30 Secretarial Science 47

Students who do not wish to qualify for the High School Assistant's Certificate, Type A, Commercial Subjects, may substitute for Business 460b either Business 461 (Retailing) or 471 (Advertising).

Chemistry

Requirements for Admission: Group 1, page 30, with an average of at least 60% in Science and Mathematics courses and not less than 60% in Chemistry, and an average of 60% in Physics and Mathematics.

This course satisfies the academic requirements for the High School Assistant's Certificate Type A, Chemistry and Physics, of the Department of Education of Ontario, if Botany and Zoology are selected in Junior Group 1 and either Botany or Zoology in the second year. It leads to the degree of Bachelor of Science.

Second Year

Subjects	*Subjects*
Chemistry 200, 251, 252	Physics 255
German 5 or Russian 1	Botany 250 or Geology 251 or Zoology 250

Third Year

For admission to the Third Year an average of 60% is required in the Chemistry of the Second Year, and an average of 60% in all other subjects.

Chemistry 353, 354	Physics 254
German 35 or Russian 10	English 35 or Philosophy 32

Fourth Year

For admission to the Fourth Year an average of 60% is required in the Chemistry of the Third Year, and an average of 60% in all other subjects.

Chemistry 452, 453, 454, 457, 458, 459	German 45 or Russian 45
French 45	Physics 456 or Chemistry 406

Chemistry and Physics

Requirements for Admission: As for Honors Chemistry.

This course satisfies the academic requirements for the High School Assistant's Certificate, Type A, Physics and Chemistry, of the Department of Education of Ontario. It leads to the degree of Bachelor of Science.

Second Year

Subjects	*Subjects*
Chemistry 200, 252	Mathematics [redacted], 254
German 5 or Russian 1	Physics [redacted], 254, 255

Third Year

For admission to the Third Year an average of 60% is required in the Chemistry and Physics of the Second Year, and an average of 60% in all other subjects.

Chemistry 353, 354	Mathematics 354 or Physics 250 or 351
German 35 or Russian 10	Physics 353, 366

Fourth Year

For admission to the Fourth Year an average of 60% is required in the Chemistry and Physics of the Third Year, and an average of 60% in all other subjects.

Chemistry 452
French 45
German 45 or Russian 45
Physics 456
English 44 or Philosophy 32

Either Chemistry or the Physics Option below:

CHEMISTRY OPTION	PHYSICS OPTION
Chemistry 453, 454, 457, 458, 459	Physics 454, 455, 457, 458, 459

Classics

Requirements for Admission: Group 2, page 31, with an average of 60% in Latin 20 and 60% in Greek 20.

This course satisfies the academic requirements for the High School Assistant's Certificate, Type A, Classics, of the Department of Education of Ontario.

Second Year

Subjects	*Subjects*
English 32	Greek and Latin 257
French 20 or German 20 or Hebrew 20	Latin 230, 250, 251
Greek 230, 250, 251	

Third Year

For admission to the Third Year an average of 60% is required in the Greek and Latin of the Second Year, with 60% in English.

English 45
Greek 340, 350, 351, 352
Latin 340, 350, 351, 352

Fourth Year

For admission to the Fourth Year an average of 60% is required in the Greek and Latin of the Third Year, with 60% in English.

Greek 450, 451, 452, 453, 457
Latin 450, 451, 452, 453, 457

Economic and Political Science

Requirements for Admission: Junior Group 2, page 31, with at least 60% in Economics.

NOTES: (1) At least one course in Natural Science or Mathematics, and one course in History, and one in Psychology are required for an honors degree in Economic and Political Science.

(2) History 30 may not be selected if History 20 has been taken previously.

Second Year

Subjects	*Subjects*
Ecnomics 233, 257	Philosophy was not chosen previously)
Politics 232	One of: Math. 20, 24, 230, a natural
English 35	science not chosen previously, another
Geography 39	option approved by the Dept. of
One of: Business 250, History 30, Psychology 20, Philosophy 30 (if	Economics

Third Year

For admission to the Third Year an average of 60% is required in the Economics courses of the Second Year, and an average of 60% in all other subjects.

Economics 300, 346, 355
Sociology 328
Three courses (or the equivalent) from:
Economics 351a, 353, 354, Business 250 (Accounting), 351 (Marketing), 354 (Production Policy), English 44, French 30, 33, Geography 35, German 20, 30, History 30, 31, 44, 257

Options continued:
Mathematics 20, 24, 33, 230, 350, Philosophy 31, 44, Politics 334, 342a, 342b, 351b, Psychology 20 or 46, Sociology 338, 348, Spanish 20, 30, 31, another option approved by the Dept. of Economics

Fourth Year

For admission to the Fourth Year an average of 60% is required in the Economics courses of the Third Year and an average of 60% in all other subjects.

Economics 450, 453, 460
Politics 334 or 452
Two courses (or the equivalent) from: Geography 35, 45, Math. 455, Politics 444a, 462b, Psychology 48, 49

Options continued:
Sociology 449, 478, Economics 455, other options approved by the Dept. of Economics

English Language and Literature

Requirements for Admission: Group 2, page 31, with 60% in English 20 and an average of 60% in the two languages taken.

This course is accepted by the Department of Education of Ontario as academic qualification for the High School Assistant's Certificate, Type A, English.

Second Year

Subjects

English 254, 270, 280
Greek 29
History 35

Subjects

Two of:
French 270, German 290, Latin 230, 250, Greek 230, 250

Third Year

For admission to the Third Year an average of 60% is required in the English of the Second Year, and an average of 60% in all other subjects.

English 356, 360, 373; and 436 or 438
French 380 or German 390 or Latin 340, 352 or Greek 340, 352

Philosophy 30 or Psychology 20 or a second Honors language

Fourth Year

For admission to the Fourth Year an average of 60% is required in the English of the Third Year, and an average of 60% in all other subjects.

English 441, 459, 463, 480; and 436 or 438

French 490 or German 480 or Latin 450, 452 or Greek 452

English and French

Requirements for Admission: Group 2, page 31, with 60% in English 20 and in French 20.

This course is accepted by the Department of Education of Ontario as academic qualification for the High School Assistant's Certificate, Type A, English and French.

Second Year

Subjects

English 254, 270, 280
French 270, 271, 290
History 35

Subjects

German 290 or Latin 230, 250, or *Spanish 230 or 340, 231

*Students who begin Spanish in the University will take Spanish 20 in the second year and defer Spanish 231 until the third year.

Third Year

For admission to the Third Year an average of 60% is required in the English and French of the Second Year, and an average of 60% in all other subjects.

English 356, 360, 373
French 380, 381
Greek 29

Fourth Year

For admission to the Fourth Year an average of 60% is required in the English and French of the Third Year, and an average of 60% in all other courses.

English 459, 480; 436 or 438
French 450, 490, 491, 499

English and German

Requirements for Admission: Group 2, page 31, with at least 60% in English 20 and in German 20. History 20 must be chosen as an option in the Junior Group.

This course is accepted by the Department of Education of Ontario as academic qualification for the High School Assistant's Certificate Type A, English and German.

Second Year

Subjects	*Subjects*
English 254, 270, 280	One of: French 270, Greek 20, Latin 230,
German 290, 291	250, Politics 32, Russian 10, Spanish
History 36	20 or 230

Third Year

For admission to the Third Year an average of 60% is required in the English and German of the Second Year and an average of 60% in all other subjects.

English 356, 360, 373	One of: Economics 20, French 380, Latin
German 333, 390, 391	340, or 350, 352, Greek 30, Philosophy
	30, Russian 20, Spanish 230 or 340

Fourth Year

For admission to the Fourth Year an average of 60% in the English and German of the Third Year, and an average of 60% in all other subjects.

English 459, 480; and 436 or 438
German 420, 480, 481

English and Latin

Requirements for Admission: Junior Group 2, page 31, with 60% in English 20 and 60% in Latin 20.

This course is accepted by the Department of Education of Ontario as academic qualification for the High School Assistant's Certificate, Type A, English and Latin.

Second Year

Subjects	*Subjects*
English 254, 270, 280	Latin 230, 250, 251
Greek 29	French 270 or Greek 20 or Greek 230
History 257	and 250 or German 20 or 290

Third Year

For admission to the Third Year an average of 60% is required in the English and Latin of the Second Year, and an average of 60% in all other courses.

English 356, 360, 373
History 35
Latin 340, 350, 351, 352

*Students who begin Spanish in the University will take Spanish 20 in the second year and will defer Spanish 231 until the third year.

Fourth Year

For admission to the Fourth Year an average of 60% is required in the English and Latin of the Third Year, and 60% in History.

English 459, 480; and 436 or 438 Latin 450, 451, 452, 453, 457

English and Philosophy

Requirements for Admission: Junior Group 2 (including History), page 31, with 60% in English 20 and 60% in French 20 or German 20 or Latin 20.

Course B is accepted by the Department of Education of Ontario as academic qualification for the High School Assistant's Certificate, Type A, English. For this certificate, French is the language preferred by the Department of Education.

COURSE A

Second Year

Subjects	*Subjects*
English 254, 280	Two courses of options approved by the
Philosophy 230, 231	Heads of the two major Departments

Third Year

For admission to the Third Year an average of 60% is required in the English and Philosophy of the Second Year, and an average of 60% in all other subjects.

English 270, 356	Two courses of options, to be selected
Philosophy 336, 347	as in the Second Year

Fourth Year

For admission to the Fourth Year an average of 60% is required in the English and Philosophy of the Third Year, and an average of 60% in all other subjects.

English 360, 459, 480	Philosophy 457, 448, and one of: 443, 456, 462, 466

English and Philosophy

COURSE B (Language Option)

Second Year

Subjects	*Subjects*
English 254, 270, 280	*French 270, 271 or German 290, 291
Philosophy 230, 231	or Latin 230, 251

Third Year

For admission to the Third Year an average of 60% is required in the English and Philosophy of the Second Year, and an average of 60% in all other courses.

English 356, 360, 373	Philosophy 347, 335
French 380 or German 390 or Latin 340, 250	

Fourth Year

For admission to the Fourth Year an average of 60% is required in the English and Philosophy of the Third Year, and an average of 60% in all other subjects.

English 459, 480; and 436 or 438 Philosophy 336, 457, 448

*French is the language preferred by the Department of Education of Ontario for Type A, English, High School Assistant's Certificate.

French and German

(See Modern Languages and Literatures)

French and Latin

Requirements for Admission: Group 2, page 31, with at least 60% in French 20 and 60% in Latin 20.

This course is accepted by the Department of Education of Ontario as academic qualification for the High School Assistant's Certificate, Type A, French and Latin. In this course three years, or the equivalent, of Greek or German must be taken.

Second Year

Subjects	*Subjects*
English 35	German 20 or Greek 20
French 270, 271, 290	Latin 230, 250, 251, 257

Third Year

For admission to the Third Year an average of 60% is required in the French and Latin of the Second Year, and an average of 60% in all other subjects.

French 380, 381	History 30 (or 36, if History 20 has been chosen in the Junior Group)
German 30 or Greek 30	
Greek 29	Latin 340, 350, 351, 352

Fourth Year

For admission to the Fourth Year an average of 60% is required in the French and Latin of the Third Year, and an average of 60% in all other subjects.

French 450, 490, 491, 499	Latin 450, 451, 452, 453

French and Spanish

(See Modern Languages and Literatures)

Geography

Requirements for Admission: Junior Group 1 (page 30) or Junior Group 2 (page 31) with an average of at least 60% in the subjects taken.

This course is accepted by the Department of Education of Ontario as academic qualification for the High School Assistant's Certificate, Type A, Geography, providing the options marked by an asterisk are selected. It leads to a Bachelor of Arts degree.

Second Year

Subjects	*Subjects*
Geography **20, 239	Division A subjects:
Mathematics 35	Economics 20
One course (or the equivalent) from: Botany 33a, Economics 257, History *20 (if not chosen previously) or *36, Mathematics 24, Zoology 43, Sociology 28	German 5 or Russian 1 or Spanish 1-10
	Psychology 30
	Division B subjects:
	Botany 20
	Geology 20
Division A or Division B (A follows Junior Group 1, B follows Junior Group 2)	Philosophy 30 or one additional year's work in a modern foreign language

NOTE: Students who intend to continue into graduate studies are advised to begin work in a second foreign language in the third year, if they have not done so earlier. Consult the Department of Geography for advice on this subject.

**Anyone who has taken Geography 20 in Junior Group 2 will repeat it with additional assignments for Honors standing or will take instead one course of options from those listed.

Third Year

For admission to the Third Year an average of 60% is required in the Geography of the Second Year (20 and 239), and an average of 60% in all other subjects.

Subjects

English 35
Geography 330, 335
Geology 256
History 31
Mathematics 29
Politics 232

Subjects

One course (or the equivalent) from:
Economics 354
German 35 or Russian 10
*History 36
Philosophy 30 (if not chosen previously)
Politics 342
Sociology 348
Second year options not already chosen

Fourth Year

For admission to the Fourth Year an average of 60% is required in the Geography of the Third Year (330 and 335), and an average of 60% in all other subjects.

Economics 351a
French 45 or German 45 or Russian 45 or Spanish 45
Geography 440, 444, 445 (any two)
Geology 367
History 44
One course (or the equivalent) from:
Economics 300
English 38 or 49

Options continued:
Geology 263
Philosophy 47
Politics 462b
Psychology 36 or 49
Zoology 453
Second or Third Year options not already chosen

NOTE: Students in Fourth Year Honors Geography shall attend all graduate seminars in Geography (501 and 511) without credit.

(For the Geophysics Major of the Honors Physics and Mathematics Course, see page 53.)

Geology

Requirements for Admission: Junior Group 1, page 30, with an average of 60% in the Science subjects and not less than 60% in Geology 20.

This course leads to a Bachelor of Science degree.

Consult the department head regarding options in the various years.

Near the beginning of the first term, the department will conduct a field trip of one week's duration, in which all Third and Fourth Year students are required to participate. The cost of each trip will not exceed fifty dollars.

Second Year

Subjects

Chemistry 200
Geology 251, 252, 256, 263
German 5

Subjects

Physics 204
One of: Botany 20, Mathematics 254, Zoology 250

Third Year

For admission to the Third Year an average of 60% is required in the Geology of the Second Year, and an average of 60% in all other subjects.

Business 20 or Economics 20 or Philosophy 30
Geography 30

Geology 351, 354, 360, 365, 367
German 35

Fourth Year

For admission to the Fourth Year an average of 60% is required in the Geology of the Third Year, and an average of 60% in all other subjects.

French 45
Geology 452, 454, 455, 458, 460

One Geology and one other course from:
Geology 463, 465, Philosophy 31, Politics 32, Psychology 30

History

Requirements for Admission: Junior Group 2, page 31, with 60% in History and an average of 60% in English, one other language, and either Economics or a second language.

This course will be accepted by the Department of Education of Ontario as the academic qualification for the High School Assistant's Certificate, Type A, History, if the options marked by an asterisk are taken.

Second Year

Subjects

Business 20 or Philosophy 30
Economics 20* (or English 35 if Economics 20 has been chosen previously)
History 236, 257
Two of: French 30, German 30, Greek 30, Latin 30, Spanish 20 or 30, Geography 20*

Third Year

For admission to the Third Year an average of 60% is required in the History of the Second Year, and an average of 60% in all other subjects.

Geography 239
Geography 335* or Psychology 20
History 35, 331, 333a, 354b, 356a
Economics 233* or English 280, 254, or Literature courses in two foreign languages, to be arranged

Fourth Year

For admission to the Fourth Year an average of 60% is required in the History of the Third Year, and an average of 60% in all other subjects.

Economics 450a
History 444, 452, ~~455~~ 460
Politics 232, 452a
Geography 445*, or Economics 450b and Politics 452b, or Economics 346 or 453, or English 32 or 38 or 45 or 49, or Literature courses in two other languages to be arranged

Journalism

Requirements for Admission: The completion of Junior Group 2 with Journalism 20 (60%), Economics 20 and Philosophy 20 as options; English 20 with 60% is also required for Sequence B.

Notes: (1) Students must follow either Sequence A or Sequence B consistently.

(2) Transfer students from other colleges or courses must include Journalism 20 in the second year of the Honors course if it has not been taken previously; 60% is required in it.

Second Year

Subjects

Journalism 250, 260, 270
Politics 32
Psychology 20
Sequence A or Sequence B:

Sequence A:

English 35
Business 20

Sequence B:

Two courses in Honors English and/or French (to be selected in consultation with the Journalism and the other Departments concerned)

Third Year

For admission to the Third Year, an average of 60% is required in the Honors subjects, and an average of 60% in all other subjects.

Subjects
History 31 or 331
Journalism 351, 365, 375
Politics 42

Sequence A:
Geography 239
An optional course (to be selected in consultation with the Department of Journalism)

Subjects
Sequence B:
Two courses in Honors English and/or French (to be selected in consultation with the Journalism and the other Departments concerned)

Fourth Year

For admission to the Fourth Year an average of 60% is required in the Journalism subjects of the Third Year, and an average of 60% in all other subjects.

Politics 351b
History 44 or 444
Journalism 451, 455, 460
Sequence A or Sequence B:

Sequence A
History 36
Two courses of options (to be selected in consultation with the Department of Journalism)

Sequence B
One optional course (to be selected in consultation with the Dept. of Journalism)
Two courses in English and/or French (to be selected in consultation with the Journalism and the other Departments concerned)

See also the Diploma Course in Journalism for graduates of other courses, page 55.

Mathematics

Requirements for Admission: Junior Group 1, page 30, with an average of 60% in the Science and Mathematics subjects, and at least 60% in Mathematics;

OR

Junior Group 2, page 31, with at least 60% in Mathematics 20.

This course leads to the Bachelor of Arts degree, and to Type A, High School Assistant's qualification if Algebra, Geometry, Trigonometry and Statics have been completed in Grade XIII and if Mathematics 353 is selected.

Second Year

Subjects
Mathematics 230, 234, 242, 245
German 5
Three options (not previously selected) from:
Economics 20, 233, English 35, History 36, Philosophy 230, 231

Subjects
Options (continued)
Politics 32, Psychology 30, a laboratory course in Natural Science at the 20-29 level

Third and Fourth Years

Identical with the Honors Mathematics Major, or with the Actuarial Science Major, of the Honors Mathematics and Physics Course which follows.

Mathematics and Physics

Requirements for Admission: Junior Group 1, page 30, with an average of 60% in the Science and Mathematics subjects, and at least 60% in Mathematics and 60% in Physics.

Second Year

Subjects
German 5
Mathematics 230, 242, 254

Subjects
Physics 250, 254, 255
Either Math. 245 or Physics 251

Note

In the two final years of this course, a student may select one of four Major studies:

The Honors Mathematics Major, leading to the B.A. degree.

The Honors Actuarial Science Major, leading to the B.A. degree.

The Honors General Physics Major, leading to the B.Sc. degree (see page 53).

The Honors Radio Physics Major, leading to the B.Sc. degree (see page 54).

All four Major studies are accepted by the Department of Education as academic qualification for the High School Assistant's Certificate, Type A, in Mathematics (from the B.A. courses) or in Mathematics and Physics (from the B.Sc. courses).

For admission to the two final years of each Major plan, an average of 60% is required in the Honors Courses of the previous year, and an average of 60% in all other subjects.

Honors Mathematics Major
and
Honors Actuarial Science Major

(1) In the Third and Fourth Years of each of these Major studies there is a principal sequence of three required Mathematics courses, augmented by five other courses for a minimum requirement of eight courses a year. An average of 60% in the Honors Mathematics of the Second and Third Years is required for admission to the Third and Fourth Years, respectively.

(2) **Courses marked with asterisks are compulsory for Actuarial Science students,** who are prepared to write three preliminary examinations sponsored by the Society of Actuaries. The first two examinations may be written at the end of the Second Year, and the third at the end of the Fourth Year. Examinations of the Society of Actuaries are held about May 15th and may be written in London. Applications to write the preliminary examinations must be received by March 15th.

Third Year

Subjects

Business 250* or English 44
German 35
Mathematics 350, 351, 356
Two of:
Mathematics 345, 353* (required for the Type A Certificate), 354, 358, 359, 363*, Physics 350, 351, 353

Subjects

One course (not previously selected) from:
Economics 20, 233, English 35, History 36, Philosophy 230, 231, Politics 32, Psychology 30, a laboratory course in Natural Science at the 20-29 level

Fourth Year

Subjects

Mathematics 450, 456, 470
Three of:
Mathematics 452, 454, 455, 458, 459, 460, 463*, Physics 456, 457
Either English 44, or French 45 and German 45 combined

Subjects

One of:
Business 353*, Economics 300, History 30 (if neither 20 nor 36 has been selected previously), Politics 34

For the Honors Geophysics Major (leading to the B.Sc. degree) see page 53.

For the Honors Physics Major (leading to the B.Sc. degree) see page 53.

For the Honors Radio Physics Major, (leading to the B.Sc. degree) see page 54.

Modern Languages and Literatures

Requirements for Admission: Group 2, page 31, with at least 60% in French 20 and in German or Spanish.

This course is accepted by the Department of Education of Ontario as the academic qualification for the High School Assistant's Certificate, Type A, French and German, or French and Spanish.

Second Year

Subjects	*Subjects*
English 35	Greek *29
French 270, 271, 290	At least one course in a foreign language not chosen as a major.
German 290, 291 or *Spanish 230 or 340, 231, 250 or 360	

Third Year

For admission to the Third Year an average of 60% is required in the French and in the German or Spanish of the Second Year, and an average of 60% in all other subjects.

French 380, 381	History 30
German 333, 390, 391 or Spanish 340 or 230, 341, 360 or 250	At least one course in the minor foreign language of the Second Year

Fourth Year

For admission to the Fourth Year an average of 60% is required in the French and in the German or Spanish of the Third Year, and an average of 60% in all other subjects.

Subjects	*Subjects*
French 450, 490, 491, 499	One course in the minor foreign language continued from the Third Year
German 420, 480, 481 or Spanish 450, 451, 460	

Philosophy

(This course is offered in University College only)

Requirements for Admission: The completion of any Junior Group or of the second year of any of the pre-Theological General Courses (pp. 35, 95, 105) with at least 60% in English and 60% in each of five other subjects.

Second Year

Subjects	*Subjects*
English 32 or 38 or History 257	Philosophy 230, 231
A Natural Science 21 not chosen previously	At least two courses from options approved by the Department of Philosophy

Third Year

For admission to the Third Year an average of 60% is required in the Philosophy of the Second Year, and an average of 60% in all other subjects.

Philosophy 336, 347	Two courses from options approved by the Department of Philosophy
Philosophy 335, or 350	
A course in Psychology	

Fourth Year

For admission to the Fourth Year an average of 60% is required in the Philosophy of the Third Year, and an average of 60% in all other subjects.

Philosophy 443, 448, 456, 457, 462, 466	One course from options approved by the Department of Philosophy

*Students who begin Spanish in the University and who wish to major in Spanish will take Spanish 20 in the Second Year and will defer Spanish 231 and Greek 29 until the Third Year.

Physical, Health, and Recreation Education

Requirements for Admission: Group 2, page 31, with an average of at least 60% in the subjects taken in the University.

(1) The Physical and Health Education Option is accepted by the Department of Education of Ontario as the academic qualification for the High School Assistant's Certificate Type A, Physical Education, if History, two Mathematics (from Algebra, Geometry, Trigonometry), Economics, Psychology, Biology and Physical Science have been selected as Grade XIII or Junior Group 2 options. Music is advised as a Grade XII option, but it is not essential.

(2) The Recreation Education Option is accepted by the Department of Education of Ontario as the academic requirement for the High School Assistant's Certificate, Type B.

(3) Both Options lead to the Honors B.A. degree.

(4) The following information should be submitted, before the end of the first year, along with the application for admission to the Honors Course:

Personal health certificate, from the applicant's family physician, including information regarding his medical fitness for either of the Honors options.

Reports on his sports achievement and leadership ability, from his secondary school Principal and physical education director.

It is advisable but not essential to possess Life Saving and First Aid Certificates.

Second Year

Subjects	*Subjects*
English 35	English 39
Physical, Health, and Recreation Ed. 251, 258, 266	Psychology 36
First Aid (if not taken previously)	Zoology 24

Note: Consult the Head of the Department before selecting either the Physical and Health Education Option or the Recreation Education Option.

(a) Physical and Health Education Option

Third Year

For admission to the Third Year an average of 60% is required in the Honors subjects of the Second Year, and an average of 60% in all other subjects.

Sociology 28	Philosophy 30
Geography 20	Physical, Health, and Recreation Ed. 351, 352, 353, 354, 356
Home Economics 31 (lectures only)	
Mathematics 35 a/	

Fourth Year

For admission to the Fourth Year an average of 60% is required in the Honors subjects of the Third Year, and an average of 60% in all other subjects.

Subjects

Politics 32a (or b) and 42a
Psychology 49
One course in History or Geography (to be selected in consultation with the Head of the Department, in accordance with the aim of a connected course in Social Studies)
Physical, Health, and Recreation Ed. 382, 450, 451, 453, 454, 457

(b) Recreation Education Option

(Not offered in 1956-57)

Third Year

For admission to the Third Year an average of 60% is required in the Honors subject of the Second Year, and an average of 60% in all other subjects.

Subjects

Sociology 28
English 36
One course of options to be approved by the Head of the Department

Subjects

Philosophy 32
Physical, Health, and Recreation Ed. 353, 371, 372, 375, 376, 382

Fourth Year

For admission to the Fourth Year an average of 60% is required in the Honors subjects of the Third Year, and an average of 60% in all other subjects.

Politics 32a (or b) and 42a
Psychology 49
One course of options to be approved by the Head of the Department

Physical, Health, and Recreation Ed. 450, 473, 476, 479, 483

Physics and Mathematics

(Honors General Physics Major)

Requirements for Admission: Junior Group 1, page 30, with an average of 60% in the Science and Mathematics subjects, and at least 60% in Mathematics and 60% in Physics.

This course is accepted by the Department of Education of Ontario as the academic qualification for the High School Assistant's Certificate, Type A, Mathematics and Physics. It leads to the Degree of B.Sc.

Second Year

Subjects

German 5
Mathematics 230, 242, 254

Subjects

Physics 250, 251, 254, 255

Third Year

For admission to the Third Year an average of 60% is required in the Honors Courses of the Second Year, and an average of 60% in all other subjects.

German 35
Mathematics 356

Physics 350, 351, 353, 356, 359

Fourth Year

For admission to the Fourth Year, an average of 60% is required in the Mathematics and Physics of theThird Year, and an average of 60% in all other subjects.

French 45
German 45
Physics 454, 455, 456, 457, 458, 459

One of: Economics 20, English 32 or 35, Psychology 30, Philosophy 32

Physics and Mathematics

(Honors Geophysics Major)

Requirements for Admission: Junior Group 1, page 30, including Geology 20 and Mathematics 24, with 60% in Mathematics, 60% in Physics, and an average of 60% in all the Mathematics and Science subjects.

This option leads to the degree of B.Sc.

Second Year

Subjects

Geology 252, 253
German 5

Subjects

Mathematics 230, 254
Physics 250, 251, 254, 255

Third Year

For admission to the Third Year an average of 60% is required in the Honors Courses of the Second Year, and an average of 60% in all other subjects.

Chemistry 200
Economics 20
Geology 351

German 35
Physics 350, 353, 356, 359

Fourth Year

For admission to the Fourth Year an average of 60% is required in the Honors Courses of the Third Year and an average of 60% in all other subjects.

French 45
Geology 452, 455, 465
German 45
Philosophy 30
Physics 351, 455, 456, 458

Physics

(See Chemistry and Physics, Geophysics, Physics and Mathematics, Radio Physics)

Psychology

(This course is offered in University College only)

Requirements for Admission: Group 1 or 2, page 30 or 31, with an average of at least 60%. Zoology should be selected as an option in the Junior Group.

Second Year

Subjects	*Subjects*
English 35 or 44	Zoology 24 (21 must be taken instead, if Zoology has not been completed in the Junior Group, or in Grade XIII with 66%)
Philosophy 30	
Psychology 234, 235, 236	
One other course approved by the Dept. of Psychology	

Third Year

For admission to the Third Year an average of 60% is required in the Psychology of the Second Year, and an average of 60% in all other subjects.

Psychology 337, 338, 339, 349, 355
Two optional courses approved by the Dept. of Psychology

Fourth Year

For admission to the Fourth Year an average of 60% is required in the Psychology of the Third Year, and an average of 60% in all other subjects.

Psychology 444, 446, 448, 459
Three optional courses approved by the Dept. of Psychology

Radio Physics

(The Radio Physics Major of the Honors Physics and Mathematics Course)

Requirements for Admission: Junior Group 1, page 30, with an average of 60% in the Science and Mathematics subjects, and at least 60% in Mathematics and 60% in Physics.

(1) This course is accepted by the Department of Edccation of Ontario as the academic qualification for the High School Assistant's Certificate, Type A, Mathematics and Physics. It leads to the degree of B.Sc.

(2) The purpose of this course is to provide students with sufficient theoretical and practical background to enable them, as graduates, to occupy responsible technical positions in the various branches of the radio industry, including frequency modulation, television and radar; in communications generally; in the field of industrial electronics; and in development and research laboratories.

Second Year

Subjects	*Subjects*
German 5	Physics 250, 251, 254, 255
Mathematics 230, 242, 254	

Third Year

For admission to the Third Year an average of 60% is required in the Honors Courses of the Second Year, and an average of 60% in all other subjects.

Economics 20 or Philosophy 32
German 35
Mathematics 356
Physics 351, 370, 376, 377, 379

Fourth Year

For admission to the Fourth Year, an average of 60% is required in the Honors Courses of the Third Year, and an average of 60% in all other subjects.

French 45
German 45
Physics 455, 456, 457, 458, 476, 477, 479

DIPLOMA COURSES

(i) Business Administration

Requirements for Admission: Graduation in some field other than Business Administration from a recognized college or engineering school, including The Royal Military College. Successful business experience, in lieu of academic training, may be considered.

An average of 66% in this one-year course is required for the diploma in Business Administration. Those who obtain 66% may proceed to an M.B.A. degree in one additional year's work.

Subjects

Business:
551 (Marketing)
553 (Finance)
554 (Production)
557 (Control)
558 (Administrative Practices)
A staff-supervised field-trip to industrial plants

For detailed information about Graduate Courses in the School of Business Administration, consult the Announcement published by that school.

(ii) Journalism

Requirements for Admission: Graduation from a recognized college, with a degree in some field other than Journalism.

Candidates for the Diploma in Journalism will take the prescribed courses and do special assignments in reporting, writing and editing.

An average of 60% in this one-year course is required for the Diploma.

Subjects

Journalism 260, 351, 355, 365, 375, 400, 455, 460

DESCRIPTION OF COURSES

BOTANY

11aN. Elementary Botany: For students of the Home Economics Course; the basic principles of Botany, including a brief survey of the plant kingdom. 2 lectures, 3 laboratory hours a week, one term: half course.

20. Introductory Botany: For students of the General Course, Group 1; the general principles of Botany. **To qualify for the Honors Courses in Biology a student must obtain 60 per cent. in Botany 20.**

2 lectures, 3 laboratory hours a week.

31a. Plant Diseases and Fungi: The recognition of poisonous and edible fungi and the identification, cause and control of common plant diseases. 2 lectures, 4 laboratory hours a week, one term.

Prerequisites: Botany 33a and 32b, or Botany 20, or Botany 11aN (60%), or Zoology 21 (60%).

32b. Plant Culture: The elementary principles of plant growth, propagation and care, with particular reference to plants of the garden and home.

3 lectures, 3 laboratory hours a week, one term.

Prerequisites: Botany 20 or Botany 11aN (60%) or Zoology 21 (60%).

33a. Plant Ecology: The relationship between plants and their surroundings, including the recognition and classification of common plants.

2 lectures, 4 laboratory hours a week, one term.

Prerequisites: same as for 32b.

36b. Elementary Bacteriology: The common economic organisms in reference to: Water, food supplies, public health and civic problems. Prescribed for second year students in Home Economics: optional for others.

Prerequisites: as in 31a. 2 lectures, 4 laboratory hours a week.

43b. Plant Taxonomy: The recognition and classification of the common garden and field plants with special reference to adaptations to environment and distribution.

2 lectures, 4 laboratory hours a week, one term.

Prerequisite: Botany 31a or 32b or 33a.

Honors Courses

250. The Vascular Plants: The morphology, anatomy and development of the Pteridophyta and Spermatophyta, stressing the Seed Habit.

Prerequisite: Junior Group 1. 2 lectures, 3 laboratory hours a week.

337. Historical Biology: See Zoology 337. 2 hours a week.

352a. Plant Physiology: The function and reactions of plants and their organs. 2 lectures, 6 laboratory hours a week, one term.

Prerequisite: Botany 250.

354b. Cytology: A study of the structure and functions of cells and tissues, including the techniques of preparing materials for cytological

studies. 2 lectures, 6 laboratory hours a week, one term.
Prerequisite: Botany 250.

361. Mycology and Plant Pathology: Plant diseases and classification, morphology and structure of the fungi.
Prerequisite: Botany 250. 1 lecture, 2 laboratory hours a week.

452. Advanced Plant Physiology: Special emphasis on biochemical and physical reactions in plants. Optional for fourth year Honors and graduate students. 2 lectures and 6 laboratory hours a week, one term.

453a. Plant Ecology: The structure of vegetation and its relation to the environment. 2 lectures, 6 laboratory hours a week, one term.
Prerequisite: Botany 250.

453b. Systematic Botany and Taxonomy: The principles of taxonomy and the identification and distribution of plants.
2 lectures, 6 laboratory hours a week, one term.
Prerequisite: Botany 453a.

454b. Plant Anatomy: The anatomy and histology of the Pteridophyta and Spermatophyta, including some Palaeobotany. Optional for fourth year Honors and graduate students.
2 lectures, 6 laboratory hours a week, one term.
Prerequisite: Botany 352a.

455. Genetics: See Zoology 455. 2 hours a week.

460a. Cryptogamic Botany, Algae: The morphology, evolution and classifications of the Algae.
2 lectures, 6 laboratory hours a week, one term.
Prerequisite: Botany 352a.

460b. Cryptogamic Botany, Origin of a Land Flora: General consideration of the evolution of land plants based largely on the studies of the liverworts and mosses.
2 lectures, 6 laboratory hours a week, one term.
Prerequisite: Botany 460a.

461a. Advanced Mycology and Plant Pathology: A continuation of 361, with special emphasis on groups of economic importance.
2 lectures, 6 laboratory hours a week, one term.
Prerequisite: Botany 361.

466b. Bacteriology: The culture, classification and life histories of selected groups of bacteria. 2 lectures, 6 laboratory hours a week, one term.
Prerequisite: Botany 361 or 461a.

BUSINESS ADMINISTRATION

20. Introduction to Business Organization: 3 hours a week.

250. Fundamentals of Accounting: 3 hours a week.

Information concerning Graduate Courses in Business Administration and additional information concerning undergraduate courses will be found in the School of Business Administration Announcement. A copy may be obtained on request.

CHEMISTRY

11N. General Chemistry for Home Economics and Nursing students.
2 lectures, 3 laboratory hours a week.

20. General Chemistry and Qualitative Analysis: For Junior Group 1.
2 lectures, 3 laboratory hours a week.

32. Analytical: For Home Economics, Nursing and General Course students. 2 lectures, 3 laboratory hours a week.
Prerequisite: Chemistry 20 or 11N.

33. Organic Chemistry: For Home Economics and General Course students. 2 lectures, 3 laboratory hours a week.
Prerequisite: Chemistry 20 or 11N.

44. Physical Chemistry: For General Course students.
2 lectures, 3 laboratory hours a week.
Prerequisites: Chemistry 20 and 32.

46. Biochemistry and Food Analysis: For Home Economics and General Course students. 2 lectures, 3 laboratory hours a week.
Prerequisites: Chemistry 32 and 33.

Honors Courses

The student in Honors Chemistry or Honors Chemistry and Physics may be required to write a comprehensive examination at the end of the fourth year.

200. Elementary Physical Chemistry: For students in Honors Chemistry, Chemistry and Physics, Biology, Geology; chemical principles.
2 lectures, 3 laboratory hours a week.

203M. Organic Chemistry: For prospective medical students.
2 lectures (both terms) and 3 laboratory hours (one term) a week.

204M. Physical Chemistry: For prospective medical students.
2 lectures (both terms) and 3 laboratory hours (one term) a week.

251. Treatment of Experimental Data: For students in Honors Chemistry. 1 lecture, 2 laboratory hours a week.

252. Quantitative Analysis: For students in Honors Chemistry and Honors Chemistry and Physics.
First term: 1 lecture, 3 laboratory hours a week;
Second term: 1 lecture, 6 laboratory hours a week.

303. Organic Chemistry: For Honors Biology students.
2 lectures, 3 laboratory hours a week.
Prerequisite: Chemistry 20.

353. Organic Chemistry: For students in Honors Chemistry and Honors Chemistry and Physics. Lectures and laboratory exercises dealing with carbon compounds. 2 lectures, 4 laboratory hoursa week.
Prerequisites: Chemistry 20 and 200.

354. Intermediate Physical Chemistry: For students in Honors Chemistry and Physics. A systematic derivation of the principles which govern reactions in chemical systems.
3 lectures, 6 laboratory hours a week: double course.
Prerequisites: Chemistry 200 and either Chemistry 251 or Physics 251.

406. Biochemistry: For Honors Biology students.
Prerequisites: Chemistry 200, 303. 2 lectures, 3 laboratory hours a week.

452. Advanced Analytical Chemistry: Instrumental analysis; microscopy and semi-micro Quantitative Analysis.
1 lecture, 3 laboratory hours a week.

453. Advanced Organic Chemistry:
Prerequisite: Chemistry 353. 3 lectures, 3 laboratory hours a week.

454. Advanced Physical Chemistry: Thermodynamics and Kinetic Theory of Matter. 3 lectures, 3 laboratory hours a week.
Prerequisite: Chemistry 354.

457. Tutorial: Technical report-writing; chemical literature and patents and modern topics. 1 hour a week: half course.

458. Seminar: Presentation of papers on topics selected from the current chemical journals, dealing with the more recent and fundamental developments of the science; prescribed for fourth year Honors Chemistry students and desirable for all students majoring in Chemistry. Half course.

459. Research: Special topics and laboratory methods in the field of the student's individual interest. The second term will be devoted to a research problem upon which a report will be required as a senior thesis.
6 hours a week: double course.

ECONOMICS

20. Introduction to Economics: The elementary economic concepts; production, exchange, consumption and distribution of wealth; money and banking; business cycle; full employment; labor problems; public finance; international trade; government regulation. 3 hours a week.

30. Economic Theory: An intensive course in economic analysis and policy. 3 hours a week.
Prerequisite: Economics 20 or permission of the instructor.

33. Money and Banking: Part 1. Monetary systems, characteristics and functions of money; banking organization and practice; central bank-

ing in Canada, United States and England; other financial institutions; the principles and mechanism of international payments.

Part 2. The development of short run economics, contemporary monetary theories and policies; international monetary problems.
3 hours a week.

46. **Labor Problems:** The study of labor movements, the forms of labor organization, economic problems of labor in relation to national economy, labor legislation, methods of dealing with labor disputes, the social aspects of industrial relations. 3 hours a week.

Honors Courses

Economics 300, 233 and 346 are identical respectively with 30, 33 and 46, except that additional assignments will be required in the Honors courses.

257. **Economic History of (i) Europe:** The economic foundations from antiquity, the developments of the Middle Ages, Mercantilism, the Industrial Revolution, *laissez faire* and Economic Nationalism.

(ii) North America: A survey of the geographical and historical conditions which have given rise to the current economic problems of the United States and Canada. 2 hours a week.

351a. **International Economics:** International values, foreign exchange, free trade and protection, commercial treaties, quotas and exchange controls.
3 hours a week, one term: half course.

353. **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. 3 hours a week.

354. **Agricultural Economics:** The place of agriculture in economic life, organization for agricultural production, factors chiefly responsible for success or failure, independent and co-operative marketing of agricultural products, the financing of agriculture, government policies and aid. Not offered in 1956-57. 2 hours a week.

355. **Statistical Methods:** The application of statistical methods to Economics; graphic methods and tabulation; frequency distributions; measures of central tendency and deviation; probability; the normal curve; correlation; reliability and validity; time series; index numbers.
3 hours a week.

450. **History of Economic Thought:** (a) A survey of the history of economic theory, including the neo-classical school; (b) Seminars in modern economic theory. 3 hours a week.

453. **Monetary and Fiscal Policy:** Business cycles, booms and depressions; governmental expenditures, revenues, borrowing and debt structures; the shifting and incidence of taxation; government activities and financial policies. 3 hours a week.

Prerequisite: Economics 33 or the permission of the instructor.

455. **Mathematical Economics:** This course is designed to acquaint the student with the role and use of mathematics in economic analysis.

3 hours a week.

460. **Modern Economic Theory (non-Monetary):** An intensive course in selected current theories of value, production and distribution, under conditions of pure and monopolistic competition. 2 hours a week.

ENGINEERING SCIENCE

For information about the courses offered, consult a separate pamphlet to be obtained from the Registrar's Office.

ENGLISH

Notes: (1) Detailed descriptions of the following courses may be obtained from the office of the Department of English (Room 115B, Arts Bldg.) or from the Registrar's Office.

(2) All courses in English scheduled for two hours a week may meet for additional hours at the discretion of the instructor.

10. **General Literature and Composition:** Selected short stories and poems, one novel, one play by Shakespeare, and a study of composition (one hour a week); essays will be written and discussed with the instructor.

3 hours a week.

20. **General Literature and Composition:** Selections in *The College Survey of English Literature* from the works of Chaucer, Shakespeare, Jonson, Donne, Milton, Pope, Swift and Keats, and a study of composition (one hour a week); essays will be written and discussed with the instructor.

3 hours a week.

29. **Public Speaking:** The introductory course.

1 hour a week: half course.

No student will be admitted to any of the following courses until he has successfully completed English 20.

32. **Literature of the Nineteenth Century:** Selected works by Wordsworth, Coleridge, Shelley, Keats, Byron, Arnold, Tennyson, Browning, Newman, Huxley, Pater and other writers; two novels are included.

3 hours a week.

33M. **General Literature and Composition:** For prospective medical students only; similar to English 35. 2 hours a week.

35. **General Literature and Composition:** Selected essays, plays and narrative prose from English literature and (in translation) from Greek literature; essays and exercises in composition will be required. This course is not offered for credit in the General Course. 3 hours a week.

36. **Drama:** A study of the works of such modern dramatists as Ibsen, Chekhov, Shaw, O'Neill and Eliot, against the background of Classical and Renaissance drama. 3 hours a week.

38. **Literature of the United States and Canada (English):** Selected works by American authors from Franklin to Faulkner and by Canadian authors from Haliburton to Page. 3 hours a week.

39. **Speech:** A detailed study of several areas of speech, with theory and practice in exposition and persuasion, oral reading, group discussion, voice and diction. 2 hours a week.

41. **Creative Writing:** The use of language as art and communication in the recognized creative writing forms; emphasis is placed on analysis of work submitted during the course. 1 hour a week: half-course.

44. **General Literature and Composition:** Similar to English 35 but on a more advanced level. The reading consists of selected works of poetry, prose and fiction. More, Arnold, Huxley and D. H. Lawrence are included. (For students in the final year of some Honors and professional courses.) 2 hours a week.

45. **Comparative Literature:** A course of reading in English or in English translations of some of the great books of Western civilization from Homer to T. S. Eliot, with particular emphasis on the growth of epic, drama and fiction. 3 hours a week.

46. **Play Direction:** An introductory course, with instruction in directing and acting, and participation in acting exercises and a final production. 2 hours a week.

49. **Recent Literature in English:** Selected poetry of Hopkins, Yeats, Frost, Eliot and Auden; one novel by each of Forster, Joyce, Faulkner, Koestler, Wolfe; one play by Christopher Fry. 3 hours a week.

Honors Courses

Comprehensive Examinations will be held at the end of the fourth year of all courses in English Honors.

254. **Criticism:** and a general introduction to English studies. 2 hours a week.

270 (formerly 350): **Literature of the Romantic Revival (1780-1832).** 2 hours a week.

280 (formerly 450): **Renaissance Literature, Non-Dramatic (1500-1660).** 3 hours a week.

356. **English Drama to 1642:** with particular reference to the plays of Shakespeare. 3 hours a week.

360 (formerly 460): **Literature of the Victorian Period (1832-1900).** 3 hours a week.

373 (formerly 357 and 363): **Introduction to Early English and the History of the Language.** 3 hours a week.

436 (formerly 236): **Modern British and American Drama.** 3 hours a week.

438 (formerly 358): American and Canadian Literature (English-Canadian only). 3 hours a week.

441. Creative Writing. 1 hour a week: half-course.

459. Recent Literature in English. 3 hours a week.

463. Old and Middle English Literature: with special emphasis on *Beowulf* and Chaucer. 2 hours a week.

470. English Tutorial: Method of research in English language and literature directed by members of the department. Prescribed but non-credit.

480 (formerly 250): Restoration and Eighteenth Century Literature (1660-1780). 2 hours a week.

FRENCH

General course students may, with the consent of the Head of the Department, elect some Honors courses as optional credits toward graduation.

10. Intermediate French: Grammar, dictation, translation, oral practice. 3 hours a week.

Prerequisite: Grade XII French.

20. Advanced French: Grammar, translation, free composition, oral practice. 3 hours a week.

Prerequisite: French 10 or Grade XIII French.

22. French Conversation: Systematic oral practice for those students who wish to develop fluency in speaking French.

Prerequisite: French 20. 2 hours a week: half course.

30. Outline of French Literature: Origins to 1789 A.D.

Prerequisite: French 20. 3 hours a week.

33. Commercial French: Business correspondence, simple transactions, selected reading. For students in Secretarial Science, optional in Business Administration. 3 hours a week.

Prerequisite: French 20.

40. Outline of French Literature: From 1789 A.D. to the present time. 3 hours a week.

Prerequisite: French 30.

43. Commercial French: Advanced transactions, reading. For students in Secretarial Science. Given in University College only. 3 hours a week.

Prerequisite: French 33.

45. Scientific French: The reading of Scientific French from textbooks and journals, supplemented by individual reading in the special field of study of each student. 1 hour a week: half course.

Prerequisite: French 10 or Grade XIII French.

48. French-Canadian Literature: Lectures and reading on the his-

torical and cultural background and the philosophical and literary contributions of French Canada. 3 hours a week.

Prerequisite: French 20.

Honors Courses

All students in Honors Courses will take a comprehensive examination at the end of their final year.

270. French Literature of the Renaissance and Classical Periods: Study of representative literature of the sixteenth and seventeenth centuries; reading, lectures, discussion and reports. 3 hours a week.

Prerequisite: Junior Group 2.

271. Prose Composition, Phonetics.

Prerequisite: Junior Group 2. 1 hour a week: half course.

290. French Civilization and Culture: (Origins to 1789); survey of the most significant French cultural achievements and a study of the background which produced them; lectures, reading, reports. 2 hours a week.

Prerequisite: Junior Group 2.

380. The Literature of the Eighteenth Century and French Civilization and Culture: The second part of the course will complete French 290, covering the period 1789 to the present; lectures, reading, discussion, reports in French. 3 hours a week.

Prerequisite: French 270.

381. Prose Composition, Phonetics and Conversation.

Prerequisite: French 271. 3 hours a week.

An equivalent course is given also at Trois-Pistoles, P.Q., during July and August. For full details see special bulletin.

450. Mediaeval French: Reading of Old French, historical grammar, history of mediaeval literature; reading, lectures.

Prerequisite: French 380. 1 hour a week: half course.

490. The Literature of the Nineteenth Century: Lectures, reading and reports. 3 hours a week.

Prerequisite: French 380.

491. Advanced Composition, Grammar and Phonetics.

Prerequisite: French 381. 3 hours a week.

An equivalent course is given also at Trois-Pistoles, P.Q., during July and August. For full details see special bulletin.

499. Contemporary French Literature: Study of some typical examples of the novel and drama of the twentieth century; reading, lectures, reports.

Prerequisite: French 380. 2 hours a week.

GEOGRAPHY

20. Elements of Geography: The earth as the home of man; the elements of the physical and cultural landscape with special reference to their world patterns. 2 lectures and 2 hours practical work a week.

30. **Advanced Physical and Cultural Geography:** Studies of the environmental factors, meteorology, climatology, geomorphology, hydrology, vegetation and soils; their interrelatinships; techniques of measurement and classification, including air photographs and map projections.

2 lectures and 2 hours practical work a week.

Prerequisite: Geography 20.

35. **World Regional Geography:** A systematic survey of the major natural and political regions of the world.

2 lectures and 2 hours practical work a week.

Prerequisite: Geography 20 or 39, or equivalent.

39. **Geography of World Resources and Industries: Trade Routes and Centres:** The world's physical resources; their nature, utilization, and transportation. 3 lectures a week.

40. **Problems in Geography:** A survey of historical geography, political geography, and the philosophical foundations of modern geography.

3 lectures a week.

Prerequisites: Any two of Geography 20, 30, 35, 39.

44. **Geography of Mexico and the United States:** Systematic survey of the human geography of the two countries. 3 lectures a week.

Prerequisite: Geography 20 or 39, or equivalent.

45. **Geography of Canada: The Natural Wealth of Canada and its Conservation:** The geographic basis of human occupance in Canada. Conservation of natural resources. 3 lectures a week.

Prerequisite: Geography 20 or 39, or equivalent.

Honors Courses

Geography 239, 330, 335, 440, 444, and 445 are identical with 39, 30, 35, 40, 44 and 45 respectively. Students who elect Honors courses will cover additional material and be held strictly to the University regulations of Honors standards.

GEOLOGY

20. **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. Laboratory work will consist of the study of speciments of the more common rocks and minerals, typical fossil specimens, the interpretation of geological maps and topographical maps. Field trips.

2 lectures, 2 laboratory hours a week.

21. **Geological Science:** A survey of the Geological Sciences; the relation of Geology to the other sciences, and its economic significance, with emphasis on topics of local interest. 2 lectures, 2 laboratory hours a week.

Honors Courses

251. **Mineralogy:** Crystallography, physical and chemical properties

of minerals. The description and study of about 150 common species, with considerable practice in identification, including blowpipe analysis.

1 lecture, 4 laboratory hours a week.

252. **Lithology:** Megascopic descriptions of the common igneous, sedimentary and metamorphic rocks. Practice is given in identification through the study of numerous specimens. 2 hours a week: half course.

256. **Drafting and Surveying:** The principles and techniques of surface and mine surveying with stress on the use of the plane table; precision of measurements and theory of errors; practice on surface and underground surveying. The principles of lettering and drafting and the preparation of simple geologic plans and mine sections.

1 lecture, 5 laboratory hours a week.

263. **Historical Geology:** The significant events in the geologic history of the earth and its inhabitants, combined with a general discussion of the geology of Canada. Laboratory periods will include map work, examination of fossils, and field trips. 2 lectures, 2 laboratory hours a week.

351. **Optical and Descriptive Mineralogy:** The principles of optics as applied to the identification of minerals; the study of about 150 rock-forming mineral species, with practice in their identification in hand specimen and in thin section. 2 lectures, 3 laboratory hours a week.

354. **Origin and Formation of Mineral Deposits:** The origin of mineral deposits and a study of the principal processes involved in their formation, with a brief mention of prominent examples. Laboratory time will be devoted to readings on the theory of ore deposition as well as to the acquisition of the technique of polished section preparation and examination.

1 lecture, 2 laboratory hours a week.

360. **Seminar:** Third year students are required to attend all senior seminars and to give at least one paper. 2 hours a week: half course.

363. **Invertebrate Paleontology:** First half—the study of fossils in biological succession with concentration on classification, morphology and ecology; second half—index fossils and their geologic ranges.

2 lectures, 3 laboratory hours a week.

365. **Precambrian Geology of the Canadian Shield:** General geology of the Shield, with studies of type areas and some of the principal mining districts. Particular attention is paid to current problems and controversies.

1 lecture, 1 hour class-study a week: half course.

367. **Glacial and Pleistocene Geology:** Glaciers and their work; glacial and extraglacial deposits, their structure and landscape forms; Pleistocene stratigraphy, especially of eastern North America, and the development of Glacial Lakes; economic aspect of Pleistocene deposits. Laboratory work will consist of field trips, studies of collected materials, map exercises, readings and discussion of reference papers. 3 hours a week.

452. **Petrography and Petrology:** The principles and theories of igneous, sedimentary and metamorphic rock genesis; stress is laid on diver-

sification in igneous magmas; the classification of rocks is discussed, with practice in rock identification, particularly in thin section.

2 lectures, 3 laboratory hours a week.

454. **Economic Mineral Deposits:** The occurrence and production of ores of the principal metals, with a study of outstanding examples, especially in Canada. Laboratory works consists of (a) a series of reports based on selected reading from original sources and (b) studies of specific ore deposits or problems, with emphasis on the examination of ores under the microscope. 1 lecture, 5 laboratory hours a week.

455. **Structural Geology:** Primary and induced structures in igneous, sedimentary and metamorphic rocks; the physical properties of rocks and the effects of stress application; the interpretative value of various minor structures; relations between structure and topography; earth's structure and mountain building. Laboratory work will include the interpretation of geologic structures from maps. 2 lectures, 2 laboratory hours a week.

458. **Senior Research and Field Report:** A report on geological field work carried on by the student, including the results of laboratory investigation and a study of available literature. 1/2 full course ~~Prescribed but non credit~~.

460. **Seminar:** Presentation and discussion of papers on various geological subjects; informal discussion of topics of current geological interest.

2 hours a week: half course.

463. **Stratigraphy and Sedimentation:** The principles, demonstrated mainly by a study of Paleozoic and Mesozoic strata in Canada.

2 lectures, 2 laboratory hours a week.

465. **Geophysics:** An introductory course in the various geological problems associated with gravity, magnetism, seismology, radioactivity, and the internal constitution of the earth, with applications to geophysical exploration. 2 lectures, 2 laboratory hours a week.

GERMAN

1. **Elementary German:** The work of Grade XII (Middle School) or its equivalent is covered. 3 hours a week.

5. **Elementary Scientific German:** The elements of German grammar with the reading of easy scientific German. Prescribed for second year honors science students. 3 hours a week.

5M. **Elementary Scientific German:** The elements of German grammar with the reading of easy medical German. Offered for medical students.

1 hour a week: half course.

10. **Intermediate German:** The work of Grade XIII (Upper School) or its equivalent is covered. 3 hours a week.

Prerequisite: Grade XII German or German 1.

20. **Advanced German:** Translation from modern literary German, grammar, dictation, conversation. 3 hours a week.

Prerequisite: Grade XIII German or German 10.

22. **Conversation:** Systematic oral practice for students who wish to develop fluency in speaking German. 2 hours a week: half course.
Prerequisite: German 10 or German 20.

30. **Outline of Modern German Literature:** From Romanticism to the present. 3 hours a week.
Prerequisite: German 20.

35. **Intermediate Scientific German:** The reading of scientific works in German and a review of basic grammatical constructions as an aid to reading. Prescribed for third year honors science students.
Prerequisite: German 5 or Grade XII German. 2 hours a week.

40. **Outline of Classical German Literature.** 3 hours a week.
Prerequisite: German 30.

45. **Advanced Scientific German:** The reading of scientific works in German. Prescribed for fourth year honors science students.
1 hour a week: half course.
Prerequisite: German 35 or Grade XIII German.

Honors Courses

All students in Honors Courses will take comprehensive examinations at the end of their final year.

290. **German Romanticism.** 3 hours a week.
Prerequisite: Junior Group 2.

291. **Grammar, Conversation, Composition, Phonetics.**
Prerequisite: Junior Group 2. 2 hours a week.

333. **Middle High German Language and Literature:** An introduction to Germanic philology. 2 hours a week.

390. **German Realism.** 3 hours a week.

391. **Grammar, Conversation, Composition.**
Prerequisite: German 291. 2 hours a week.

420. **Contemporary German Literature.** 2 hours a week.

480. **German Classicism.** 3 hours a week.

481. **Grammar, Conversation, Composition.** 2 hours a week.
Prerequisite: German 391.

GREEK

1. **Elementary Greek:** A preparatory course for those who wish to begin the study of Greek at the University. 3 hours a week.

10. Plato, Selected Dialogues; Colson's *Greek Reader Part VIII;* composition, sight translation. 3 hours a week.
Prerequisite: Grade XII Greek or Greek 1.

20. Plato, *Crito;* Euripides, *Alcestis;* Xenophon, *Oeconomicus;* Demosthenes, *In Cononem;* composition, sight translation. 3 hours a week.

Prerequisite: Greek 10 or Grade XIII Greek.

29. **Greek Literature in English Translation:** A survey of Greek literature for those without a reading knowledge of Greek.

1 hour a week: half course.

30. Plato, *Apology;* Aristophanes, *Clouds;* Homer, selections from the *Iliad* and the *Odyssey;* lectures on the social, religious and political life of Athens in the fifth century, B.C.; composition, sight translation.

Prerequisite: Greek 20. 3 hours a week.

40. Aeschylus, *Prometheus Vinctus;* Euripides, *Medea;* Sophocles, *Oedipus Tyrannus, Antigone;* lectures on the theatre and the development of the drama; composition, sight translation. 3 hours a week.

Prerequisite: Greek 30.

Honors Courses

Comprehensive examinations will be set for all Honors students at the end of the fourth year.

Sight translation is an integral part of each of the courses in Greek Authors.

230. Plato, *Apology;* Aristophanes, *Clouds, Wasps;* public, social and political life of Athens in the fifth century, B.C.

Prerequisite: Group 2 including Greek 20. 2 hours a week.

250. **The Greek Epic:** Selections from the *Iliad and the Odyssey.*

Prerequisite: Group 2, including Greek 20. 1 hour a week: half course.

251. **Syntax and Composition:**

Prerequisite: Group 2, including Greek 20. 1 hour a week: half course.

257. **Ancient Civilizations:** The Near-East, Greece and Rome. Identical with Latin 257 and History 257. 3 lectures a week.

340. **Greek Tragedy:** Sophocles, *Oedipus Tyrannus, Antigone;* Aeschylus, *Prometheus Vinctus;* Euripides, *Medea.* Lectures on the theatre and the drama.

Prerequisite: Greek 230. 2 hours a week.

350. **I: Introduction to the Greek Historians:** Herodotus.
II: The Attic Orators: Lysias and Demosthenes.

Prerequisite: Greek 230. 2 hours a week.

351. **Syntax and Composition:** 1 hour a week: half course.

Prerequisite: Greek 251.

352. **Introduction to Greek Philosophy:** Plato, *Republic, I-IV.*

Prerequisite: Greek 230. 1 hour a week: half course.

450. **The Greek Historians:** Thucydides.

Prerequisites: Greek 340, 350. 2 hours a week.

451. Syntax and Composition: 1 hour a week: half course.
Prerequisite: Greek 351.

452. Greek Philosophy: Plato, *Republic, V-X;* Aristotle, *Ethics, I, II, IV, X.* 3 hours a week.
Prerequisites: Greek 340, 350.

453. Reading Course in Greek: To be taken with Latin 453.
Prerequisites: Greek 340, 350. 3 hours a week, one term: half course.

457. Greek and Roman History: Lectures, readings and reports. Prescribed for students in Honors Classics and optional with the consent of the instructor for other qualified students. Identical with Latin 457.
2 hours a week.

HEALTH

General Medical Knowledge: Lectures on mental health, communicable diseases and immunization, essential anatomy, physiology, minor and common diseases of the respiratory, cardio-vascular, alimentary, urino-genital and nervous systems; First Aid. Prescribed for all students in their first intramural year. One hour a week for nine weeks.

HEBREW

1-10. Grammar: Text of *Genesis* 1-3, I *Kings* 17. 5 hours a week.

20. Grammar and Syntax: Text of *Obadiah, Jonah, Amos, Isaiah* 1-6, *Haggai.* 3 hours a week.
Prerequisite: Hebrew 1-10.

30. Principles of Hebrew Poetry: *Psalms* 1, 16, 23-28, 80-84, 90-95, 121-134, *Proverbs* 1-5, *Job* 38-41; Old Testament archaeology.
Prerequisite: Hebrew 20. 3 hours a week.

40. Aramaic: Brown, *Aramaic Methods,* part I and II; exercises, grammar, syntax, pointing; translation of Old Testament Aramaic sections; Old Testament history and religion. 3 hours a week.
Prerequisite: Hebrew 30.

HISTORY

14. History of the Americas: A study of the rise and growth of the various American nations and their relations with one another, against their respective geographical, economic and cultural backgrounds.
3 hours a week.

20. Mediaeval, Renaissance and Reformation History: Continental Europe from the Fall of the Roman Empire to the close of the Council of Trent. Lectures, prescribed reading and essays. 3 hours a week.

30. The Development of Western Civilization and Thought: A survey of the development of western civilization and thought from the breakdown of the Roman Empire to the Peace Settlement following World War I. This course may not be taken by any student who has credit for 20 or 36, or for former courses numbered 21, 45 or 46. 3 hours a week.

31. **History of Canada:** Lectures, prescribed reading and essays. A survey from the beginning of the French Regime to the present.
2 hours a week.

33a. **The Development of Self-Government in the British Empire Commonwealth:** Lectures, prescribed reading and reports. The lectures will be grouped under the following heads: the breakdown of the Old Colonial System and Policy; British Colonial Policy at the beginning of the Nineteenth Century; the Colonial Reformers and the application of their ideas to Canada and to Australia; the evolution of self-government in Canada, Australasia, South Africa and India; the growth of colonial nationalism and autonomy, culminating in the achievement of Dominion status; the constitutions of the Dominions and of the Republics of Ireland and India.
3 hours a week: half course.

35. **History of England:** A lecture and reading course on the political and cultural development of England from the Roman Conquest to 1837. Prescribed for students in Honors History. 2 hours a week.

36. **Modern European History:** From the Religious Peace of Augsburg, 1555, to the fall of the First German Republic, 1934. Lectures, prescribed readings and essays. 3 hours a week.

44. **History of the United States:** The colonial period, the revolution, making 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.

Honors Courses

236. **Modern History (1555-1934):** For details see History 36. Honors students will be required to do special reading and reports.
Prerequisite: Junior Group 2. 3 lectures and a seminar a week.

257. **Ancient Civilizations.** The Near East, Greece and Rome. Identical with Latin 257 and Greek 257. 3 hours a week, lectures and seminars.

331. **History of Canada:** A survey from the beginning of the French Regime to the present. 2 lectures and a seminar a week.

333a. **The Development of Self-Government in the British Empire Commonwealth:** For details see History 33a. Honors students will be required to do special reading and reports in this course.
3 hours a week, lectures and seminars: half course.

354b. **History of Latin America:** Not offered, 1956-57.
3 hours a week, lectures and seminars: half course.

356a. **History of International Relations:** 1918 to the present.
3 hours a week, lectures and seminars: half course.
Prerequisite: History 236.

444. **History of the United States:** See History 44; prescribed for students of the fourth year in the Honors Course in History.
3 lectures and a seminar a week.

452. **History of European Society and Institutions:** In the first term Continental Europe to 1648 will be studied. In the second term the course deals primarily with the social and constitutional history of England to 1660 and emphasizes the use of documents.

3 hours a week, lectures and seminars.

455. **British Political Parties:** The rise of the Tory and Whig parties; the Revolution of 1688; the Tory Reaction in the reign of Anne; the "Reign of the Whigs", the experiment in personal government of George III; the disruption of the old Whig Party; the new Tory Party under Pitt; the growth of Parliamentary Reform and Free Trade; Peel and Liberal Conservatism; Disraeli and Democratic Toryism; Gladstone and Modern Liberalism; the Irish Parliamentary Party; the Unionist Party; the Labor-Socialist Party. 3 hours a week, lectures and seminars.

HOME ECONOMICS

23x. **Applied Art:** Fundamentals of design and color as applied to the home; modern handicraft suitable for use in home and school.

2 hours a week.

24x. **Home Nursing and First Aid:** Care of the sick; emergency treatment; bandaging; symptoms and isolation of disease. Essays and practical problems. 1 hour a week: half course.

25x. **Household Administration:** A study of general principles of home construction, choice of sites, house designs, cost of dwelling, selection of home equipment and planning the work in the home.

2 hours a week: half course.

26x. **Physiology:** A lecture course dealing with the structure and functions of the various parts of the human body.

2 hours a week: half course.

30x. **Clothing:** A study of textiles; problems in clothing construction.

1 lecture, 3 laboratory hours a week.

31x. **Normal Nutrition:** Normal requirements of the body; the optimum diet; food nutrients and their functions; deficiencies.

2 lectures a week, both terms; 2 laboratory hours a week, one term.

Prerequisites: Home Economics 26x.

32x. **Foods:** The principles of cookery and food preparation and the scientific theory underlying them. 1 lecture, 3 laboratory hours a week.

33x. **Interior Decoration:** Elements of interior decoration and design.

1 hour a week, half course.

Prerequisite: Home Economics 23x.

40x. **Clothing and Designing:** Art of costume and personal appearance; history of costume; pattern designing; care of fabric; problems in clothing construction. 2 lectures, 3 laboratory hours a week.

Prerequisite: Home Economics 30x.

41x. Advanced Nutrition: Nutritional needs during infancy; the preschool child; the adolescent. Modifications of the normal diet to meet specific dietary needs during diseases. Preparation of foods for these diets.
2 lectures a week, both terms; 2 laboratory hours a week, one term.

42x. Foods: Food science and experimental cookery.
1 lecture, 3 laboratory hours a week.
Prerequisite: Home Economics 32x.

45bx. Economics of the Household: Marketing and consumer education; family income; budgeting. 2 hours a week: half course.

46x. Demonstration Techniques: Meal service.
1 afternoon a week in second term: half course.

47x. Nutrition: Seminars and reports on recent findings in nutrition.
Prerequisite: Home Economics 31x. 1 hour a week: half course.

48x. Institutional Management: Discussion of equipment; organization and administration of food services; quantity cookery; field projects.
2 lectures a week, 3 laboratory hours one term.
Prerequisite: Home Economics 32x.

ITALIAN

1. Elementary Italian: Grammar, oral practice, translation of simple texts. 3 hours a week.

10. Intermediate Italian: Review of grammar, translation of modern Italian, oral practice. 3 hours a week.
Prerequisite: Italian 1 or its equivalent.

20. Outline of Italian Literature and Civilization: Composition, translation, history of literature. 3 hours a week.
Prerequisite: Italian 10.

JOURNALISM

Note: Students should be proficient in typewriting by the beginning of the second year.

20. Introduction to Journalism: A survey of the world press from the reader's point of view rather than that of the professional journalist; an introduction to writing for mass communication. 3 hours a week.

Honors Courses

250. News Writing and Reporting: The forms and style of journalistic prose; reporting methods; news evaluation. 6 hours a week.

260. Law for Journalists: Basic principles of the common law with special emphasis on access to news, legal guarantee and limits of freedom of the press; defamation; contempt of court and copyright.
1 hour a week: half course.

270. **Pictorial Journalism:** Principles of news photography; picture editing; the photo-story; magazine illustration; layout; engraving process. Not a course in photography. 2 hours a week: half course.

351. **Newspaper Production:** Newsroom organization; copy editing; page makeup; survey of the mechanical phases of newspaper production. 3 hours a week.

355. **History of Journalism:** A survey of the development of journalism in the British Isles, United States and Canada. 2 hours a week.

365. **Editorial Writing:** Editorial policy; the editorial and the background article; research methods; editorial page feature; the signed column; ethical standards of the press. 1 hour a week: half course.

375. **Feature and Magazine Article Writing:** Feature writing for newspapers; magazine article writing, including a study of marketing and manuscript preparation. 2 hours a week.

400. **Newswriting and Reporting:** For students registered in the Diploma course in Journalism. Writing for mass communication; the forms and style of journalistic prose; reporting methods; news evaluation; interpretive reporting. 9 hours a week.

451. **Interpretive News Writing and Reporting:** A study of the problems in reporting public affairs, social, economic and political news; individual instruction will be given in reporting specialized fields. 3 hours a week.

455. **Radio News and Documentary Writing:** Comparative study of newspaper and radio writing and news treatment; preparation of newscasts; documentary news broadcasts; radio interviewing; the actuality broadcast. 3 hours a week.

460. **Foreign News Editing and Reporting:** An intensive study of dispatches and background material from areas prominent in the news. 2 hours a week.

LATIN

1. **Elementary Latin:** A preparatory course for those who wish to begin the study of Latin at the University. 3 hours a week.

10. Selections from Latin Prose and Poetry; composition and sight translation. 3 hours a week.
Prerequisite: Grade XII Latin.

20. Pliny, *Letters;* Virgil, *Aeneid VI;* composition; sight translation.
Prerequisite: Latin 10 or Grade XIII Latin. 3 hours a week.

30. Catullus; Virgil, selections from the *Bucolics* and *Georgics;* selections from Horace (*Odes*) and the Elegiac Poets; composition and sight translation.
Prerequisite: Latin 20. 3 hours a week.

39. **Latin Literature in English Translation:** A survey of Latin Literature for those without a reading knowledge of Latin. 1 hour a week: half course.

40. Virgil, *Aeneid I-VI;* Horace, *Satires, Epistles;* Juvenal, *Satires;* composition, sight translation. 3 hours a week.
Prerequisite: Latin 30.

Honors Courses

Comprehensive examinations will be set for all Honors students at the end of the fourth year.

Sight translation is an integral part of each of the courses in Latin Authors.

230. Catullus; Virgil, selections from the *Bucolics* and *Georgics;* selections from Horace (*Odes*) and the Elegiac Poets. 2 hours a week.
Prerequisite: Group 2, including Latin 20.

250. Cicero, *De Amicitia.* 1 hour a week: half course.
Prerequisite: Group 2, including Latin 20.

251. Syntax and Composition: 2 hours a week.
Prerequisite: Group 2, including Latin 20.

257. Ancient Civilizations: The Near-East, Greece, Rome. Identical with History 257 and Greek 257. 3 lectures a week.

340. Virgil, *Aeneid I-VI;* Horace, *Satires* and *Epistles;* Juvenal, *Satires.*
Prerequisite: Latin 230. 2 hours a week.

350. Cicero: the history of his life and times; *De Officiis III, Pro Archia, Philippic II, Letters.* 2 hours a week.
Prerequisites: Latin 230, 250.

351. Syntax and Composition: 1 hour a week: half course.
Prerequisite: Latin 251.

352. Roman Comedy, with an introduction to historical Latin Grammar. 1 hour a week: half course.
Prerequisites: Latin 230, 250.

450. Roman Historians, with special reference to Livy and Tacitus.
Prerequisites: Latin 340, 350, 352. 2 hours a week.

451. Syntax and Composition: 1 hour a week: half course.
Prerequisite: Latin 351.

452. Lucretius, *I-III* (Selections), *V;* Virgil, *Aeneid, VII-XII;* Quintilian X; Horace, *Satires I, 4, 10; Ars Poetica.* 2 hours a week.
Prerequisites: Latin 340, 350, 352.

453. Reading Course in Latin: to be taken with Greek 453.
Prerequisites: Latin 340, 350, 352.
3 hours a week, one term: half course.

457. Greek and Roman History: Lectures, readings and reports. Prescribed for students in Honors Classics and optional with the consent of the instructor for other qualified students. 2 hours a week.

LIBRARY SCIENCE

The Use of Books and Libraries: Lectures and exercises on the use and arrangement of the card catalogue, standard reference books, bibliography, periodicals and periodical indexes. Prescribed for all students in the first year. 1 hour a week: half course.

Text-book: Campbell and Welling, *Library Science for Canadians.*

MATHEMATICS AND ASTRONOMY

11. College Mathematics: A unified treatment of algebra, analytic geometry, trigonometry. 3 hours a week.

Prerequisite: Grade XII Mathematics.

20. Principles of Mathematics: An introduction to university mathematics and some modern points of view in the foundations of mathematics. 3 hours a week.

Prerequisite: Grade XIII Mathematics (any two papers), or equivalent mathematical maturity.

Text-book: Allendoerfer and Oakley, *Principles of Mathematics* (McGraw-Hill).

24. Calculus: A first course. 3 hours a week.

Prerequisites: Grade XIII Algebra, Geometry, and Trigonometry, or Mathematics 11.

Text-book: Smail, *Calculus* (Appleton-Century).

24. (Engineering) Calculus: For First Year Engineering Science.
Prerequisites: Grade XIII Algebra, Geometry, Trigonometry.
4 hours a week.

Text-book: Sherwood and Taylor, *Calculus* (Prentice-Hall).

29. Descriptive Astronomy: Systems of coordinates; identification of stars and constellations; the solar system; normal, variable and binary stars; structure of our galaxy; other galaxies; observations with the 10-inch refractor of the Hume Cronyn Observatory. 2 hours a week.

33. Mathematics of Investment: Interest and discount, annuities certain; amortization and sinking funds, bonds and bond prices, capitalized cost, elementary probability theory with applications to life insurance and life annuities. 2 hours a week.

Prerequisite: Grade XII Mathematics.

Text-book: Simpson, Pirenian, Crenshaw, *Mathematics of Finance,* Third Edition (Prentice-Hall).

35. Statistics: Fundamental concepts of statistics with applications; nature and scope of statistical methods. 2 hours a week.

Text-book: Wilks, *Elementary Statistical Analysis* (Princeton University Press).

Honors Courses

230. Algebra I: Determinants and matrices, complex numbers, theory of equations. 2 hours a week.

Prerequisite: Mathematics 20 or 24.

234. Calculus: A second course. 4 hours a week.
Prerequisite: Mathematics ~~20~~ 20

242. Analytic Geometry: First term, the general conic and pencils of conics; second term, geometry of three dimensional space. 3 hours a week.
Prerequisite: Mathematics 20 or 24.
Text-books: Magee, *Advanced Conic Sections* (mimeographed).
Olmsted, *Solid Analytic Geometry* (Appleton-Century).

245. Statistics I: Introductory probability and statistics.
Prerequisite: Mathematics 20 or 24. 2 hours a week.
Text-book: Freund, *Modern Elementary Statistics* (Prentice-Hall).

254. Calculus and Differential Equations. 3 hours a week.
Prerequisite: Mathematics ~~20~~ 24

254 (Engineering) Calculus and Differential Equations: For second year Engineering Science. 3 hours a week.

345. Mathematical Theory of Probability. Math 445 is identical 2 hours a week.

350. Algebra II: Linear algebra and theory of matrices.
2 hours a week.
Text-book: Stoll, *Linear Algebra and Matrix Theory* (McGraw-Hill).

351. Synthetic Geometry: Metric and projective geometry of two dimensional space. 2 hours a week.

353. Investment and Finite Differences. 2 hours a week.
Text-books: Mackenzie, *Interest and Bond Values* (U. of Toronto Press).
Freeman, *Mathematics for Actuarial Students,* Vol. II (Cambridge).

354. Differential Equations. 2 hours a week.

356. Analysis I. 3 hours a week.

358. Vector and Tensor Analysis: Algebra and calculus of vectors, introduction to tensor analysis, applications to metric differential geometry.
2 hours a week.

359. Astronomy: Descriptive and mathematical. 2 hours a week.

363. Life Contingencies. 2 hours a week.
Text-book: Jordan, *Life Contingencies* (Society of Actuaries).

450. Algebra III: Theory of numbers; an introduction to some of the concepts of abstract algebra, such as sets, groups, rings, polynomials, fields, and the Galois theory. 2 hours a week.

452. Analytic Projective Geometry. 2 hours a week.

454. Partial Differential Equations. 3 hours a week.

455. Statistics II. 3 hours a week.

456. Analysis II. 3 hours a week.

458. Fluid Dynamics. 2 hours a week.

445, See 345

459. **Astrophysics:** An introduction to the study of binary stars, stellar atmospheres, stellar structure and interstellar matter. Practical problems in the analysis of astronomical data relating to these topics will be included. 2 hours a week.

460. **Introductory Topology.** 2 hours a week.

463. **Life Contingencies II.** 2 hours a week.

Text-book: Jordan, *Life Contingencies* (Society of Actuaries).

470. **Foundations of Mathematics:** Historical background and philosophical aspects of mathematics; abstract postulational systems; foundations of geometry, algebra, and analysis. 2 hours a week.

Text-books: Stabler, *Introduction to Mathematical Thought* (Addison-Wesley).
Wilder, *Introduction to Foundations of Mathematics* (Wiley).

MILITARY STUDIES

Students may offer themselves for training in one of the three Armed Services, the University Naval Training Divisions, the Canadian Officers' Training Corps, and the RCAF University Squadron. Suitable candidates in each service will be trained for commissioned rank.

Military Studies count as a half course towards a degree in Senior Group B of the General Course in Arts.

Auxiliary officers and other ranks, enrolled in degree courses, will obtain credit for Military Studies when they have served for three years, including summer training, and have attended eighty percent. or more of their lectures and parades.

MUSIC

Three courses in Music permit students of the University to expand their knowledge of music and improve their performance. Application should be made to the Principal of University College to ascertain where these options will be counted in Junior Group 2, in Senior Group B, and in Honors and specialized courses. Substitution for a prescribed subject in any year of an Honors course must have the concurrence of the head of the Department concerned.

Through auditioning, the professor in charge of each course in Music will assess each candidate's prerequisite and outline the nature of the assignments for the year. The subjects presented are theory, history of music and applied music, i.e. lessons in piano, voice or violin, etc. Two of the three subjects must be chosen in order to obtain college credit. Whenever private lessons are involved, tuition fees will be the student's responsibility.

10. **History of Music:** Music in the ancient world, in the early Church, in the Middle Ages, in the Renaissance; the overture to the baroque; the 17th and 18th centuries; Bach and Handel.

Theory, first course: Elementary Rudiments and Harmony; knowledge of major and minor scales, time signatures, intervals, embellishments, primary triads, cadences, phrase and sentence structure as demarcated by cadence. 2 hours a week.

20S. Music Education: to be offered only in the Summer Session. It is an option towards a General Arts degree. 10 hours a week.

20. History of Music: Haydn, Mozart, Beethoven, Schubert, the early Romantic composers, Mendelssohn, Schumann, Berlioz, Chopin and piano music, Liszt, the predecessors and contemporaries of Wagner.

Theory, second course: Harmony, chord connection, primary and secondary triads, realization of figured bass, harmonization of melody, study of two and three-part song forms and sonatina. 2 hours a week.

30. History of Music: The later Romantics; Brahms, Wolf, Strauss; Cesar Franck; Bruckner, Mahler; Nationalism in Music; the musical impressionists; Debussy, Ravel; the 20th century.

Theory, third course: Harmony: seventh chords, non-chord tones, simple modulations, study of Sonata-Allegro form. 2 hours a week.

For additional Music Courses, see page 98.

PHILOSOPHY

Note: A student who has not chosen Philosophy 20 as a Junior Group option is required to take Philosophy 30 or 32 (for Science students) for a General Course degree. Philosophy 20 is not a prerequisite for 30, although 20 followed by 30 is a suitable sequence.

20. Philosophy and Human Problems: This course is concerned with ethical, logical, aesthetic, religious, educational and political types of problems. Its purpose is to help students to understand what is involved in these problems and to appreciate some of the solutions provided by the great thinkers of the past and present. (This course is for freshmen.) 3 hours a week.

30. Basic Philosophical Literature: A critical survey of a selected group of Philosophical classics, ancient and modern. 2 hours a week.

31. Logic and Problems of Knowledge: First term—Logic: meaning and definition, formal logic, verification of knowledge and scientific method; second term—Problems of Knowledge, with particular reference to religion. 2 hours a week.

32. Philosophical Theory: Readings in selected philosophical classics and an examination of some of the fundamental ideas in fields other than the natural and social sciences. (This course should not be selected by those who are taking or have taken Philosophy 20 or 30.) 2 hours a week.

35. Aesthetics: A study of aesthetic theory, criticism and general theory of value. 2 hours a week.

36. Ancient Philosophy: A survey of the principal developments from the Presocratics (600 B.C.) to Plotinus (250 A.D.) and of their contributions to our cultural heritage. Primary emphasis will be placed on the critical reading of selected original sources. 2 hours a week.

42. Introductory Ethics: A critical inquiry into the possibility and nature of ethical standards, the methods by which they may be known, and

their applications to concrete problems of personal and social morality. 2 hours a week.

43. **Philosophy of Religion:** The nature of religion; the growth of religious experience; important types of religious philosophy. 2 hours a week.

44. **Principles and Problems of Philosophy:** Philosophical problems, related to the special interests of members of the class, will be discussed. 2 hours a week.

Prerequisites: Two courses in Philosophy and the consent of the Head of the Department.

47. **Early Modern Philosophy:** A critical examination of basic philosophical literature from the 16th, 17th and 18th centuries. 2 hours a week.

48. **Contemporary Philosophy:** A critical study of the following 20th century philosophers: Dewey, Bergson, Whitehead. There will also be an examination of logical positivism and existentialism. 2 hours a week.

Honors Courses

The following courses are identical with the Pass courses indicated, except that additional assignments will be required: 231 (31), 335 (35), 336 (36), 347 (47), 443 (43), 444 (44), 448 (48).

230. **Basic Philosophical Literature:** An examination of the principal problems and issues, methods and attitudes, theories and solutions, terms and concepts, of philosophy, as exemplified in selected philosophical classics. For Honors students in any department. 2 hours a week.

350. **Philosophical Texts:** An examination of specified source materials in Greek and Modern Philosophy; critical works will also be studied. Not offered, 1956-57. 2 hours a week.

456. **Seminar in Plato and Aristotle.**
Prerequisite: Philosophy 336. 2 hours a week.

457. **Modern Philosophy:** Later modern philosophy with particular emphasis on the philosophy of the 19th century. 2 hours a week.
Prerequisite: Philosophy 347.

462. **Ethics:** A critical study of moral problems and theories. The course will be based on readings selected from the classics of ethical literature from Aristotle to the present. 2 hours a week.

466. **Mediaeval Philosophy:** A survey of the principal currents in philosophy from the breakdown of classical culture to the Renaissance (350 A.D. to 1500). Primary emphasis will be placed on the critical examination of representative works. 2 hours a week.
Prerequisite: Philosophy 336.

PHYSICAL, HEALTH AND RECREATION EDUCATION

10. **Prescribed Program:** The curriculum is divided into three

sessions (fall, winter and spring). Each undergraduate student entering the University will elect one activity in each of the three sessions, in order to fulfill the requirements of this course. All new students are also required to take a swimming proficiency test. The non-swimmers and beginning swimmers will enrol in the beginning swimming course in the fall session.

Proficiency Examinations: New students may be granted the privilege of exemption from one or more of the session's activities by passing proficiency examinations in the sports offered.

Activities Available:

(1) *Aquatic*: Beginning and advanced swimming; lifesaving;
(2) *Recreational*: Badminton; squash; tennis; golf; handball;
(3) *Team*: Soccer; volleyball;
(4) *Combatives* Wrestling; personal defense; (men only);
(5) *Athletic and acrobatic*: Tumbling; apparatus; track and field;
(6) *Fitness and developmental*: Physical fitness; prescribed exercises. Hours by arrangement: half course.

20, 30, 40. Elective Program: In the second, third and fourth years, respectively. Hours scheduled by arrangement: half course.

(1) *First Aid*: Elementary course, second term: 2 hours a week, 8 weeks.

(2) *Life Saving and Water Safety*: second term, starting early in March. 4 hours a week, 5 weeks.

(3) *Individual Physical Education*: Classes will be conducted as possible for students who require individual corrective physical education, on recommendation of the University Physician.

(4) *Intercollegiate Sports*:

For men and women: basketball, swimming, tennis;
For men: football, wrestling, soccer, track and field;
For women: badminton, archery, volleyball.

Team practices are generally held in the late afternoons, with contests scheduled on week-ends, insofar as possible.

Honors Courses

251. Team Games, Individual and Dual Activities: for men—football, group games, basketball, aquatics, track and field, officiating, volleyball, gymnastics, badminton, handball, squash racquets; for women—archery, track and field, group games, volleyball or basketball, badminton, folk dancing, square and ballroom dancing, swimming, gymnastics.

2 lectures and 6 laboratory hours a week.

258. History of (and Introduction to) Physical, Health, and Recreation Education: Development of these three sections of education; their inter-relationship in modern society; their connection with learning; the social significance of competitive games and sports; contemporary developments through public and private agencies. 2 lectures a week.

266. Teaching Methods in Physical, Health, and Recreation Education: Teaching techniques; program and lesson planning; and the development of methods for the selection and organization of materials.

2 lectures a week (laboratory as required)

351. Team Games, Individual and Dual Activities: for men—football, track and field, hockey, folk and square dancing, soccer, basketball, aquatics, gymnastics; for women—tennis, golf, group games, volleyball or basketball, folk dancing, modern dancing, swimming, skating.

1 lecture and 4 laboratory hours a week.

352. Organization and Administration of Physical and Health Education including Athletics: Staff, curriculum, budget, finance and purchasing, care of equipment, class organization, records, reports and facilities; the scheduling and management of athletic contests. 2 lectures a week.

353. School Health Education (Methods and Materials): An approach to intelligent planning for healthful living; the study of personal health from the standpoint of Biology and Psychology; community and institutional public health; methods and materials needed to teach school health.

2 lectures a week.

354. Functional Human Anatomy:

1 lecture and 1 laboratory hour a week: half course.

356. Student Teaching and Seminar: Group discussion; supervised observation; supervised participation in secondary schools.
1 lecture a week; 2 laboratory hours a week in the second term; half course.

Note: The Recreation Education Option (courses 371-376) will not be offered in 1956-57.

371. Social and Recreational Games: For various club and age groups.

1 lecture and 1 laboratory hour a week: half course.

372. Planning, Construction, and Maintenance of Recreational Facilities: Relating specifically to playgrounds, parks, play areas, public and private agencies, day camps, and overnight camping units; resources, methods, and materials. 2 lectures a week.

375. Organization and Supervision of Crafts and Hobbies: Their recreational and therapeutic values; facilities; audio-visual aids; lectures in craft design; craft activities. 1 lecture a week, field laboratory work.

376. Supervised Field Work in Recreation: Field work progressing from directed observation to supervised practice and subsequent independent work, under supervision of the University staff and local directors of approved public and private agencies. After-hour work; half course.

382. Organization and Administration of Recreation:

2 lectures a week.

450. Principles of Physical, Health, and Recreation Education: The aims and objectives of education as a basis for formulating the student's professional point of view; the scope of Physical, Health, and Recreation

Education; the contributions made by the humanities, natural sciences, and social sciences; the principles and psychological aspects of competition; the functions and competencies of leaders and teachers; professional ethics.
2 lectures a week.

451. **Team Games, Individual and Dual Activities:** for men—football, track and field, sports development exercises, gymnastics, aquatics, basketball, wrestling, baseball, stunts and tumbling; for women—two team sports, specialized training and experience in coaching, two individual or dual sports, and electives. 1 lecture and 4 laboratory hours a week.

453. **Corrective Physical Education (including Care and Prevention of Athletic Injuries):** Essential facts of human anatomy and physiology, as they pertain to corrective exercise; the under-developed or handicapped child; the care and prevention of athletic injuries; practical laboratory experience in clinical centres. 1 lecture, 2 laboratory hours a week.

454. **Physiology of Exercise and Kinesiology:** Trends of investigations of the physiology of physical activity, with implications for physical and health education; the science of bodily movements; the principal types of muscular exercise; analysis of complex movements into their simplest elements. 2 lectures a week (laboratory as necessary).

457. **Tests and Measurements in Physical and Health Education:** The use of test results to aid in program evaluation.
2 lectures a week (demonstrations and laboratory work as necessary).

Note: The Recreation Education Option (courses 473-483) will not be offered in 1956-57.

473. **Activities for Special Groups (including Industrial Recreation):** Recreational activities for pre-school children, adults, the handicapped, the aged; aspects of recreation in industry.
2 lectures a week (laboratory experiences as required).

476. **Supervised Field Work in Recreation:**
After-hour work; half course.

479. **Seminar in Current Problems:** Analysis of problems in recreation with application to local ituations; public relations and liaison techniques; program aids; professional survey techniques; analysis of program organization; basic problems and trends of recreation. 2 lectures a week.

483. **Camping and Outdoor Education:** Selected administrative details in organized camping, including committee for planning, personnel, budget, sites; buildings, outdoor areas, equipment, publicity, safety and health precautions, insurance, nutrition, and program.
2 lectures a week (laboratory hours as necessary).

PHYSICS

20. **Mechanics and Heat:** A survey prescribed for students intending to major in some branch of science: demonstrations and laboratory exercises covering the following principal topics: systems of measurement; laws of uniformly accelerated motion; elementary analytic statics; rotational

motion; simple harmonic motion; hydrostatics and hydrodynamics; surface tension; viscosity; osmosis; thermometry; temperature and its effects; gas laws; calorimetry; change of state; vapor pressure; hygrometry; elementary kinetic theory; first and second laws of thermodynamics, reversible cycles.

2 lectures, 3 laboratory hours a week.

21. **Physical Science:** Lectures and lecture demonstrations designed (1) to present an historical review of the development of the physical sciences, with emphasis on principles rather than facts; (2) to develop some of the practical applications of physical science in the modern world; (3) to outline the present trends in science. Optional in Junior Group 2 and in Senior Group B. 2 lectures, 2 laboratory hours a week.

31. **General Physics:** An extension of Physics 20; the laws and principles of light, sound, electricity, magnetism and thermionics.

2 lectures a week, both terms; 3 laboratory hours a week, first term.

41. **Modern Physics:** (i) a review of the laws and theories of classical physics; (ii) the development of physical science from the late 19th century to the present, with particular emphasis on atomic phenomena.

Prerequisites: Physics 20 or 21 and Mathematics 24 (this may be taken contemporaneously). 3 lecture hours a week.

Honors Courses

204. **General Physics:** Elementary Electricity and Optics including elementary geometrical and physical optics, current electricity, static electricity, magnetism and electro magnetism.

2 lectures, 3 laboratory hours a week.

204M. **General Physics:** An extension of Physics 20, prescribed for the students who have been selected by the Admissions Committee of the Faculty of Medicine for admission to the second year premedical course; the laws and principles of light, sound, electricity, magnetism and thermionics.

2 lectures, 3 laboratory hours a week, first term:
2 lectures a week, second term.

250. **Theoretical Physics I:** An introduction to vector calculus, with applications to mechanics; the theory of vibrations and waves; dimensional analysis. 2 lectures a week.

251. **Theory of Measurements:** Lectures and practical work on methods of treating data obtained in the laboratory, so as to obtain the greatest amount of useful information. The course includes a discussion of the basic ideas of probability, of chance distributions, and of precision indexes.

3 lectures and laboratory hours a week.

254. **Light and Sound:** Elementary geometrical and physical optics, and elementary sound. 2 lectures, 3 laboratory hours a week.

255. **Electricity and Magnetism:** The principles of electricity and magnetism, including an introduction to electrical measurements.

2 lectures, 3 laboratory hours a week.

350. **Dynamics and Properties of Matter:** Some aspects of properties of matter, damped and perturbed harmonic motion, central orbits, and the theory and application of the Lagrangian and Hamiltonian equations of motion. 3 lectures a week.

351. **Theoretical Physics II:** The Harmonic Analysis of Waveforms. The techniques of solution in various coordinate systems, of the partial differential equations commonly met in mathematical physics, together with an introduction to the eigenvalue approach to boundary value problems.
3 lectures a week.

353. **Advanced Heat and Thermodynamics:** A treatment of the laws of thermodynamics, heat engines, reversible cycles, change of state, radiation, kinetic theory of gases, with applications to various fields of physics, including surface tension and elasticity. 2 lectures a week.

356. **Electronics:** Similar to 376, with the addition of laboratory work throughout the year. 2 lectures a week.

359. **Modern Experimental Physics:** Laboratory work designed to give training in the techniques of the advanced physics laboratory.
9 laboratory hours a week: double course.

366. **Electronics:** Similar to 376 but with the addition of one term of laboratory work. 2 lectures a week, both terms,
3 laboratory hours a week, second term.

370. **Dynamics:** The first term of Physics 350, including Vector Analysis and generalized coordinates.
3 lectures a week, first term: half course.

376. **Electronics:** A treatment of the underlying principles of the emission of electrons and of their behaviour in high vacuum tubes, gaseous tubes, cathode ray tubes and other devices; an analysis of rectifier circuits and of amplifiers. 2 lectures a week.

377. **Circuit Analysis:** An introduction to electric circuit analysis commencing with simple transient problems but chiefly concerned with the steady-state A.C. method. Impedance and admittance concepts, vector diagrams, resonance, systematic analysis of multi-branch networks and the specialised results of linear 4-terminal systems are considered in detail. Emphasis throughout is placed on communications rather than power aspects. 3 lectures a week.

379. **Laboratory:** Experiments on the elementary theory of vacuum tubes, the transient analysis of simple circuits, and elementary A.C. phenomena. Electrical measurements at audio and radio-frequencies. Design, and construction of power-supplies, audio amplifiers, attenuators and filters. Solution, by students in class, of problems arising from Physics 376 and 377. 9 laboratory hours a week: double course.

454. **Advanced Optics:** An advanced treatment of theoretical and applied optics. 2 lectures a week.

455. **Theoretical Physics III:** A mathematical treatment of electrostatics and electromagnetism, with special emphasis on field theory and electromagnetic waves. 2 lectures a week.

456. **Atomic Physics.** A course designed to give a thorough knowledge of the fundamental particles and of the experimental basis for modern concepts of atomic and nuclear structure. 2 lectures a week.

457. **Introductory Quantum Mechanics:** The course stresses the physical ideas behind the wave-particle duality and probability interpretation, thus leading to Schroedinger's wave equation and its solution for tunnelling phenomena, Hydrogen atom, and other problems. 2 lectures a week.

458. **Seminar:** Preparation of papers and reports: reading of historical essays and of articles from current magazines. Prescribed for fourth year students and optional for all students in the Mathematics and Physics course.
1 hour a week: half course.

459. **Laboratory:** Designed as an accompaniment to the lecture work of the fourth year. Emphasis is laid upon individuality of work and resourcefulness. As far as possible, training is given in research methods.
12 laboratory hours a week: double course.

476. **Circuit Analysis and Applied Electronics:** (1) Use of operational methods of obtaining the complete (including transient) solution to electrical and analogous mechanical circuit problems, with emphasis on the direct and inverse Laplace Transformations; (2) a study of the motion of electrons in electric and magnetic fields, with applications to devices such as the klystron, magnetron, ion accelerator, electron microscope.
2 lectures a week.

477. **Communication Circuits:** A study of the principles and applications of oscillatory circuits, modulators, detectors, etc., together with an analysis of transmission line and antenna design. 2 lectures a week.

479. **Laboratory:** Designed as an accompaniment to the lecture work of the fourth year Radio Physics Option. 12 hours a week: double course.

POLITICS

32. **Introduction to Political Science:** (a) The state, its origin, form and activities, and the working of governments, particularly those of the United Kingdom, Canada, the United States, France and Switzerland.

(b) A critical study of Socialism, Communism and Fascism.
3 hours a week.

34. **Elements of Political Theory:** An analysis of the principal concepts of politics, especially democratic politics.
Prerequisite: Political 32 or instructor's permission. 3 hours a week.

42a. **Municipal Government:** The functions and administration of municipal government, especially in Ontario, and the role of municipal government in Canadian politics. 3 hours a week: half course.

42b. Canadian Government and Politics: A study of Canadian governmental institutions and Canadian federalism.

Prerequisites: History 31 or Politics 32 or instructor's permission.

3 hours a week: half course.

44a. American Government and Politics: A study of American institutions of government and American political processes.

Prerequisite: Politics 32 or History 44 or instructor's permission.

3 hours a week: half course.

Honors Courses

Politics 232, 334, 342a, 342b and 444a are identical respectively with 32, 34, 42a, 42b and 44a, except that additional assignments will be required in Honors courses.

351b. International Relations: The problems arising from the absence of world government; economic harmonies and conflicts; Nationalism, Militarism, Imperialism, the causes of war and the efforts to avoid it; diplomacy, arbitration, the World Court, International Law, and the United Nations.

3 hours a week, one term: half course.

452. History of Western Political Thought: The development of western political ideas, from the ancient Greeks, through the Middle Ages to modern fascism, Marxism and liberalism. 3 hours a week.

462b. Public Administration: An anlysis of the structure, management and control of modern civil services. Not offered in 1956-57.

Prerequisite: Politics 32. 3 hours a week: half course.

PSYCHOLOGY

In University College, Psychology 20 or 30 is ordinarily prerequisite to all other courses in psychology.

20. Introduction to Psychology: Contemporary psychological methods and tendencies; intelligence and intelligence testing; memory and the learning process; motivation; feeling and emotion; sensation and perception; types of thinking; personality. 3 hours a week.

30. Principles and Methods: A discussion of the motives, emotions, and intellectual abilities of human beings; special emphasis on the effective use of these factors in private and social activities. **Open only to Science and Premedical students who have neither had nor are taking Psychology 20.**

3 hours a week.

35. Experimental Psychology I: An elementary course designed to introduce the student to standard laboratory techniques in psychology; emphasis is placed upon learning, aesthetic judgment, motor aptitudes; a brief introduction to statistics. 2 lectures, 2 laboratory hours a week.

35S. Similar to Psychology 35, but abbreviated and condensed.

Half course.

36. **Child Psychology:** Child development; native equipment; learning; character and personality development; child management and family relationships. 2 hours a week.

38. **Experimental Psychology II:** A laboratory study of such processes as sensation, perception, reaction times, emotions and the higher thought processes. 2 lectures, 2 laboratory hours a week.

39. **Problems in Clinical Psychology:** The clinical approach to mental hygiene; the development of Mental Health Clinics; mental testing; behavioral problems; factors promoting mental health. 2 hours a week.

46. **Applied Psychology:** The applications of psychological principles to problems in education and industry. 2 hours a week.

48. **Abnormal Psychology:** A consideration of abnormal activities in sensation, perception, memory, emotion, thought and behavior; mental deficiency; the causes and symptoms of the psychoneurotic disorders; some reference to major mental disorders; psychotherapeutic techniques including hypnosis and psychoanalysis; spiritism and extrasensory perception. 2 hours a week.

49. **Social Psychology:** The activities of living beings in response to their social environment. The conditioning of personality by the family and other groups; types of prejudice; leadership and prestige in social life; the mob; mental epidemics; propaganda; public opinion. 2 hours a week.

Honors Courses

Offered in University College only.

The following courses are identical with the Pass courses indicated, except that additional assignments will be required: 235 (35), 236 (36), 338 (38), 339 (39), 349 (49), 446 (46), 448 (48).

234. **Basic Problems in Psychology:** A critical examination of the more persistent problems in the history of psychology. 2 hours a week.

337. **Theory and Construction of Mental Tests:** Discussion of basic considerations in mental measurement; description and evaluation of typical measuring instruments and their uses; consideration of persistent problems in the field of mental measurement. 2 hours a week.

355. **Statistics:** The application of common statistical procedures to psychological data. 2 hours a week.

444. **Modern Systems of Psychology:** A critical examination of some modern systems of psychology: Structuralism, Functionalism, Behaviorism, Purposivism, Gestalt Psychology, Psychoanalysis. 2 hours a week.

459. **Research Problems:** A seminar course in which students will select topics for special investigation. 3 hours a week.

For **RELIGIOUS KNOWLEDGE** courses, see the affiliated colleges, pp. 95-105.

RUSSIAN

1. **Elementary Russian:** A beginning course; pronunciation, grammar, dictation, translation, oral practice. Not offered, 1956-57. 3 hours a week.

10. **Intermediate Russian:** Grammar, dictation, translation, composition and conversation. Not offered, 1956-57. 3 hours a week.

Prerequisite: Russian 1.

20. **Advanced Russian:** Special problems of grammar, translation, conversation, composition. Not offered, 1956-57. 3 hours a week.

Prerequisite: Russian 10.

29. **A Survey of Russian Literature:** for those without a reading knowledge of Russian. Not offered, 1956-57. 1 hour a week: half course.

30. **Outline of Russian Literature:** Nineteenth and Twentieth centuries. Not offered, 1956-57. 3 hours a week.

Prerequisite: Russian 20.

45. **Scientific Russian:** The reading of scientific texts and articles in Russian. For Honors Science Students. 1 hour a week: half course.

Prerequisite: Russian 10.

SECRETARIAL SCIENCE

Students are warned that the difficulty of adjusting timetables makes it impossible for those who are unable to pass the final tests of each year to take general Arts subjects of a succeeding year in conjunction with their Shorthand and Typewriting. Therefore, students who fail to pass in one or more of their subjects are faced with the possibility of having to lose an entire year.

28-29. **Shorthand and Typewriting:** Pitman's Shorthand: theory; speed up to 60 words a minute, and typed transcription of notes. Touch system of typewriting; care of machine; letter styles; copying from manuscript and printed matter; centering; accuracy; and timed tests. 12 hours a week.

30. **Accounting and Bookkeeping:** Prescribed for secretarial science students. The course provides practical and basic applications of accounting relating to the sole proprietorship form of business organization, as well as to the partnership and corporate types of organization. 2 hours a week.

36. **Business Mathematics:** Prescribed for Honors students in Business Administration and Secretarial Science. It provides practical and basic applications of methods relating to such calculations as inventory and turnover, depreciation, distribution of overhead, taxes, insurance, annuities and many other kinds of typical business calculations. 2 hours a week.

37. **Office Practice:** The foundation of the work in Office Practice is laid in the third year. Lectures are given on office methods, and actual duties are undertaken in the Secretarial Science Office. 3 hours a week.

Prerequisites: Secretarial Science 28-29.

38-39. **Shorthand and Typewriting:** Shorthand speed up to 100 words a minute; typed transcription of notes; typewriting from manuscript; tabula-

tion; carbon copies; telegrams; financial statements; methods of duplicating; accuracy and timed tests. 12 hours a week.

Prerequisites: Secretarial Science 28-29.

47. Office Practice: The responsible duties of the various members of an office staff and the operation of modern office equipment are undertaken by the fourth year students. Units of work are assigned in rotation. Lectures are given on secretarial duties, office organization, the administration of services, the problem of office personnel. 15 hours a week: double course.

Prerequisites: Secretarial Sciences 37, 38, 39.

48-49. Shorthand and Typewriting: Shorthand speed up to 130 words words a minute; typed transcription of notes; typewriting speed up to 60 words a minute; typing from advanced copy (technical matter, foreign languages) and from dictation. 10 hours a week.

Prerequisites: Secretarial Science 38, 39.

SOCIOLOGY

28. Introduction to Sociology: 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. 3 hours a week.

38. Social Development of Canada: An examination of processes, problems and theories of social change, using Canadian geographic, economic, religious and historical data for analysis. 3 hours a week.

48. Population Trends and Problems: The study of the ecological, symbiotic and socio-anthropological factors in the evolution of the human species; a critical survey of population theories; the quantitative and qualitative aspects of population; race relations, population movements, and the problems of eugenics and euthenics. 3 hours a week.

49. Social Pathology: The study of personality disorganization and maladjustment from the point of view of sociology; the problems of poverty, physical and mental deficiency, alcoholism, insanity, delinquency and crime; social change and social disorganization, the pathology of social groups and classes, the pathology of economic and cultural relatins. 3 hours a week.

Honors Courses

Sociology 328, 338, 348, and 449 are identical respectively with 28, 38, 48 and 49, except that additional assignments will be required in the Honors courses.

SPANISH

1-10. Elementary Spanish: Grammar, translation, dictation, oral practice. 5 hours a week.

20. Advanced Spanish: Grammar review, composition, translation, oral practice. 3 hours a week.

Prerequisite: Spanish 1-10 or its equivalent.

22. **Conversation:** Systematic oral practice for developing fluency in speaking Spanish. 2 hours a week: half course.

Prerequisite: Spanish 1-10.

45. **Scientific Spanish:** The reading of Scientific Spanish from journals, supplemented by individual reading in the special field of study of each student. Not offered in 1956-57. 1 hour a week: half course.

Prerequisite: Spanish 1-10 or Grade XIII Spanish.

Note: Spanish 30, 31, 40, 41 are identical with 230, 231, 340, 341, respectively.

Honors Courses

All students in Honors Courses will take a comprehensive examination at the end of the final year.

230. **Spanish Drama** since the 17th Century; lectures, reading, discussion reports. 2 hours a week.

Prerequisite: Spanish 20.

231. **Phonetics, Prose Composition, Conversation.**
Prerequisite: Spanish 20. 2 hours a week.

250. **Latin-American Civilization:** An historical survey of Latin-American Culture; the modern Spanish-American novel; lectures, reading, reports. 2 hours a week.

Prerequisite: Spanish 20.

340. **Modern and Contemporary Spanish Prose:** Lectures, reading, discussion, reports. Not offered in 1956-57. 2 hours a week.

Prerequisite: Spanish 20.

341. **Commercial and Industrial Spanish:** Grammar, advanced composition, reading. 2 hours a week.

Prerequisite: Spanish 231.

360. **Spanish Civilization:** An historical survey of Spanish culture; lectures, reading, reports. Not offered in 1956-57. 2 hours a week.

Prerequisite: Spanish 20.

450. **Spanish Lyric Poetry:** Lectures, reading, discussion.
Prerequisites: Spanish 340 and 360. 2 hours a week.

451. **Mediaeval Spanish:** Study of phonology, morphology, reading of Old Spanish, history of mediaeval literature; reading, lectures, reports.
Prerequisite: Spanish 341. 3 hours a week.

460. **Spanish Literature of the Golden Age:** Lectures, reading, reports.
Prerequisites: Spanish 340 and 360. 3 hours a week.

ZOOLOGY

11bN. **Introductory Zoology:** The principles of animal biology as illustrated by the study of certain typical forms; for students in Nursing and Home Economics.

2 lectures, 3 laboratory hours a week, one term: half course.

20. Introductory Zoology: The principles of animal biology as illustrated by a study of the structure and physiology of particular forms. To qualify for the Honors Courses in Biology a student must obtain at least 60% in this course. 2 lectures, 3 laboratory hours a week.

21. Biological Science: The fundamental principles of biology with stress on the cell as a unit, the origin and preservation of the individual and the race, the mode of inheritance, and the applications of biology to social and economic problems. This course is illustrated by examples from the botanical as well as the zoological field.

Open to Junior and Senior Groups. Students obtaining 60 per cent. in this course may select options for further study in Botany and Zoology.

2 lectures and 2 laboratory hours a week.

23S. Biological Field-Studies: Ontario trees, shrubs, birds, water life, insects, from the point of view of economic importance, conservation, scientific identification. Summer School only. 11 hours a week: half course.

24. Mammalian Zoology: The anatomy (first term) and physiology (second term) of the mammals. For students in Senior Group A and the Nursing, Home Economics (first term only), and Physical Education courses. 2 lectures and 2 laboratory hours a week.

Prerequisite: Zoology 11N or 21.

34. Vertebrate Histology: An introduction to the microscopic structure and development of tissues and organs.

Prerequisite: Zoology 24. 1 lecture, 3 laboratory hours a week.

37. History of Biology: The history of discoveries in biology and the development of biological thought. 2 lectures a week.

41b. Entomology: The biology and economic importance of the insects, and in addition the spiders, mites, crustacea and other arthropods.

Prerequisite: Zoology 20.

2 lectures, 4 laboratory hours a week, one term.

43. Animal Ecology: To be given in alternate years, next in 1956-57, as Zoology 453. 2 lectures a week.

Prerequisite: Zoology 24.

45. Principles of Genetics: An introduction to Mendelian inheritance, chromosome and gene theory, and the genetic conception of species.

2 lectures a week.

Prerequisite: Zoology 20, or Biological Science 21 (60%).

Honors Courses

200M. Comparative Vertebrate Zoology and Introductory Embryology: Comparative structure and function of vertebrate organ systems; introductory embryology. For prospective Medical students.

2 lectures, 3 laboratory hours a week.

250. **Invertebrate Zoology:** The anatomy and biology of representative invertebrate animals and the general classification of the group.
Prerequisite: Zoology 20. 1 lecture, 3 laboratory hours a week.

337. **History of Biology:** The history of discoveries in biology and the development of biological thought. 2 lectures a week.

350. **Comparative Vertebrate Zoology:** The biology, origin, and evolution of the classes of vertebrates; an introduction to some principles of evolution. 2 lectures, 3 laboratory hours a week.
Prerequisite: Zoology 250.

354. **Vertebrate Histology:** An introduction to the microscopic structure and development of vertebrate tissues and organs.
1 lecture and 3 laboratory hours a week.

360b. **Entomology:** The biology and economic importance of the insects, and in addition the spiders, mites, crustacea and other arthropods.
2 lectures and 4 laboratory hours a week: second term.

452. **Comparative Physiology:** A comparison of the function of the organs and organ systems in selected invertebrate and vertebrate types.
Prerequisite: Zoology 350. 1 lecture and 2 laboratory hours a week.

453. **Animal Ecology:** Effects of environmental factors; distribution of animals; animal communities; population dynamics; variation, adaptation, and evolution. 2 lectures a week.

454. **Embryology:** Principles of development as illustrated by selected invertebrate and vertebrate types.
Prerequisite: Zoology 354. 1 lecture and 3 laboratory hours a week.

455. **Principles of Genetics:** The principles of Mendelian genetics and the chromosome theory, illustrated by lectures and the practical performance of simple breeding experiments. 2 lectures a week.
Prerequisite: Zoology 350.

456. **Laboratory Technique:** A practical course in standard laboratory procedures, including microtechnique, photomicrography, and preparation of illustrations. 3 laboratory hours a week: half course.

460. **Insect Taxonomy:** The principles and historical development of insect taxonomy, and the classification of specimens by means of keys and monographs. 3 laboratory hours a week: half course.

462. **Cellular Physiology:** A study of general physical and chemical principles involved in the function of the animal cell.
Prerequisite: Zoology 354. 1 lecture and 2 laboratory hours a week.

463. **Biological Field Studies:** An obligatory course of study of living organisms in their field environment. The student should be prepared to report in September one week in advance of registration, and to meet part of his expenses for travel and subsistence. Prescribed but non-credit.

470. **Vertebrate Taxonomy:** Classification and distribution of vertebrates, and the study of Canadian vertebrates in the laboratory.
1 lecture and 2 laboratory hours a week.

THE SUMMER SCHOOL AND EXTENSION DEPARTMENT

The Summer School and Extension Department offers four types of courses which count towards the Bachelor of Arts degree:

(1) **Lecture Courses.** In numerous centres in Southwestern Ontario courses are conducted by members of the University Faculty. Attendance at these satisfies part of the residence requirements.

(2) **Tutorial Courses.** In several centres in Northern Ontario there are tutorial classes planned and supervised by members of the University Faculty, but taught by local tutors, who are college graduates. These courses use the correspondence material, in part, and do not satisfy the residence requirements.

(3) **Correspondence Courses.** In some subjects that do not include Science, Mathematics, Psychoogy, Business Administration, and the elementary work in languages, correspondence courses are available.

Students in these classes write the regular examinations and their papers are marked by members of the University Faculty.

(4) **Summer School Courses.** On the campus in London there is a Summer School extending for six weeks from the first week in July. The credit subjects offered in the Summer School are those listed in the announcement as belonging to the General Course.

Three courses in one winter session shall be the maximum enrolment of a student in the Correspondence and Extension Department, unless permission is received from the Academic Standing Committee of University College to increase that number. Two courses are the maximum in the summer session.

A candidate for a degree must attend intramural classes of this University for two academic years, or for one academic year and two summer sessions, or for five summer sessions. This requirement is reduced to a minimum of one winter session or three summer sessions by attendance at extension lecture classes held by this university or by the transfer of credit from an approved college or university.

Complete information about the Summer School and about Extension work is contained in the Handbook of the Summer School and Extension Department. This may be obtained by applying to the Director of the Summer School and Extension Department or to the Registrar.

TROIS-PISTOLES SUMMER SCHOOL FOR FRENCH, ENGLISH AND PAINTING, TROIS-PISTOLES, PROVINCE OF QUEBEC

In 1956 the School will operate from July 5th to August 22nd inclusive. Although formal instruction is given in Phonetics, Composition, etc., the emphasis is on the spoken language.

For the bulletin concerning the above and the Painting course apply to the Director of the Trois-Pistoles Summer School, Room 126, University College, or to the University Registrar, Stevenson Hall.

HURON COLLEGE

(London, Ontario)

(For Faculty and Administrative Officers, see pp. 20-26.)

For the Pre-Theological General Course for students under 21 years of age, see p. 35. The following course is offered jointly by Huron and University Colleges, for adult students only.

GENERAL COURSE WITH THEOLOGICAL OPTIONS

Requirements for Admission: Secondary School Graduation Diploma (page 107).

This course leads to the Degree of Bachelor of Arts from the University of Western Ontario. It is available to students *over twenty-one years of age.* The subjects of the first year of Theology are distributed through the four years in Arts. Upon the successful completion of this course, candidates will be permitted to complete the studies for the Title of L.Th. in two years.

The following course is available to any qualified, adult student of the University who is desirous of taking advantage of the Theological Options offered by Huron College.

First Year

Subjects	*Subjects*
English 10	Geology 21 or Zoology 21
Economics 20	Church Music 10x
Greek 1	Liturgics 10ax
History 30	Library Science
Public Speaking 29x	Physical Education
	Health Lectures

Second Year

English 20	Philosophy 20 or 30
Greek 10	Psychology 20
History 31	Church History 40x

Third Year

English 32 or 36 or 38	Psychology 39 or 36
Greek 35x	Old Testament 40x
Philosophy 36 or 31	Philosophy of Religion 40x

Fourth Year

English 35 or 44 or 49	Christian Ethics 40x
Philosophy 47 or 42	New Testament 40x
Psychology 48 or 49	Systematic Theology 40x

The requirements for the Licentiate in Theology may be met by completing successfully the last two years of Course B (in Huron College) after the B.A. with Theological Options.

Biblical Greek

35x. An Introduction to Biblical Greek: Selected passages from the Old Testament (Septuagint) and from the New Testament. 2 hours a week.

Church History

40x. The History of the Christian Church: A survey of the history of Christianity from its origins to the present. Special attention is given to those major developments in institutions and doctrines which influenced the course of Christian history. 3 hours a week.

Church Music

10x. Introduction to Church Music: The history and principles of Church Music. A study of ideals in music for worship.

1 hour a week: half course.

Christian Ethics

40x. Philosophical and Theological Ethics: Philosophical prolego mena; the nature of ethical theory; some great ethical philosophers and their relation to the Christian tradition; the specificity of Christian ethics; its sources and norms; the bases of its theory and practice; problems of Love and Justice in personal life and social order; Christian social ethics and democracy, and their modern rivals. 2 hours a week.

Liturgics

10ax. Introduction to Christian Worship: The genius of Christian worship and its forms. The use of the Book of Common Prayer.

1 hour a week, first term: half course.

New Testament

40x. ~~Philosophical and Theological Ethics: Philosophical prolego-~~ social and religious environment of primitive Christianity with special reference to the influence of Graeco-Roman and Jewish ideas. The exegesis of the Synoptic Gospels. 3 hours a week.

Old Testament

40x. Old Testament History and Exegesis: A survey of the history of Israel. A critical, historical and exegetical study of the Pentateuch, Joshua and Judges. 2 hours a week.

Philosophy of Religion

40x. The Nature and Validity of Religion: The phenomenology of the religious consciousness; the comparative study of religion; philosophical theories concerning the nature of religion; theories of religion as illusion; historical and modern problems in the philosophy of religion and apologetics. 2 hours a week.

Public Speaking

29x. The Principles of Public Speaking: Assignments will be given in the selection, arrangement and delivery of speeches.

1 hour a week: half course.

Systematic Theology

40x. Systematic Theology: An introductory survey of the field of Systematic Theology with special reference to authority, revelation and reason. 3 hours a week.

MUSIC TEACHERS' COLLEGE

(London, Ontario)

(For Faculty and Administrative Officers, see pp. 20-26.)

GENERAL COURSE WITH MUSIC OPTIONS

(leading to the degree B.A.)

Requirements for Admission: Grade XII (Secondary School Graduation Diploma, General course, with three options, see p. of the Arts and Science Announcements), and satisfactory results in audition tests.

Notes:

(1) This course offers two options: Music C or Music T. Music C is a performer's course, while Music T is a pedagogy course for private teachers and for teachers of music in the elementary and secondary schools. Students in Music T will major in instrumental or vocal performance or theory. Music T will consist also of lectures in pedagogy, repertoire, choral conducting, teaching materials and methods. Students in Music C will stress performance and will have more practice periods and correspondingly less work in pedagogy than students in Music T.

(2) As this course is a combination of Arts subjects and Music, it is conceivable that a student might have finished the required Arts subjects without reaching the required standard in the Music courses. In such case, the required standard in music may be attained extramurally under the guidance of the College.

(3) Both courses satisfy the academic requirements for admission to the Type B (High School Assistant) Certificate of the Department of Education of Ontario. Those students who hold, in addition to the degree of Bachelor of Arts, the diploma of Music Graduate in Pedagogy (Mus. G. Paed.) will be admitted to the High School Assistants' Course, Type A, in Vocal Music, at the Ontario College of Education. Those students who do not hold this diploma will be admitted if they make application to take the Supplementary Music Option at the Ontario College of Education, to the Elementary Vocal Option, the Elementary Instrumental Option, or both, if the instructor deems them qualified for such admission.

(4) One subject from the options is to be continued consistently throughout the course. Students who expect to attend the Ontario College of Education should select Geography and History as their options (Geography *or* History in the second year).

(5) A student who enters the University with Senior Matriculation German will do German 20, 30, 40 as his prescribed or his optional language.

First Year

Subjects	*Subjects*
English 10, 29	Library Science
French 10	Music 15C or 15T
Latin 10 or Math. 11, or Music* or any two of Math. 10, 12, 18	Physical Education

Second Year

Requirements for Admission: Satisfactory results in audition tests (for new students) and first year or Grade XIII standing in English, French, and two of: Latin, Mathematics, Music*, History, Science, another language.

English 20	One of: Economics 20, Geography 20, History 20, Math. 20, Phil. 20, Psych. 20, a second language
French 20 or German 1	Music 25C or 25T
Italian 1 (prescribed for vocal students)	

Third Year

English 32	Two of: Economics 30, Geography 35, History 36, Math. 24, Phil. 30, Politics 32, Psych. 36, a second language
French 30 or German 10	Music 35C or 35T
Italian 10 (prescribed for vocal students)	

Fourth Year

English 36
French 40 or German 20
Music 45C or 45T

Two of: Economics 46, Geography 45, Hist. 31, 44, Italian 20 or another language, Phil. 35 or 48, Politics 42, Psych. 49

Text-books: Western Ontario Conservatory of Music, *Book of Reference and Texts.*
Kitson, *Harmony and Counterpoint.*
Colles, *Growth of Music.*

MUSIC

15T. Piano:** Pedagogy—piano technique; teaching repertoire—beginners and Grades I, III, V, VII; practice teaching; repertoire—demonstrations and discussions; private lessons; development, through the Studio Club, of critical faculties and playing experience.

Voice: Vocal production and its fundamental laws; practical applications; simple songs in English; Italian diction applied to singing; simple Italian repertoire.

Harmony: Basic chord connections through elementary modulations (2 lectures a week); aural training in Solfege (2 laboratory periods a week). Class presentation gives training in teaching methods.

*Grade VIII, Practical, and Grade II, Theory; or Grade IV, Theory.
**For course in the History of Music, see Music 10, 20, 30, page .

25T. Piano:** Teaching repertoire — Grades II, IV, VI, VIII; an extension of Music 15T in practice teaching, repertoire, private lessons, and Studio Club.

Voice: A continuation of technical elementary practice, with the use of increasingly difficult material; emphasis on sight singing; introduction to repertoire study in French; French diction applied to singing; study of operatic numbers; recitative singing and introduction to Oratorio pieces.

Harmony: A continuation of Music 15T through augmented chords; simple composition (2 lectures a week); aural training in Solfege (2 laboratory periods a week).

35T. Piano:** A continuation of assigned parts of Music 25T; private lessons; recital performance; concerto performance with orchestra, ensemble playing; Studio Club.

Voice: Development of technical prowess; increasing emphasis on fluency and tone modulation; reading of modern English songs; beginning of the study of German Lieder; German diction applied to singing; study of some operatic repertoire.

Counterpoint: Two-part through free three-part; analysis of contrapuntal compositions, including Fugue (2 lectures a week).

45T. Piano:** Private lessons; Studio Club.

Voice: Difficult technical studies and exercises; memorized repertoire of songs in the original languages by Schubert, Schumann, Brahms, Wolf,

**For courses in the History of Music, see Music 10, 20, 30, p. 78-9.

Strauss and Mahler; Debussy, Faure, Duparc; modern repertoire in English; operatic arias and ensembles.

Form: Song forms through Sonata-Allegro. (2 lectures a week, first term).

Harmonic Analysis: Classic and romantic compositions, with emphasis on the increasing chromaticism of the late 19th and early 20th centuries. (2 lectures a week, second term). Prerequisite: the permission of the Principal.

ST. PETER'S SEMINARY AND CHRIST THE KING COLLEGES

(London, Ontario)

(For Faculty and Administrative Officers, see pp. 20-26)

St. Peter's College conducts two institutions: the Philosophy division of St. Peter's Seminary for candidates for the priesthood, and Christ the King College, an Arts College for lay students.

In addition to the course in Honors Philosophy outlined below, all courses offered in University College are open to students registered in Christ the King College *subject to the acceptance of the Admissions committees.* All laboratory courses in Science are taught entirely in University College.

Honors Course in Philosophy

This course is open only to students of St. Peter's Seminary College of Arts; it leads to the degree of Bachelor of Arts in Honors Philosophy.

Requirements for Admission: Secondary School Graduation Diploma (page 107).

First Year

One year's work in either Junior Group. (Minimum: six courses.)

Admission to the Sophomore Year in Honors Philosophy is subject to approval by the Registrar and the Department of Philosophy.

Second Year

Subjects	*Subjects*
English 20 Philosophy 250x, 251x, 257x, 260x A second year foreign language	At least one course of options approved by the Registrar and the Dept. of Philosophy

Third Year

English 32 or 36 or 38 Philosophy 351x, 352x, 357x, 358x	At least one course of options approved by the Registrar and the Dept. of Philosophy

Fourth Year

English 32 or 36 or 38 or 49 (one not previously chosen) Philosophy 450x, 451x, 452x, 457x	At least one course of options approved by the Registrar and the Dept. of Philosophy

Note: for description of English courses, see the University College section.

Latin

25x. **Introduction to Mediaeval Latin:** Cicero, *De Amicitia;* St. Ambrose, *Hymns and Homilies;* St. Augustine, *Confessions;* a comparative study of the thought and style of Cicero and St. Augustine; syntax and composition. 3 hours a week.

35x. **Survey of Mediaeval Latin:** From the death of St. Augustine to the 12th Century; lectures on Latin style and culture of the period; syntax and composition. 3 hours a week.

45x. **Survey of Mediaeval and Renaissance Latin:** From the 12th Century to the present; lectures on Latin style and culture; syntax and composition. 3 hours a week.

Philosophy

250x. **Psychology: Dynamology:** Vegetation; sensation and perception; imagination processes; instinctive action; memory work; feeling and emotion; reflex behavior; intellectual operations; deliberation; the unconscious and abnormal phenomena; the faculty theory and modern psychological research. 3 hours a week.

251x. **Formal Logic:** The three operations of the intellect. Conception: the idea; the term, categories and predicables; definition and division. Judgment: assertion and negation; the proposition; the conversion of proposition. Reasoning: deduction and induction; the rules, modes, and figures of syllogisms; fallacies. 2 hours a week.

257x. **The History of Pre-Christian Philosophy:** Philosophy in the Orient before Christ: philosophy in the west from its birth among the Ionians to its perfection in Plato and in Aristotle and then its decline; Graeco-Oriental philosophy at the time of Christ. 2 hours a week.

260x. **Natural Philosophy:** An introduction to Aristotelian philosophy by a close study of the *De Principiis Naturae* of St. Thomas. The aim of the course is to show how the mind is led, from the study of motion in general and its principles, to natural motion, the four causes and the problem of chance and fortune. Attention will also be given to Substance and Accident, the primary accident of Quantity, and finally to the main divisions of the sciences and the interrelation of philosophy and experimental science. 2 hours a week.

351x. **Metaphysics: Epistemology and Ontology:** (a) Problems of Knowledge; the nature and the existence of certain truth which is objective and based on evidence; the objective reality of sensation and of intellectual processes; the value of authority in obtaining knowledge; (b) problems of Being: substantial and accidental being; being in its causes and in its effects; the first principles and the analogy of being. 3 hours a week.

352x. **Ethics:** (a) General: the last end of man; its nature and attainment, morality of human acts; the norm of morality; law, eternal, natural and positive, in relation to morality; right reason; conscience; influence of

passions on moral acts; habits; virtues; notions of right and duty; (b) Individual: special rights and duties. 3 hours a week.

357x. History of Philosophy from the Time of Christ to 1600 A.D.: Philosophy during the early ages of Christianity; Greek writers: St. Justin, Athenagoras, Clement, Origen; Latin writers: Tertullian, Lactantius, St. Augustine, Boethius. Arabian writers: Avicenna, Algazel, Averrhoes; Jewish writers: Avicebron, Moses Maimonides; Scholastic writers: St. Anselm, St. Bonaventure, St. Albert, St. Thomas, Duns Scotus, William of Occam, Cajetan, Suarez. 3 hours a week.

358x. Social Philosophy: Historical development of social economy to 19th century liberalism; industrial revolution, capitalism, individualism, collectivism; authoritarian and corporative state: origin and forms of civil organization and administration; social functioning of modern economic society; individual and social character of proprietorship, capital and labor; the business cycle: population, vital statistics; international trade, world peace and progress, the common good. 2 hours a week.

450x. Psychology: The Nature of Man: Man's soul and its essential qualities; the union of soul and body in man; personality; the origin and the immortality of the human soul. 2 hours a week.

451x. Metaphysics: God, The Supreme Being: The existence of God and the absurdity of atheism; the divine attributes of God and modern agnosticism; the relations of God to the world; creation, conservation, providence; the refutation of pantheism. 3 hours a week.

452x. Social Ethics: Domestic Society: the nature and conditions of marriage; chastity, guardian virtue of the family; the birth rate and birth control; woman and child in the family. Civil Society: the philosophy of the state; the relations between church and state; the community of nations. 3 hours a week.

457x. Modern Philosophy: The history of philosophy from the Renaissance to the present day. 3 hours a week.

Religious Knowledge

30x. Theology: Rational defence of Christian revelation; the existence of God; the fact of revelation; the Church of Christ; the sources of revelation. 2 hours a week.

37x. Church History: Christian antiquity and mediaeval church history from the birth of Christ to the year 1500 A.D. 2 hours a week.

40x. Theology: A study of revealed truths; God and creation; sin and redemption; supernatural life; the channels of supernatural life. 2 hours a week.

47x. Church History: The Reformation and modern church history from 1500 A.D. to the present day. 2 hours a week.

URSULINE COLLEGE

(*London, Ontario*)

(For Faculty and Administrative Officers, see pp. 20-26)

All the courses offered in University College, and the Honors Philosophy Course as outlined for St. Peter's Seminary, are open to students registered in Ursuline College, *subject to the acceptance of the Admissions Committees.* All laboratory courses in Science are taught entirely in University College.

For the outline of the four-year course in Home Economics offered jointly by Ursuline and University Colleges, see page 36. For the descriptions of Home Economics courses, see pp. 72-3.

Philosophy

Philosophy 20 or 30 or 36 is a prerequisite for all General courses in Philosophy, Philosophy 230 for all Honors courses in Philosophy. Students preparing for Social work or other professions may, with permission, select options to suit their needs. Courses scheduled for two hours a week may meet for additional seminars or discussions at the discretion of the instructor.

To facilitate the use of manuscripts by Honors students an elementary course in Mediaeval Latin will be provided, if necessary.

Ursuline College may cancel a Philosophy course for a year, if the number of students who wish to take it is insufficient.

20x. Introduction to Philosophy: Problems, divisions and method of philosophy; the principles of natural philosophy, metaphysics, epistemology and moral philosophy; an outline of the main tendencies in the history of philosophy; the interrelation of philosophy and experimental science. 3 hours a week.

30x. Basic Philosophical Literature: As in University College. 3 hours a week.

31x. Logic: The three operations of the intellect. Conception: the idea: the term, categories and predicables; definition and division. Judgement: assertion and negation; the proposition; the conversion of the proposition. Reasoning: deduction and induction; the rules, modes and figures of syllogisms; fallacies. Formal as contrasted with symbolic logic; problems of scientific method and certitude. 2 hours a week.

32x. Introductory Ethics: General and individual. 2 hours a week.

33x. Introduction to Metaphysics, Epistemology and Ontology: Problems of being, knowledge, causality and analogy. 2 hours a week.

34x. Political Philosophy: History of ancient, mediaeval and modern political philosophy. The second term's work will cover the philosophical implications of contemporary political movements and principles for world society. 2 hours a week.

35x. Aesthetics: Lectures and seminars on the history of the philosophy of art and the metaphysics of the beautiful; aesthetic problems; aesthetics as the foundation of criticism; art and prudence; the liberal and servile arts; the useful and fine arts. 2 hours a week.

36x. Ancient, Mediaeval and Scholastic Philosophy: with reading from selected texts. 2 hours a week.

42x. Social Ethics: Domestic society: the nature and conditions of marriage; function, rights and duties of family inmates; birth control and population problems. Civil society: the philosophy of the state; the relations between church and state; the community of nations; labor problems. 2 hours a week.

43x. Advanced Metaphysics: Natural theology; comparative religious philosophy. 2 hours a week.

44x. Social Philosophy: The relationship of philosophy to the social sciences: the nature and function of society; freedom, authority, government, the family and the state; historical development of social economy from primitive to modern times; individual and social character of property, capital and labor. 2 hours a week.

47x. History of Modern Philosophy: The transition from Mediaeval to Modern Philosophy; Modern Philosophy; readings from selected basic texts. 2 hours a week.

Honors Courses

The following courses are identical with the Pass courses indicated, except that additional assignments will be required or seminars added: 231 (31), 335 (35), 336 (36), 347 (47), 443 (43).

Because a reading knowledge of Mediaeval Latin will facilitate the reading of Thomistic texts, an intensive course in Elementary Latin will be offered when there is sufficient demand.

When the number of applicants is insufficient to warrant a class, the college reserves the right to cancel the class for the current year.

230x. Basic Philosophical Literature: An examination of the principal problems and issues, methods and attitudes, theories and solutions, terms and concepts of philosophy in the light of Scholastic principles; a critical reading of selected philosophical classics is required. 2 hours a week.

350x. Philosophical Texts: An examination of specified source materials in Greek, Mediaeval and Modern Philosophy, as well as pertinent critical texts. 2 hours a week.

448x. Seminar in Contemporary Philosophy. 2 hours a week.

454x. Principles and Problems of Philosophy: Philosophical problems of special interest to the class, evaluated according to pragmatic, idealist and neo-Thomist principles. 2 hours a week.

456x. Seminar in Plato and Aristotle. 2 hours a week.
Prerequisite: Philosophy 336.

457x. Seminar in Modern Philosophy. 2 hours a week.
Prerequisite: Philosophy 347.

462x. Ethics: A critical study of moral problems and theories; a comparative study of the conflicting approaches to ethical problems found in the classics of ethical literature from Aristotle to the present, including Thomistic and neo-Thomist texts. 2 hours a week.

466x. Seminar in Post-Aristotelian and Mediaeval Philosophy.
Prerequisite: Philosophy 336. 2 hours a week.

Religious Knowledge

10x. Motives and Means of Christian Life: Fundamental dogmas of Christianity, grace, prayer and the sacraments. Lectures, essays, readings. 2 hours a week.

20x. Christian Ideals of Life: Charity, personal, social and civic; justice and the commandments; citizenship. Lectures, essays, readings. 2 hours a week.

30x. Theology of Christ and the Church: The governing function of the Church; the teaching and sanctifying functions of the Church; Christian apologetics. 2 hours a week.

31x. History of Liturgy: Survey of expressions of social consciousness in worship from Apostolic to modern times. Lectures, readings, seminars on the Encyclicals. 1 hour a week: half course.

40x. Dogmatic Theology: Introduction to Theology. Study of revealed truths. 2 hours a week.

41x. Scripture: Introduction to the Old and New Testaments. 1 hour a week: half course.

42x. Moral Theology. 2 hours a week.

Sociology

39x. The Family: The family as a primary social group; a brief history of family life in Western societies; modern biological, psychological, sociological, economic and ethical views on the family; the ethical basis of family life; the form, unity and object of family life; status in the family; divorce; eugenics and birth-control; the family and the state; the family and economic organization; the training and the education of children; the Christian family. 2 hours a week.

WATERLOO COLLEGE

(Waterloo, Ontario)

(For Faculty and Administrative Officers, see pp. 20-26)

In 1925 the Faculty of Arts of Waterloo College became an affiliated college of the University of Western Ontario. In January, 1930, the right

of Waterloo College to proceed with courses leading to the Honors B.A. degree was officially recognized. For information about the General and Honors courses offered by the college, and the fees for the courses, consult the Registrar. The following course is taught in Waterloo College only. It has been approved by the Evangelical Lutheran Seminary of Canada as a prerequisite for the theological course. Pre-theological students are encouraged to substitute Honors Courses, if they desire to do so.

General Course With Pre-Theological Options

Requirements for Admission: Secondary School Graduation Diploma in required subjects (see page 107) and approval of application by the Dean of the Seminary and the Dean of the College.

For the credits to be allowed for certificates in Grade XIII subjects, consult your Registrar.

JUNIOR GROUP

Subjects	*Subjects*
English 10, 20, 29	One of: Greek 1x or 10*, Geography 20, History 14 or 20, Music 10 or 20, Philosophy 20, a foreign language 10 or 20
Library Science	Two years of work in one of the following languages:
Physical Education	German 1 and 10, or 10 and 20*
Latin 10 or Math. 11 or Music 10	French 10 and 20
Math. 20 or Physics 21 or Zoology 21	Latin 10 and 20
Economics 20	
History 14 or 20	
Psychology 20	

*No credit is given for a beginner's course in a foreign language until it is followed by a second year of successful work in the same language.

At least one foreign language must be completed at the 20 level.

SENIOR GROUP

Philosophy 30	Greek 35x or Psychology 36 or 48 or 49
Geology 20 or Physics 21 or Zoology 21 (one not taken previously)	At least three full courses (or the equivalent in half-courses) from: English 39, Geography 20, Hebrew 1x, 10x, Philosophy 31, 42, 43, Psychology 36, 46, 48, 49, Religious Knowledge 31x, 32x, 43x, 44x, Sociology 28
Two of: English 32, 36, 38, 49	
Two of: History 20 (prescribed if not taken previously), 31, 36, 44	
Greek 25x or Politics 32 or 42	

For those courses which University College and Waterloo College offer in common, see the University College section. The following courses are offered in Waterloo College only:

Economics

457b. Introduction to Insurance, Estates, and Trusts.

2 hours a week: half course.

Chemistry

11xN. Basic inorganic and organic chemistry, with stress placed on application to physiology and pharmacology. Lectures and laboratory exercises. 3 hours a week.

Greek

For Biblical Greek 35x, see the Huron College section.

Hebrew

1x. A study of the grammatical forms of Hebrew, and the elements of syntax; written exercises; practice in reading easy Bible passages.
3 hours a week.

Latin

26x. **Ecclesiastical Latin:** A study of selections from the Confessional writings of the Evangelical Lutheran Church as contained in the *Book of Concord*. 1 hour a week: half course.

Music

55x. **Church Music:** A study of the development of music in the worship of the Christian Church. 1 hour a week: half course.

Religious Knowledge

31x. **Biblical Literature:** A study of the times, life, and teachings of Jesus based on the Gospels. 1 hour a week: half course.

32x. **Biblical Literature:** A study of the foundation and work of the early Christian Church, with special attention to the Acts and to the life and letters of Paul. 1 hour a week: half course.

43x. **Biblical Literature:** A study of Old Testament history.
1 hour a week: half course.

44x. **Biblical Literature:** A study of the lives and teachings of the Hebrew Prophets. 1 hour a week: half course.

APPENDIX A — ACADEMIC REGULATIONS

ADMISSIONS

For admission in September of any year, official certificates of High School and any college work must be presented to the Registrar's Office **by September 1st** (by July 1st for admission to Summer Session). Teachers should present their professional teaching certificates, as well, and veterans should present their discharge records. For the evaluation of non-Canadian certificates a fee of two dollars is charged. This sum must accompany the certificates and is not returnable.

University College requires for admission the Grade XII Diploma and the detailed Grade XIII certificates of the Department of Education of the Province of Ontario, or the equivalent from other Provinces and other countries. In 1956, Home Economics will be the only course in which students (women) will be accepted without **Grade XIII standing in at least four complete subjects (usually eight or more papers), with an average of 60% or better.** In 1957, Grade XIII standing will be required for admission to all courses.

In University College, all adult special applicants, all applicants at the Grade XII level, and all Grade XIII applicants with averages below 60% are required to take an aptitude test to be held early in September and to have an interview with a member of the Admissions Committee. Such a test will not excuse an applicant from any part of his admission "conditions" if he is accepted.

A. Some of the affiliated colleges (all but Huron College) admit students to all courses except Science and Premedicine on the presentation of a Secondary School Graduation Diploma, or the equivalent, showing satisfactory completion of the following **Grade XII** subjects:

(1) English and History; (2) Latin or Mathematics; (3) One of: Latin, French, German, Spanish or Italian, Greek; (4) One of: Mathematics, Science or Agriculture, *Music, Geography, another language from section (3). No subject may be counted more than once.

B. An applicant presenting **Grade XIII certificates or the equivalent in at least four subjects (usually eight or more papers), with an average of 60%,** together with the full requirements of A, above, may expect to complete one of the General Courses in three years, or an Honors Course in four years.

The Grade XIII subjects are: English (Literature and Composition), Mathematics (Algebra, Geometry, Trigonometry and Statics), History, Latin, Greek, French, German, Spanish, Italian, Physical Science (Physics and Chemistry), Biology (Botany and Zoology), Geography, **Music, ***Mathematics of Investment, Accountancy Practice, Secretarial Practice.

*For the Music option in Grade XII, the following certificates of a Conservatory of Music will be accepted: Grade VII Practical and Grade II Theory; or Grade III Theory.

**For the Music of Grade XIII, the following certificates of a Conservatory of Music will be accepted: Grade VIII Practical and Grade II Theory; or Grade IV Theory.

***An alternative for Algebra only.

An Admissions Handbook specifies the prescribed and optional subjects, and the standing in those subjects which is advised for admission to each course.

In order to obtain Credit standing in any subject, a candidate must obtain at least fifty per cent. on each subject, not necessarily at one examination. First Class Honors requires at least seventy-five per cent., Second Class Honors sixty-six per cent., and Third Class Honors sixty per cent. of the marks assigned to any subjert, with a minimum of fifty per cent. on each paper of that subject.

Admission On Equivalent Examinations

Certificates of having passed Secondary School subjects parallel to Grade XII and Grade XIII subjects named above may be accepted provided always that the standards of these certificates meet the requirements of this University.

The local examinations formerly conducted by the English and Scottish universities for the School Certificate and the Higher School Certificate are accepted instead of Grade XIII (Senior Matriculation) standing in some subjects, providing those subjects are passed "with Credit" or higher standing.

The General Certificate of Education of England and Wales is accepted in lieu of Grade XIII work, if it shows standing in either five or six subjects, with at least two of these subjects at the Advanced level. English Literature, a language other than English, and either Mathematics or an approved Science must be included.

Admission With Advanced Standing

From Universities

All applications for advanced standing must be accompanied by official certificates from the institution where work has been done, and be presented to the Registrar by July 1st if possible. These official documents must include a certificate of honorable dismissal from the institution last attended. No student may register in the University of Western Ontario if he may not re-register in the institution from which he wishes to transfer.

Admission of Adult Special Students

Students who are over twenty-one years of age, though they may not be able to present qualifications for admission as candidates for degrees, may be admitted to a few courses in the Faculty of Arts and Science of the University, after college aptitude tests, if, in the opinion of the professors in charge, they are qualified to pursue satisfactorily the courses chosen. These special students must satisfy their professors by regular attendance and attention to the work of their classes. They will not be allowed to advance from year to year in a department without taking the regular examinations.

An adult special student who has passed in all the work of a Junior Group in the General Course will be considered to have completed his entrance requirements.

APPEALS

The Senate has made regulations governing appeals by students. A copy of these regulations may be seen in the Registrar's office.

ATTENDANCE AT LECTURES

Freshmen and sophomore students are required to attend eighty per cent. of their lecture and laboratory classes.

Any student who, **in the opinion of his instructors,** is absenting himself too frequently from class or laboratory periods in a course will be reported to his Dean and, on recommendation of the Department concerned and with the permission of the Dean, after due warning has been given by the Dean, shall be debarred from taking the regular examinations in that course.

A candidate for a degree must attend intramural classes of this University for two academic years, or for one academic year and two summer sessions, or for five summer sessions. This requirement is reduced to a minimum of one winter session or three summer sessions by attendance of Extension Lecture classes held by this University or by the transfer of credit from an approved college or University.

CONDITIONS

A student who is permitted by the Admissions Committee to enter a course with one "condition" must remove that condition within two years of his admission.

Students conditioned at the final examinations should attempt to remove their conditions at the supplemental examinations of the next August. If a condition is not removed the **whole course** must be repeated.

CONDUCT

Students are required to conduct themselves in an orderly manner in all parts of the University premises at all times.

No student will be registered in any year, or be allowed to continue in attendance after registration, if his presence is considered prejudicial to the interests of the University. Registration in any year does not entitle a student to registration in a subsequent year.

The Dean may suspend any student until his case has been considered by the Advisory Committee.

EXAMINATIONS AND GRADES

The regular examinations will be held in April and May.

Students in the General Courses will be ranked in order of merit in each course in six grades, A, B, C, D, E, F. The minimum for Grade A is 75 per cent. of the marks obtainable; fro Grade B, 66 per cent.; for Grade C, 60 per cent.; for Grade D, the minimum passing grade, 50 per cent. A mark that falls in Grade E, 40 to 49 per cent., entitles the student to a supplemental, subject to the regulations governing supplementals (see page 110). Grade F, less than 40 per cent., indicates a total failure and the necessity of repeating the course in class. General Course

No student will be admitted to the degree of Bachelor of Arts in the Home Economics, the Secretarial, the Music, or the Pre-Theological Course who has not obtained at least 50% on all the prescribed and elective work of his course and who has not obtained at least 60% in half the courses of the third and fourth years, including 60% in half the courses of his senior year. In the General Course an average of 60% must be obtained

in the Major subject, with 60% in each of six courses out of the eleven required in the Senior Group, in addition to 50% or better in all other courses.

Honors Courses

Candidates in the Honors Courses will be ranked in four classes: Class I—75 per cent. or over; Class II—66 to 74 per cent.; Class III—60 to 65 per cent. An average of Class IV—50 to 59 per cent., in the Honors subjects of the fourth year, with no failure on any examination, will not entitle the candidate to an Honors degree.

Students in an Honors Course, who do not obtain at least third class standing in the Honors subject of the second and third years, with an average of at least sixty per cent. in other subjects, are not permitted to continue in Honors.

Re-examinations

If a student writes more than one examination in a course, the last mark he obtains shall be the only one considered valid.

Comprehensive Examinations

Students entering Honors Courses should observe that the purpose of their college work is not simply the creditable passing of courses, term after term, but the gradual acquisition of a broad and deep knowledge of the chosen subjects and an intelligent appreciation of their bearing upon general knowledge and culture. Various departments of the University College of Arts and Science have introduced comprehensive examinations for Honors students. These examinations, partly oral and partly written, are given at the end of the senior year to cover the broad aspects of the student's Honors Course. They are additional to the course examinations.

Term work

In all subjects of the General and Honors Courses the ratio of term-work marks to examination marks is determined by the teaching staff in each subject. To pass, a student must obtain 50 per cent. in a whole subject, with 50 per cent. in term work and 50 per cent. in examinations.

Term work in a course will not be credited to a student beyond the year in which the course is taken.

Supplementals

A supplemental examination is one set on work in which a student has been conditioned (40 to 49 per cent). This examination will be held in August for those who have been conditioned in any course. (See first paragraph under *FAILURES*.) Students whose grade is F (less than 40 per cent.) in any course may not write a supplemental. They must repeat the course.

Supplemental examinations will not be allowed any student in more than the equivalent of two full courses.

No supplemental examination will be allowed in Honors subjects.

Special Examinations

A special examination is any examination other than the regular examination in May or August. No special examination may be assigned except on the recommendation of the head of the department concerned, after consultation with the instructor involved. (Often students should be advised to adopt the alternative of repeating the lectures and taking the next regular examination without fee.) Whenever possible special examinations will be held during the first full week in September. **No special examination will be set within three months of failure.**

A student who fails to appear for a paper at the time set in the examination timetable will not be allowed to write on the examination paper thus missed, but will be required to write a special examination at a time determined by the Registrar after consultation with the department involved.

No General Course student may write special examinations on more than the equivalent of one full course in one academic year. No Honors Course student may write a special examination in any academic year if he has failed in more than one Honors examination paper or has secured less than 35 per cent. on one Honors examination paper.

A special examination may be written only at the college in which a student is registered.

FAILURES

A student who fails to obtain 50 per cent. in the regular or supplemental examination in a course will not be eligible for re-examination without a further year's attendance at the lectures in the course in which he has failed. **The student must repeat that course, if it is prescribed, the year after failure no matter what subject or subjects must be postponed.**

A student may take no course more than twice.

A student shall be required to pass in two-thirds of his approved registration **at the Spring examinations;** if he fails to do so, he shall repeat and complete successfully, **at the Spring examinations,** the entire work of his year (not necessarily the same course); a student who fails to satisfy this requirement shall withdraw from his course.

A student who is required to repeat his year's work may petition his Dean or Principal to be allowed to substitute a subject of equivalent weight, at the same year-level and available without clash of timetable, for a subject in which he has obtained sixty-six per cent. or better.

Subjects which depend directly upon the work of a preceding year may not be taken by a student who has failed in the pre-requisites.

A candidate in an Honors Course who, at the examination for the degree of Bachelor of Arts, fails to obtain the requisite average for honors (60), provided he has obtained 50 per cent. in each course of his final year, may, on the recommendation of the Committee on Academic Standing, be awarded a degree in the General Course. The candidate may write a subsequent examination for the Honors degree.

Any student of the third or fourth year who shows an unsatisfactory knowledge of spoken or written English must do additional assignments until his work satisfies his instructors.

GENERAL REGULATIONS

When a student begins a foreign language in the University, no credit towards a degree will be given for the first year of that language unless that year is followed by a second year in the same language. No student may begin two foreign languages in the same year.

A course that is an optional course need not be given unless it is elected by at least five students.

A student may take one course more than the number normally required for the academic year in which he is registered. Permission to take

any further course must be obtained from the Committee on Academic Standing. For extra courses taken by permission of this Committee, an extra tuition and laboratory fee will be charged at the usual rate for special students.

LENGTH OF COURSES

In University College

The length of all General or specialized courses in Arts is three years for students with Grade XIII standing in four subjects (see page 107). In the degree courses in Nursing forty-eight months of University and hospital study are required, in addition to Grade XIII standing in four subjects (see page 107). The Honors Courses require four years, from Grade XIII standing in four specified subjects. Two years of Premedicine and three years of Engineering Science are also available in University College.

In the Affiliated Colleges

Grade XII standing is the entrance requirement (p. 107) and the General Courses and the Honors Courses in Philosophy are four years in length; other Honors Courses are five years. A satisfactory year's work in four Grade XIII subjects corresponding to the subjects prescribed in the first year of any course will decrease by one year the length of that course in any college.

REGISTRATION

Junior Groups

All students in Arts and Science must register each year in University College or one of the affiliated Colleges. See page 28 for dates for registration.

Subject to the admissions requirements (see page 107, Sections A and B), students presenting Grade XII and Grade XIII, certificates will register in one of the Junior Groups or one of the specialized courses (pages 30-38).

Senior Group or Honors

Students who have completed a Junior Group may register either in one of the Senior Groups or in an Honors Course for which they have specific prerequisites.

Medical Examination

No registration of any student for any year is complete until the prescribed physical examination has been taken. (See page 114.)

A student on admission each year, by his registration subscribes to the regulations as stated from time to time in the University official announcements.

REGULATIONS GOVERNING TEACHERS' COURSES AND CERTIFICATES

(i) Courses for Teachers

University College offers the General Course for those who for various reasons find it impossible to attend the winter sessions for all the work necessary for a degree in Arts. This course is completely available through the Extension and Summer School Department.

(ii) Public School Inspectors' Certificates

By agreement with the Minister of Education the work described below satisfies the academic requirements for a Public School Inspector's Certificate:

(1) An Honors Degree in Arts or Science in accordance with the present agreement prescribed for Type A qualifications (see section II below); or

(2) A General Course or a Teachers' Course Degree in Arts with a standard of 66 per cent. on the work of the final year of the course, and with standing in English in any three of the first, second, third and fourth year courses of study.

To meet the requirements of the University, a candidate must, of course, satisfy the attendance regulations for his degree.

For the professional requirements, candidates should consult the Department of Education, Toronto 5, Ontario.

(iii) High School Assistants' Certificates

I. Type B

The academic standing for admission to the course in the Ontario College of Education leading to a High School Assistant's Certificate, Type B, is a degree in Arts or in Science from a British University, based upon courses approved by the Minister of Education.

II. Type A

Subject to the conditions specified below, an Honors degree in Arts or in Science (66 per cent.) is the academic standing for admission to the courses leading to High School Assistant's Certificate, Type A, in Classics, Commercial Subjects, English, English and French, English and German, English and Latin, French and German or Spanish, Geography, History, Latin and French, Mathematics, Mathematics and Physics, Physical Education, Physics and Chemistry, Science.

For the University of Western Ontario, the courses specified above shall be the Honors Courses as defined in the current Announcement of the Faculty of Arts and Science.

The courses shall extend over at least five years from Grade XII or, as may be determined under the regulations of the University, over four years from Grade XIII standing in four subjects.

Candidates shall attend for at least two full academic years, the third and fourth.

The Minister shall have authority to deal with any case not already covered. The University shall submit to the Minister a recommendation on any case whose merits justify special consideration.

Graduates in general courses who wish to obtain Type A standing should consult the Registrar. Geography is the only subject in which it can be obtained through Summer Session and Correspondence work.

APPENDIX B — GENERAL INFORMATION

CONCERT SERIES

The cultural life of the University is enhanced by the provision each year of a series of Sunday Nine O'clock concerts by artists of high distinction in their several departments of music. The project is subject to the jurisdiction of the University Students' Commission. Each full-time student in the four constituent divisions (Arts and Science, Medicine, Nursing and Business Administration) is entitled to admission to all concerts in this series.

HEALTH SERVICES

(i) Physical Examinations

A physical examination by practising physicians under the supervision of the University Health Service is required of students, men and women, of all years. The medical examination will be free if taken on scheduled registration days, but a late fee of Two Dollars will be charged those students who do not take the examination at that time. **An X-ray examination prescribed for all undergraduate and graduate students will be arranged during January and is free if taken during the period prescribed.**

(ii) Student Health Insurance

The scheme of health insurance was designed for the benefit of students. Its first purpose is to protect any student whose academic year may be jeopardized financially by a serious accident or an acute illness requiring hospitalization. As a student body cannot make a legal contract, the University has made the contract with the Assurance Company. Copies of this contract are given to students at registration and may be obtained from the Health Service Office. Each student should study this contract carefully, as the responsibility for making claims for illness or injury rests entirely on him. All inquiries about insurance and the proper forms to be used for insurance claims should be made in the Health Service Office.

No insurance claims will be paid to any student who has not taken the physical examination.

(iii) Health Service

The purpose of the University Health Service is to supplement the Student Health Insurance. It consists of a clinic where students may consult the University Physician for the diagnosis or treatment of sickness, or for advice. A V.O.N. nurse is present who carries out treatment and does dressings. The Health Service secretary deals with inquiries and assists students with insurance claims.

A student who is taken ill out of clinic hours should call the family physician of those with whom he is residing, or the University Physician for information and/or advice.

HOUSING

The students who do not wish to live in residence or who do not apply early enough to be accepted in residence will find the **Housing Bureau** situated in Room 118, Thames Hall, from August 1st to October 15th. Meals may be obtained in Somerville House (the University Dining Hall) and rooms in private homes in the University vicinity.

RESIDENCES

Students who wish to live in residence should apply, preferably six months ahead, to the person specified below, for accommodation in London:

Women—Spencer Hall, where first year University College women are given a preference. Apply to the Dean of Women, in care of the University Post-office, for application form and full details.

Brescia Hall, the Ursuline College residence, R. R. 3, London. Students must enrol in Ursuline College if they wish to live in Brescia Hall. Apply to the Dean.

Men—Both **Christ the King College**, Waterloo Street North, and **Huron College**, R. R. 3, London, have residence accommodation for their own students and for University men enrolled in other colleges and Faculties. Apply to the Dean of Residence at one of these colleges.

Waterloo College, at Waterloo, Ontario, has residences for both men and women students. Apply to the Registrar before August 31st.

STUDENT ACTIVITIES

For information about Student Government and Organizations, see the Student Handbook, published in November each year. Copies may be obtained, on loan, from the Registrar's Office later in the year, or may be purchased from the Handbook Editors close to the time of publication. It is a student publication, distributed free of charge to all who pay student government fees.

The name of the University may not be used in any publication without the permission of the Advisory Committee. No class or group of students may engage in any public effort as a body representing the University or any organization within the University, without the permission of the Advisory Committee.

The constitution of any proposed club or society must be approved by the Advisory Committee before such organization can be recognized.

APPENDIX C — BURSARIES, SCHOLARSHIPS, MEDALS AND PRIZES

NOTE: Bursaries require II Class Honors (66%) or better, with some measure of financial need. Scholarships are strictly competitive, requiring a minimum average of 75%.

I. Admission Bursaries

(i) Dominion-Provincial Student-Aid Bursaries, Type A.

Applications and terms of qualification may be obtained from secondary school principals or the Registrar of the Department Education of Ontario.

(ii) Leonard Foundation Bursaries

The income of a trust created by the late Lieut-Col. and Mrs. R .W. Leonard, St. Catharines, Ont., will be expended in paying part of the college expenses of selected students at several institutions of Canada, including the University of Western Ontario, for from one to four years. The details of qualification and the procedure of application for these scholarships may be secured by corresponding with the trustees of the foundation, the Toronto General Trusts Corporation, Toronto, Ontario. Applications must be submitted by February 15th.

(iii) The Atkinson Charitable Foundation Grade XIII Bursaries

These are available to residents of the Province of Ontario who obtain an average of sixty-six percent. on eight Grade XIII papers, and who need financial assistance to attend a university. Applications should be submitted to the Registrar of the University of Western Ontario by May 1st of the students' final year in Grade XIII.

(iv) Children of War Dead (Education Assistance) Act

Under the terms of this Act fees and monthly allowances are provided for the children of veterans whose death was attributable to military service. Enquiries should be directed to the nearest District Office of the Department of Veterans Affairs.

II. Admission Scholarships: University College*

Candidates must notify the Registrar of the University of Western Ontario by May 1st (on forms provided on request) of their intention to compete for Scholarships the following June.

1. The following scholarships will be awarded on the results of the Grade XIII examinations of 1956.

2. No scholarship will be awarded unless a candidate obtains an average of First Class Honors (75 per cent.) on all the papers involved in the award.

3. Candidates must write all the papers on which an award is based. No credits by "recommendation" will be considered.

4. Each candidate must write at least six papers in order to be eligible for competition for any scholarship.

5. The winners of the scholarships must register in University College.

6. Scholarships cannot be deferred. Winners must register for a full year's work beginning the academic session following the award.

7. In order to retain the privileges of these scholarships the winners must maintain a satisfactory degree of proficiency from year to year of their courses.

Board of Governors' Scholarships

(i) **Two General Proficiency Scholarships** awarded on nine papers:

(a) English, Mathematics (any two), History, two foreign languages;

(b) English, Mathematics (Algebra, Geometry, Trigonometry), a language and a science, either Physical (Physics and Chemistry) or Biological (Botany and Zoology).

Total value of each scholarship, $900 ($300 the first year, $200 in each of the next three years).

(ii) **Seven Scholarships** awarded on six papers:

(a) English, Mathematics (any two) and two other papers;

(b) English, French and German or Greek or Latin or Spanish;

(c) French, two of German, Greek, Latin, Spanish;

(d) Mathematics (Algebra, Geometry, Trigonometry), Physics and two other papers;

(e) Physics, Chemistry, Mathematics (any two) and two other papers;

(f) Biology, Mathematics (any two) and two other papers;

(g) Latin, French and German or Greek or Spanish;

Total value of each scholarship, $500 ($300 the first year, $200 the second).

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*For information about the admission scholarships available in the affiliated colleges, write the Registrars of those colleges.

(iii) A Scholarship for the highest applicant in each Collegiate Institute, Vocational School and High School, whether Commercial, Agricultural or Academic, in the counties named in the University of Western Ontario Act, 1923, *viz.,* Brant, Bruce, Elgin, Essex, Grey, Huron, Kent, Lambton, Middlesex, Norfolk, Oxford, Perth, Waterloo and Wellington, and all the cities situated therein. The successful applicants must have an average of at least First Class Honors (75 per cent.) in eight papers of the examination written in June of the year of the award, and chosen from the following subjects: English, German, Greek, French, History, Latin, Mathematics, Spanish, Botany, Zoology, Physics, Chemistry. Total value of each scholarship, $200 (payable the first year).

(iv) Scholarships for proficiency in single subjects:*

(a) Latin; (b) Greek; (c) English; (d) Mathematics (Algebra, Geometry, Trigonometry); (e) French; (f) German; (g) Biology; (h) Physics and Chemistry. Total value of each scholarship, $100 (payable the first year).

The Harriett M. Giddens Scholarship

One General Proficiency Scholarship for the highest ranking student from the City of London who has not qualified for an award under Sections (i), (ii) or (iii) above. Total value of scholarship, $200 (payable the first year).

(The capital fund for this scholarship was bequeathed to the University by the late Harriett M. Giddens of London.)

The George Williamson Young Memorial Scholarship

One General Proficiency Scholarship for the highest ranking student in Grade XIII English, History, one language, and one other paper; minimum qualifying average 75 per cent. Total value of scholarship, $500 ($300 the first year, $200 the second year).

(The capital fund for this scholarship was bequeathed to the University from the estate of the late George Williamson Young of Port Stanley.)

The Ontario Hockey Association Scholarship

An entrance award of one hundred and fifty dollars, the gift of the Ontario Hockey Association, tenable for one year only; the recipient to be selected by the University Scholarship Committee, subject to the general conditions governing admission scholarships.

The General Motors Canadian Scholarships

General Proficiency Scholarships of $200 to $2000 a year for four years, if the winers maintain scholarship standing satisfactory to the University.

The purpose of the awards is to assist deserving students to obtain a university education.

The awards will be based on Grade XIII results in Ontario (or Senior Matriculation results from the other provinces of Canada). Both financial need and academic standing will be considered by the Selection Committee

*To qualify for one of these Scholarships a candidate must obtain an average of 75 per cent. in six papers.

(the Chairman of the Scholarship Committee, the Principal, the Dean of Men, the Dean of Women, and the Registrar).

Applications are due on May 1st, and must be accompanied by a letter from each applicant's secondary school Principal certifying that he is an outstanding student with some measure of financial need. All applicants for these awards will be asked for information about their own contributions toward their education and the amount of help available from family and other sources. Such information will be used only by the Selection Committee and will otherwise be kept entirely confidential.

The H. J. Heinz Company of Canada Ltd. Scholarship

One admission scholarship of $1200 ($300 a year for four years) if the winner maintains each year the personal and scholastic standing of the college or university attended. **This scholarship is open only to Grade XIII graduates of district high schools in Essex and Kent Counties and it may be held at any approved college or university in Ontario, for any course of study desired.**

The winner is to be selected on the basis of scholastic standing and other qualifying information to be supplied by the Principals of the schools attended by the applicants. In case of a tie in the selection of a winner, financial need will be considered as a final deciding factor.

Application for a Heinz scholarship should be completed and returned to the Principal of the school attended, not later than May 1st each year, who will forward it to the Scholarship Selection Committee of the H. J. Heinz Company.

The Union Carbide Canada (Limited) Scholarship

One General Proficiency Scholarship of $2,000 ($500 a year for the duration of an undergraduate course in this University, if the winner maintains scholarship standing satisfactory to the University).

The award will be based on Grade XIII results in Ontario (or Senior Matriculation results from the other provinces of Canada). Both financial need and academic standing will be considered by the Selection Committee (the Chairman of the Scholarship Committee, the Principal, the Dean of Men, the Dean of Women and the Registrar).

The purpose of the award is twofold: to assist deserving students, interested in a business career, to obtain a university education, and to assure larger numbers of men and women trained in universities for future executive and administrative careers in business and industry.

Applications are due on May 1st, and must be accompanied by a letter from each applicant's secondary school Principal concerning his character, study-habits, financial need, and his talents for business or industry, in the Principal's opinion.

III. Undergraduate

UNIVERSITY

University Gold Medals for competition in the final year of these Honors Courses:

Botany, Business Administration and Secretarial Science, Chemistry, Chemistry and Physics, Classics, English Language and Literature, English and French, English and German, English and Latin, English and

Philosophy, French and Latin, Geography, Geology, History, Journalism, Modern Languages (French and German, and French and Spanish), Philosophy; Physical, Health, and Recreation Education; Physics and Mathematics, Psychology, Radio Physics and Mathematics, Zoology.

Governor-General's Medal: Senior Group, General Course.

The Joseph J. and Annie R. Kingston Gold Medal: final year Mathematics, University College.

(Endowed by Dean H. R. Kingston in memory of his parents.)

The London Life Insurance Company Gold Medal: final year Actuarial Mathematics, University College.

Ursuline College of Arts Award: fourth year Home Economics.

The S. F. Glass Awards: Gold Medals for the highest standing in the Honors Economic and Political Science Course, one in Honors Economics and the other in Honors Political Science of the final year.

(Endowed by the estate of the late S. F. Glass of London.)

UNIVERSITY COLLEGE

Except in the case of fourth year awards, these Scholarships and Prizes will be paid only to students who are in actual attendance and carrying a full year's work in the University during the year following the award. **Payment is made on October 15th and February 15th.**

Unless otherwise indicated, the Scholarships and Prizes available in University College are provided by the Board of Governors of the University.

Scholarships: For general proficiency in the following:

(a) Junior Group 1: Sixty Dollars.

(b) Junior Group 2:

(i) The F. G. Jewell Scholarship: Fifty dollars; for the highest ranking student who plans to enter one of the professional courses: Honors Business Administration, Business Administration and Secretarial Science, Journalism or Physical, Health, and Recreation Education.

(Given in memory of the late Francis G. Jewell, C.A., former Auditor of the University.)

(ii) The W. J. Roche Scholarship: Fifty dollars; for the highest ranking student who plans to enter one of the Social Science courses: Honors Economic and Political Science, Geography, History or Psychology.

(In honor of the late Hon. W. J. Roche, M.D., LL.D., C.M.G., *former Chancellor* of the University.)

(iii) The B'Nai Brith Scholarship: Fifty dollars; for the highest ranking student who plans to enter one of the humanities courses: English, Ancient or Modern Languages and Literatures, or Philosophy.

(Given each year by the London Branch of the Order.)

(c) Premedicine: first year: Sixty dollars.

(d) Premedicine: second year: Sixty dollars.

Scholarships: Sixty dollars each for best standing in the following:

SECOND YEAR HONORS COURSES:

Business Administration and Secretarial Science, Chemistry and Physics, Classics, English and French, English and German, English and Latin, English and Philosophy, French and Latin, Geology, Journalism,

Modern Languages, Philosophy; Physical, Health and Recreation Education; Psychology.

THIRD YEAR HONORS COURSES:

Business Administration and Secretarial Science, Chemistry and Physics, Classics, English and German, English and Latin, English and Philosophy, French and Latin, Geology, History*, Journalism, Modern Languages, Philosophy; Physical, Health, and Recreation Education; Psychology.

The J. P. Bickell Foundation Scholarship: Twelve hundred dollars; for a student entering the second year of the Honors Geology course; six hundred dollars the second year, four hundred dollars the third year, and two hundred the final year, if he maintains First Class Honors standing from year to year. For 1956-7 only, there will be two of these Scholarships available.

The Johnson's Wax Scholarship: Six hundred dollars a year for a period of three years, to the outstanding man in Junior Group 1 who enters Honors Chemistry or the Chemistry Option of the Honors Chemistry and Physics Course. The selection is to be made by the Scholarship Committee of University College, who may take into consideration the financial need of the applicants; the award is to be announced each Spring, when the Scholarship Committee releases its Spring awards list. If the successful candidate falls below First Class standing in Chemistry or fails to attain reasonably high standing in his accessory subjects, the scholarhip shall revert to the top ranking First Class student in the same year provided his financial need warrants his selection.

The Hon. Edward Blake Scholarship, No. 1: Sixty dollars; for Honors Economic and Political Science, Second Year. Offered in 1956-57.

The Hon. Edward Blake Scholarship, No. 2: Sixty dollars; for Honors Economic and Political Science, Third Year. Offered in 1956-57.

(These two Scholarships were endowed by the late Major Hume Cronyn, K.C., M.P., in memory of his uncle, the Hon. Edward Blake, sometime Premier of Ontario and later member of the British House of Commons. These Scholarships will be awarded at the discretion of the Scholarship Committee.)

The Joseph Henry Marshall Scholarship: Sixty dollars; for Honors History, Third Year. Open only to Canadian-born students. To be awarded in 1957-58.

(Bequeathed to the University by Mrs. Amy Marshall as a memorial to her late husband, Joseph Henry Marshall, M.P., to commemorate his interest in all phases of Canadian History.)

The Andrew Grant Scholarship, No. 1: Sixty dollars; for Honors Economic and Political Science, Second Year. Offered in 1956-57.

The Andrew Grant Scholarship, No. 2: Sixty dollars; for Honors Economic and Political Science, Third Year. Offered in 1956-57.

The Andrew Grant Scholarship, No. 3: Sixty dollars; for Honors Social Science, Second Year.

The Andrew Grant Scholarship, No. 4: Sixty dollars; for Honors Social Science, Third Year.

(These Scholarships were bequeathed to the University by Mrs. Grant as a memorial to her husband, Mr. Andrew Grant, St. Thomas.)

*In alternate years, next in 1956-7, when the Joseph Henry Marshall Scholarship is not available.

The John Gordon McIntosh Scholarship, No. 1: Sixty dollars for Honors Mathematics and Physics, Second Year.

The John Gordon McIntosh Scholarship, No. 2: Sixty dollars; for Honors Physics, Third Year.

(These Scholarships were endowed by the late Mrs. John Gordon McIntosh, of Winnipeg, in memory of her husband. They will be awarded at the discretion of the Scholarship Committee.)

The Wilhelmina and J. Gordon McIntosh Prize, No. 1: One hundred and twenty dollars for highest standing in Honors Business Administration, Second Year; to be held in the third year.

The Wilhelmina and J. Gordon McIntosh Prize, No. 4: Sixty dollars; for Honors Geography, Second Year; to be held in the third year.

The Wilhelmina and J. Gordon McIntosh Prize, No. 5: Sixty dollars; for Honors Geography, Third Year; to be held in the fourth year.

(These prizes were bequeathed to the University by the late Wilhelmina Morris McIntosh, of Winnipeg and London.)

The Famous Players Canadian Corporation Scholarship: Five hundred dollars; to be awarded for high standing in the Journalism subjects of the penultimate year of the Journalism course; the award may be augmented by a waiver of fees of the Trois Pistoles Summer School for a candidate who agrees to attend that Summer Session. For further details of the award and for application forms, apply to the University Registrar not later than April 1st.

The Midland Securities Scholarship: One hundred dollars, for the student with the highest standing in Journalism 20, who enters the Honors Journalism course.

The Albert O. Jeffery Scholarship, No. 1: Sixty dollars; for Honors Biology, Second Year.

The Albert O. Jeffery Scholarship, No. 2: Sixty dollars; for Honors Biology, Third Year.

The Albert O. Jeffery Scholarship, No. 3: Sixty dollars; for Honors Mathematics, Third Year.

(These three Scholarships were bequeathed to the University by the late Mrs. Jeffery as a memorial to her husband, Mr. Albert O. Jeffery, K.C., D.C.L., LL.D., former President of the London Life Insurance Company.)

The Richard and Julia Butler Scholarship: Sixty dollars; for Second Year Honors Botany.

The A. N. Knowles Scholarship: Sixty dollars; for Honors Chemistry, Second Year.

The J. C. Knowles Scholarship: Sixty dollars; for Honors Chemistry, Third Year.

(The above Scholarships are donated to the University as memorials by Mrs. A. N. Knowles, London.)

The William Wyatt Scholarship, No. 1: Sixty dollars; for Honors English Language and Literature, Second Year.

The William Wyatt Scholarship, No. 2: Sixty dollars; for Honors History, Second Year.

(The capital fund for these Scholarships was bequeathed to the University by the late William Wyatt, of London.)

The Myrtle Rowntree Memorial Scholarship: Sixty dollars; for Honors English Language and Literature, Third Year.

(This Scholarship was established as a memorial to the late Myrtle Martindale Rowntree, a 1919 graduate in Honors English and History, by her brothers and sisters.)

The California Standard Company Scholarship: Three hundred and seventy-five dollars as an aid to the completion of the final year in Honors Geophysics, Geology, Physics or Mathematics. The Selection Committee is to be the Scholarship Committee of University College. Women and foreign students are eligible to receive the award, subject to the approval of the Company. The Scholarship may revert if the highest-ranking student has any larger award.

The Ontario Hydro Engineering Scholarships: Two awards of three hundred dollars each, for outstanding students in the first and second year of the Engineering Science Course.

Khaki University and Y.M.C.A. Scholarship: Sixty dollars; for the highest average obtained by an ex-service man or woman, or the son or daughter of an ex-service man or woman, in any year of any course in University College of Arts and Science.

Sir Wilfrid Laurier Memorial Scholarships: Two scholarships, one elementary ($30.00) and one advanced ($50.00); awarded annually for proficiency in French conversation; open only to Canadian-born English-speaking students, or the sons and daughters of naturalized British subjects not of French parentage.

(The capital fund of these Scholarships was the gift of the Women's Liberal Association.)

Bruce County Scholarships: Two, one hundred dollars each, one for the man, one for the woman, from Bruce County who stand highest in any year of any regular course in the University. These scholarships can be held only once by any student: an award won a second time reverts to the student coming next in order of merit.

(These Scholarships were voted by the Council of Bruce County in June, 1945.)

Elgin County Scholarships: Two, one hundred dollars each, one for the man, one for the woman, from Elgin County (excluding the City of St. Thomas) who stand highest in any year of any regular course in the University.

(These Scholarships were voted by the Council of Elgin County in June, 1945.)

Huron County Scholarships: Two, one hundred dollars each, one for the man, one for the woman, from Huron County who stand highest in any year of any regular course in the University.

Huron County Bursaries: Five tuition bursaries up to $100 a year are available for students who have been residents of Huron County for the past three years. These Bursaries are tenable only in the constituent colleges of this University, and are renewable on the same terms as the Dominion-Provincial Student Aid Bursaries. Application forms and further details may be obtained from the Registrar by May 1st. Awards will be made by a committee of Huron County representatives and the University Registrar.

(These Scholarships were voted by the County Council of Huron County, in 1944 and 1948, for annual competition among Huron County students in attendance at the University of Western Ontario.)

Perth County Bursaries: Five tuition bursaries of one hundred dollars each, tenable only in the constituent colleges of this University, are awarded to Perth County students (outside St. Mary's and Stratford) on approximately the same terms as the Dominion-Provincial Student Aid Bursaries, with the possibility of renewal from year to year. The Selection Committee (including the Warden and other representatives of Perth County Council meeting with University Scholarship and Bursaries representatives) may award a maximum of two hundred dollars to a student, depending on the degree of financial need, if the total sum of five hundred dollars a year is not exceeded. Application forms may be obtained from Perth County Principals or from the University Registrar.

(These awards were voted by the County Council of Perth County, in 1955.)

Y-Mac Club Bursary: One hundred dollars, for a student of Y.M.C.A. background; to be awarded each fall by a special committee of Y.M.C.A., Y-Mac Club and University representatives.

The Undergraduate Women's Organization Bursary: One hundred dollars; for a woman in any year of any course; to be selected by a committee consisting of the Dean of Women, the Registrar, the Secretary of the Loans and Bursaries Committee, and the President and the Chairman of the Undergraduate Women's Organization. Applications must be submitted to the Dean of Women by October 15th.

University Women's Club Bursary: One hundred dollars; for a woman student in her third year or, preferably, her fourth year in any Faculty; it will be awarded on the basis of satisfactory academic standing and some financial need, by a committee consisting of the Dean of Women, the Registrar, and a woman member of the Faculty who is not a graduate of this University. Application should be made to the Dean of Women or the Registrar before October 1st.

(This award is made annually by the University Women's Club of London.)

The Olga Alice Miller Bursary: One hundred dollars, for a woman in any year of any course. Applications should be made to the Dean of Women by November 1st. The Selection Committee shall be the Registrar, the Dean of Women, and the Secretary of the Loans and Bursaries Committee.

(This Bursary was established as a memorial to the late Olga Alice Miller, a 1928 graduate in Honors English, by her mother Mrs. A. E. Miller and her sister Helen.)

I. O. D. E. (Municipal Chapter) Bursary: One hundred dollars; awarded in the autumn to the student registered in the Zoology option who stood highest in Third Year Honors Biology during the preceding session and who gives indication of looking forward to work in Applied Biology or Entomology. The bursary may be awarded, under special circumstances, to a student approximating these conditions.

I. O. D. E. (William E. Saunders Chapter) Bursary: One hundred dollars; awarded in the autumn to the student registered in the Botany option who stood highest in Third Year Honors Biology during the preceding session. The bursary may be awarded, under special circumstances, to a student registered in a course other than Botany.

I. O. D. E. (Dr. John Dearness Chapter) Bursary: Seventy-five dollars; awarded annually to a graduate of any Canadian University enrolled at this University in a Mycology course; if there is no graduate candidate

with good scholarship and financial need, the award shall be made to an undergraduate student in Botany 461a, under the same conditions.

I. O. D. E. (London Air Force Chapter) Bursary: One hundred dollars; awarded annually to the student with the highest standing in the Radio Physics option of the Third Year of the Honors course in Mathematics and Physics.

I. O. D. E. (Nina Moore Jamieson Chapter) Bursary: One hundred dollars; awarded annually to the student with the highest standing in the Third Year of the Honors course in English and French.

I. O. D. E. (Lord Roberts Chapter) Bursary: One hundred dollars; awarded annually to a woman student enrolled in the final year of the Medical Course or in the Public Health Option of the degree course in Nursing; applications must reach the Registrar before October 1st each year.

I. O. D. E. (The Colonel William Gartshore Chapter) Bursary: One hundred dollars; awarded by the Scholarship Committee to a student in the Humanities.

I. O. D. E. (The Princess Patricia Chapter) Bursary: One hundred dollars; awarded by the Scholarship Committee to a student in the Social Sciences.

I. O. D. E. (The Sir George Ross Chapter) Bursary: Seventy-five dollars; awarded by the Scholarship Committee to a student in the Humanities or the Social Sciences.

I.O. D. E. (The Colonel G. Eric Reid Chapter) Bursary: Seventy-five dollars; awarded by the Scholarship Committee to a student in any year of any course.

Canadian Women's Press Club (London Branch) Prize: Twenty-five dollars; for the highest standing in Foreign News Reporting and Editing in the Journalism course.

William C. Benson and Company Prize: Fifty dollars; for the highest standing in the Accounting course of Second Year Honors Business Administration.

Ursuline College Home Economics Prize, No. 1: Twenty-five dollars; for Third Year Clothing (Home Economics 30x).

Ursuline Colleye Home Economics Prize, No. 2: Twenty-five dollars; for Third Year Foods (Home Economics 32x).

W. W. Tamblyn Prize: Seventy-five dollars, for the highest standing in the use of language (English Composition and Public Speaking) at the Junior Group level.

(The capital fund for this prize was bequeathed to the University by the late W. W. Tamblyn of Bowmanville and by his son, the late Professor W. F. Tamblyn of London, formerly Head of the Department of English in this University.)

Legation of Switzerland: Book prizes to students in modern languages, on recommendation of the Departments of Romance Languages and German.

Alumnae Association Prize: Ten dollars; Third Year Canadian History (History 31); only women are eligible for competition.

Gamma Phi Beta Alumnae Jubilee Prize: Ten dollars; Third Year Secretarial Science (Secretarial Science 30, 37, 38, 39).

Chemical Institute of Canada Prize: Twenty-five dollars in books to be awarded to the student with the highest standing in Chemistry in the Honors Chemistry, or Chemistry and Physics, course of the third year.

Scholarships Available for Study at the Summer School for French and English, Trois-Pistoles, Quebec

Applications for the undermentioned scholarships will be received by the Registrar up to April 30th. The winners will be selected by a special committee.

Robert Simpson Company Limited Scholarships: Two; one hundred and fifty dollars each.

Imperial Oil Company Limited Scholarships: One hundred and fifty dollars.

Board of Governors' Scholarship: Sixty dollars.

Through the generosity of certain London chapters of the Imperial Order of Daughters of the Empire, a few students may benefit by a grant from the **Trois-Pistoles Student-Aid Fund.** For details, apply to the Director, Trois-Pistoles Summer School, Room 126, University College.

Prizes Available at the Summer Session in London

For these prizes, see the Summer School pamphlet. A prize is available for each course offered. Because the awards are made for the highest standing in each subject, it is not necessary for students to file applications for any of them. Cheques will be mailed to prize-winners by October 15th.

IV. Bursaries for Students in any year of any course

(i) Dominion-Provincial Student-Aid Bursaries, Type B

These bursaries ranging up to $500 are for second, third and fourth year students with financial need and a record of sixty-six per cent., or better, in the university work of the preceding year. Applications are submitted through Dean T. L. Hoskin, Secretary of the Student Loans and Bursaries Committee of this University, by October 1st.

A limited number of Type B Bursaries are also available to students registered in the Faculty of Graduate Studies.

(ii) Student-Aid Bursaries from the W. F. Thomas Estate

Grants of $100 to $300 are available to students in financial need who are registered at this University in any year of a degree course. To be eligible, an applicant must be able to give evidence of satisfactory academic achievement. Preference is given to applicants whose residence is in St. Thomas or Elgin County. Applications should be submitted to Dean T. L. Hoskin, Secretary of the Student Loans and Bursaries Committee of this University, by October 15th.

(iii) Atkinson Charitable Foundation Student-Aid Grants

These awards are made to deserving undergraduates registered at this University in any year of a degree course. Applicants must be residents of the Province of Ontario and be able to give evidence of financial need. Applications should be submitted to Dean T. L. Hoskin, Secretary of the Student Loans and Bursaries Committee of this University, by October 15th.

(iv) Children of War Dead (Educational Assistance) Act

(See Page 116)

V. Graduate Fellowships, Scholarships and Prizes

See the Announcement of the Faculty of Graduate Studies. For detailed information about other graduate fellowships and scholarships available in Canada and abroad, consult the following volumes on file in the Registrar's Office and in the University Library:

The Yearbook of Canadian Universities

The Yearbook of the Universities of the Commonwealth

Higher Education in Great Britain and Ireland

The UNESCO International Handbook, **Study Abroad**

The Dominion Bureau of Statistics, **Postgraduate Scholarships and Fellowships open to Canadian Students.**

APPENDIX D — MILITARY STUDIES

Students may offer themselves for training in one of the three Armed Services, the University Naval Training Divisions, the Canadian Officers' Training Corps, and the RCAF University Squadron. Suitable candidates in each service will be trained for commissioned rank.

Military Studies count as a half course towards a degree in Senior Group B of the General Course in Arts.

Regular Officer Training Plan (ROTP)

Under the ROTP, undergraduates who are successful applicants are enrolled in the service of their choice, as Naval Cadets in the Royal Canadian Navy, Officer Cadets in the Canadian Army, and Flight Cadets in the Royal Canadian Air Force.

Applicants must be Canadian citizens or British subjects, single and under 21 at commencement of university or college training. If application is made prior to entry at university or college, it should be sent in writing to ROTP Selection Board, National Defence Headquarters, Ottawa, Ontario. If it is delayed until after admission to a university, apply to the representative of your preferred service.

For successful applicants the cost of books, instruments, tuition and other essential fees will be borne by the Department of National Defence. The scale of pay and allowances under this plan is:

(a) During the academic year, pay of $60 a month and subsistence of $65 a month, for a total of $125 a month.

(b) During the period of practical summer training, pay of $60 a month and subsistence provided by the Armed Services.

On successful completion of academic and military training, cadets will be promoted to Commissioned Officer rank in the Regular Force. The privilege of release, if desired, will be honored after three years' service as a commissioned officer.

University Naval Training Division

The Royal Canadian Navy hopes to secure the majority of its officers from the Universities. Undergraduates with or without previous experience may receive Naval Training through the University Naval Training Divisions (U.N.T.D.) After successful completion of their courses they may obtain commissions in the R.C.N. or the R.C.N.(R).

Applicants for training under the R.O.T.P. for service with the Royal Canadian Navy will train with the U.N.T.D. For further particulars regarding the R.O.T.P., see the details included in the above plan which is applicable to all Services

The course consists of sixty hours training during the academic year, for three years, and fourteen weeks training ashore and afloat for two summers. Cadets may volunteer for additional service. The training during the academic year is designed to prepare the Cadet for the more advanced and concentrated training ashore in the summer. The training afloat provides the practical phase of the courses as well as an opportunity for foreign travel. Students enter enter as Probationary Cadets and in their first year appear before a Cadet Selection Board for promotion to the rank of Cadet.

Pay is at the rate of $200.00 a month. For training during the academic year Cadets are paid one half day's pay for each training period up to a maximum of sixteen days' pay. On entry, uniforms are issued; and for summer training, board, lodging, medical care, dental care, and travelling expenses are provided.

The R.C.N. is hoping to build up a body of well-trained personnel who will be available for special services in cases of emergency. The U.N.T.D. provides the opportunity for obtaining valuable training and instruction useful in peace or war and is the source of over eighty percent. of commissioned Reserve Naval Officers.

Information and application forms are available in the U.N.T.D. office, 113 Thames Hall, University of Western Ontario.

Canadian Officers' Training Corps

1. Canadian Officers' Training Corps offers undergraduates an opportunity to qualify to qualify for commissions in the Canadian Army, either Regular Army or Militia, through a training program especially designed to meet their requirements.
2. Students are eligible who are:
   (a) British subjects who are in possession of a Landed Immigrant Permit or Canadian citizens between the ages of 17 and 25; these requirements may be varied to allow a higher age of entry for men who were on active service during the war, 1939-45, and those entering special Corps.
   (b) Of a physical standard suitable for the Canadian Army Active Force.
   (c) Following a course of study leading to a recognized degree.
3. Training provided is in two parts:
   (a) Two hours a week of theoretical training in military subjects during the academic year.
   (b) Twelve to twenty-two weeks of practical training during the summer, depending upon length of vacation period and candidate's choice. Training wil be as follows:
      (i) First and second years — at Corps Schools of the Canadian Regular Army.

(ii) Third year—practical leadership in charge of a troop, section or detachment at a Regular Army Unit or camp in Canada or Europe.

4. Students accepted for COTC training are granted the rank of Officer Cadet during the first two years and in the third year are appointed as 2nd Lieutenants. They are eligible for pay of rank ($200 a month) for every full day of military duty. For this purpose four hours of lectures during the academic year count as one day's duty, as well as each day spent at summer camp up to a maximum of 22 weeks.

5. The Commanding Officer is Lt. Col. R. N. Shervill. Candidates interested in COTC training should apply to Major R. A. Virtue, Resident Staff Officer, Room 117, Thames Hall.

RCAF University Reserve Training Plan (URTP)

Under this plan (URTP) students admitted to a squadron are appointed in the rank of Flight Cadet and hold that rank until commissioned as Pilot Officers at the end of the third summer of training. As Flight Cadets and Pilot Officers they are paid at the rate of $200 a month during the summer months and up to sixteen days' pay for attendance at winter training lectures. Those accepted for aircrew training will receive an extra $30 a month during the summer flying training. Upon graduation they are promoted to Flying Officer and given the option of service with the Regular Force, or going into the Supplementary Reserve, where they are on call only in case of national emergency.

Training consists of approximately 60 hours of parades, lectures, and films during each academic year, plus training in each cadet's particular field (i.e. Aircrew, Supply, Telecommunications, etc.) during summer employment on air force stations.

The Commanding Officer of the RCAF University Squadron is Wing Commander M. H. M. MacKinnon. Information and application forms are available in Room 112, Thames Hall. Those interested are advised to make application as soon as possible after registration.

SUMMARY OF REGISTRATION IN FACULTY OF ARTS AND SCIENCE, 1955-56

Year in Course	University College		Huron College	Ursuline College	Waterloo College	St. Peter's Seminary & Christ the King Colleges	Music Teachers' College	Totals	
Full-time Students:		Intra-mural							
First (Without Senior Matriculation)		29	9	19	89	25	6	177	
Second		823*	16	36	163	62	10	1,110	
Third		320	9	25	57	25	11	447	
Fourth		269	9	16	53	9	7	363	
Graduate		69	.....	.....	.....	.....	.....	69	2,166
Part-time Students:									
Undergraduate		32	3	34	52	8	1	129	
Graduate		18	.....	.....	.....	.....	.....	18	147
									2,313
Correspondence	343	.....	.....	.....	.....	.....	.....	343	
Summer School	745	.....	.....	.....	.....	.....	.....	745	
Extension	605	.....	.....	.....	.....	.....	.....	605	1,693
TOTALS	1,693	1,560**	46	130	414	129	34		4,006
Duplicates									523
									3,483

*In Pass courses, 619, in Honors courses, 204; from the Honors courses, students transfer to Medicine, the School of Business Administration, or the advanced years of Honors courses.

**1073 men, 487 women.

SUMMARY OF REGISTRATION IN THE WHOLE UNIVERSITY, 1955-56

Faculty of Arts and Science:	University College Intramural	1,560	
	Summer School, Correspondence, Extension, less duplicates	1,170	
	Affiliated Colleges	753	3,483
Faculty of Medicine:	Undergraduates	231	
	Graduates	33	264
School of Nursing:	Graduate Nurses	98	98
School of Business Administration:	Juniors	95	
	Seniors	74	
	Graduates	109	278
	UNIVERSITY TOTAL ENROLMENT (2,877 men and 1,246 women)		4,123

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