University of

Western Ontario

Arts and Science

CALENDAR

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University of

Western Ontario

London - Canada

University College

Middlesex College

Music Teachers' College

and Affiliated Colleges

ARTS AND SCIENCE CALENDAR 1960-61

CALENDAR FOR 1960

JANUARY

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CALENDAR FOR 1961

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The Academic Calendar

1960

July 4, Monday	Summer Session begins.
August 4 and 5, Thursday and Friday	Supplemental examinations in Arts and Science.
August 11, Thursday	Summer Session examinations begin.
August 13, Saturday	Summer Session ends.
September 1, Thursday	Last day for receiving applications and certificates for intramural students.
September 12, Monday	Conference of the Faculty of all Arts and Science colleges.
September 16, Friday	Middlesex College students enrol, 8:30 to 12:30.
September 17, Saturday	Extension classes begin. University College freshmen enrol, surnames A-L, 8:30 to 12:30 surnames M-Z, 1:30 to 4:30.
September 19, Monday	University College upperclass students enrol, surnames A-F, 8:30 to 12:30 surnames G-L, 1:30 to 4:30.
September 20, Tuesday	University College upperclass students enrol, surnames M-R, 8:30 to 12:30 surnames S-Z, 1:30 to 4:30.
September 21, Wednesday	Lectures and laboratory work begin, Faculty of Arts and Science.
September 29, Thursday	Students in the Faculty of Graduate Studies enrol 8:30 to 12:30 and 1:30 to 4:30.
October 10, Monday	Thanksgiving Day, holiday.
October 11, Tuesday	Last day for the enrolment of full-time students, Faculty of Arts and Science. Last day for adding any subject in the Faculty of Arts and Science.
October 27, Thursday	Meeting of the University Senate.
October 28, Friday	Autumn Convocation.
November 11, Friday	Remembrance Day ceremony.
November 15, Tuesday	Last day for withdrawing from any subject in the Faculty of Arts and Science without counting it as a failure.
December 9, Friday	Meeting of the University Senate.
December 17, Saturday	Christmas vacation begins, all Faculties and Schools.

1961

January 4, Wednesday	Lectures resume, all Faculties and Schools.
January 16, Monday	Second term begins, Faculty of Arts and Science.
February 10, Friday	Meeting of the University Senate.
February 20 to 25	Conference Week, Arts and Science.
March 7, Tuesday	Founders' Day.
March 31, April 1	Easter vacation; University closed.
April 15, Saturday	Second term closes, Arts and Science.
April 22, Saturday	Examinations begin, Arts and Science.
May 6, Saturday	Examinations end, Arts and Science.
May 26, Friday	Meeting of the University Senate.
May 27, Saturday	Spring Convocation.

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The University

The University of Western Ontario is composed of The Faculty of Arts and Science, The Faculty of Medicine, The Faculty of Graduate Studies, The Faculty of Law, The School of Nursing, and The School of Business Administration. The Faculty of Arts includes the University colleges: University College, Middlesex College, and Music Teachers' College; and has associated with it the following arts colleges affiliated with the University: Huron College, Ursuline College, St. Peter's Seminary and Christ the King Colleges.

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

The degrees conferred by the University are:

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

Degrees by Examination: Bachelor of Arts; Bachelor of Laws; Bachelor of Science; Bachelor of Engineering Science; Bachelor of Science in Nursing; Bachelor of Divinity; Master of Arts; Master of Laws; Master of Science; Master of Clinical Science; Master of Science in Nursing; Master of Business Administration; Doctor of Medicine; Doctor of Divinity; Doctor of Philosophy.

The diplomas awarded by the University are:

Diploma in Business Administration; Diploma in Journalism; Diploma in Public Health Nursing; Diploma in Nursing Education; Diploma in Nursing Service Administration; Music Graduate in Paedagogy.

HISTORY

"The Western University of London, Ontario" received its charter from the Legislature of the Province of Ontario in 1878. The first classes graduated in Arts and in Medicine in 1883. In 1923 by Act of the Provincial Legislature, the name of the University was changed to "The University of Western Ontario". By an Act of 1955 its powers were further defined.

In 1912 control of the Medical School by a joint stock company ended and it became the Faculty of Medicine, under the direct control of the same Board of Governors as the rest of the University. It occupied its present buildings in 1921.

The Faculty of Arts was closed from 1885 to 1895. In 1908 its charter was amended so that it became undenominational and was permitted to receive financial assistance from the City of London and later from the Province.

In 1924 the Faculty of Arts was moved to the present campus and in 1943 was re-named the Faculty of Arts and Science. In 1958 Middlesex College was established within the Faculty of Arts and Science.

The Institute of Public Health was opened in 1915 and in 1917 became the Faculty of Public Health. In 1946 one section became a Provincial Laboratory and the other section the School of Nursing, which was re-located on the main campus.

A separate Faculty of Graduate Studies was created in 1947 although post-graduate degrees had been conferred for many years.

The School of Business Administration was founded in 1950. Business Administration had been an honors course offered in the Faculty of Arts from 1920 to 1950.

The Faculty of Law was established in 1958.

THE LIBRARIES:

There are two libraries at the University, the general library and the medical library, as well as special reading rooms in several other buildings. The main collection of books, 200,000 volumes, is housed in the Lawson Memorial Library building. The medical library consists of 55,000 volumes.

The general library is conspicuously rich in Canadiana, Americana and books relating to Shakespeare. The Regional Collection of local history contains much material valuable for graduate work in history and economics. There are also important newspaper and periodical files.

The Board of Governors

Officers of the Board:

Lieut.-Col. D. B. Weldon, Chairman.

Mr. W. L. Duffield, Vice-Chairman.

Mr. Ross B. Willis, Secretary.

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., Col. W. H. Hemphill.

By the London City Council—Lieut.-Col. J. E. Smallman, Hon. Lieut.-Col. J. Gordon Thompson, Capt. Joseph Jeffery, Q.C., Mr. Robert H. Reid.

By the Board of Governors—Mr. Louis L. Lang, Mr. C. F. Stevens, Col. George W. Little, Dr. A. R. Ford.

By the Alumni Association—Mr. Harold R. Newell, Dr. C. Hauch.

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 of Middlesex College, the Principal of Music Teachers' 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

(Unless otherwise stated, degrees are from this university)

Visitor: His Honor, the Lieutenant-Governor of Ontario.

Chancellor: Richard G. Ivey, Q.C., LL.D.

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; LL.D., F.R.S.C.

Vice-President and Dean of Graduate Studies: Ronald Alexander Allen, B.A., Toronto, M.A., ibid., Ph.D., Chicago.

Dean of Men: Thomas Leslie Hoskin, B.A., M.A., Northwestern.

Dean of Women: Leola Ellen Neal, B.A., M.A.; Ph.D., Toronto.

Comptroller: Ross Baxter Willis, B.A., M.A.

Librarian: James John Talman, B.A., M.A.; Ph.D., Toronto, F.R.S.C.

Physician: Richard John Bowen, B.A., M.D.

Registrar: Helen M. B. Allison, B.A.; M.A., Minnesota.

Director of Summer School and Extension: Star Floyd Maine, B.A.; B.D. Victoria; M.A., Ph.D. Chicago.

Curator of the Museum of Indian Archaeology: Wilfrid Jury, D. ès L., Montreal.

Administrative Departments

Alumni:

Director: George Hartwell, B.A.

Athletics:

Director of Intercollegiate Athletics: John Pius Metras.

Business Manager of Athletics: Ernest Slatter.

Buildings and Grounds Department:

Superintendent: John Shortreed, B.A.Sc., Toronto.

Assistant Superintendent: R. M. Yeo, B.Sc., Queens.

Comptroller's Office:

Comptroller: Ross Baxter Willis, B.A., M.A.

Bursar and Chief Accountant: R. R. Glover, B.A.

Purchasing Agent: D. E. Crinklaw.

Food Services Department:

Manager: George A. Bullas.

Library:

Librarian: James John Talman, B.A., M.A.; Ph.D., Toronto, F.R.C.S.

Assistant Librarians: Lillian Rea Benson, B.A.; Kate M. Gillespie, B.A., McGill; John P. McLaughlin, B.A., Queens, Ph.D., London.

Registrar's Office:

Registrar: Helen M. B. Allison, B.A.; M.A., Minnesota.

Assistant Registrar: Margaret P. May, B.A.

Faculty of Arts and Science

Dean: Frank Stiling, M.A.; Ph.D., Michigan.

UNIVERSITY COLLEGE

Principal: Frank Stiling, M.A.; Ph.D., Michigan.

Secretary of the Faculty: D. B. McMillan, M.Sc.; Ph.D., Toronto.

Representatives on the University Senate: Professors E. E. Reilly, R. L. Allen, H. M. Thomas.

MIDDLESEX COLLEGE

Principal: A. Brandon Conron, D.S.O., M.A., Ph.D., Harvard.

MUSIC TEACHERS' COLLEGE

Principal: Clifford von Kuster, Mus. Bac., Toronto.

Admission Requirements

For admission to the Regular Academic Session in September official high school or college certificates must be presented to the Registrar's Office by September 1st, and for the Summer Session by July 1st. A non-returnable fee of two dollars must accompany all non-Canadian certificates submitted for evaluation.

The University

6

COLLEGES OF THE UNIVERSITY

University College, Middlesex College, Music Teachers' College.

The University Colleges require 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 of Canada and other countries.

An average of 60 per cent in at least nine papers of Grade XIII is required. These must include English, Latin or Mathematics (a minimum of two papers), one other language, and three other papers to be selected according to the program which the student proposes to follow.

Where circumstances demand a restricted registration in any program, preference will be given to students who have passed the requisite number of Grade XIII papers in five years of Secondary School attendance.

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 (or a Conservatory of Music Certificate for Grade VIII Practical and Grade II Theory; or Grade IV Theory), Mathematics of Investment (alternative for Algebra only), Accountancy Practice, Secretarial Practice.

Grade XIII examination standards are as follows: First Class Honors requires at least 75 per cent; Second Class Honors, 66 per cent; and Third Class Honors 60 per cent of the marks assigned to any subject, with a minimum of 50 per cent on each paper of that subject; Credit standing requires at least 50 per cent in each paper of that subject.

An applicant presenting Grade XIII certificates or the equivalent in at least nine papers specified above, with an average of 60 per cent, together with the full requirements listed above, may expect to complete one of the General Programs in three years, or an Honors Program in four years.

The Admissions Committee may grant permission for a deficiency in one subject of Grade XIII to be made up in the first year, by the completion of an appropriate university course. It is advisable, however, to clear such a condition in a Summer Session, rather than to carry it as an extra course in the winter session.

AFFILIATED COLLEGES

The affiliated colleges are associated with the University Faculty of Arts. See **Affiliated Colleges section.**

ADMISSION ON EQUIVALENT CERTIFICATES

Certificates of having passed Secondary School subjects parallel to Grade XII or Grade XIII subjects named above, may be accepted, provided 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 standing in some subjects, providing such subjects are passed "with Credit" or higher standing.

The General Certificate of Education of England and Wales is accepted in lieu of Grade XIII, 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

All applications for admission with advanced standing must be accompanied by official certificates from the institution where work has been done, and should be presented to the Registrar by July 1st.

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

Adult Special students desiring admission to the University for intramural study must be at least 21 years of age and absent from formal education for at least three years.

Such students must submit evidence of standing in two Grade XIII papers in English, two in another language and one paper in another subject, or their equivalent.

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 subject without passing the regular examinations.

Consult the Registrar for additional information regarding the admission of Adult Special students.

Fees

Students must pay fees in full on registration day, but if necessary the fees may be divided into two instalments, payable on the first day of each term. The extra charge for this division is $5.00. Students may not attend lectures or examinations unless their fees are paid, 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 on such transfer, a minimum penalty of $50.00.

Students registering in a College of the University and transferring during the same year to an affiliated college will be charged by the University, by the University, on such transfer, a minimum penalty of $50.00.

Students transferring from an affiliated college to the University under similar circumstances will be charged, by the University, the full annual fee for the year regardless of the date of the transfer.

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

ANNUAL FEES Student Activity Fees $49.50 Incl.

Full-time intramural undergraduate students:

This 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: Sept 1960

First year (except Engineering Science)	$425.00	$465.00
Second and subsequent years, Honors programs in the Humanities and the Social Sciences (excluding Business Administration, Journalism, Mathematics and P.H.R.E.)	385.00	425.00
Second and subsequent years, all other programs	425.00	465.00
Engineering Science (all years)	500.00	550.00

Part-time Students:

Intramural, each course including examination	75.00	85.00
Correspondence, Extension, Summer School, each course, including examination	60.00	70.00
Half-course	30.00	
Non-credit (non-refundable), each course	15.00	
Laboratory and microscope fees, each science course	10.00	

Bus. Ad. 1st & 2nd - $465.00
3rd & 4th - 490.00

Law $500.00
Medicine 675.00
Music 465.00
Nursing 465.00

Graduate Studies
M. A. 340.00
M. Sc. 340.00
PhD - 340.00
M. B. A - 490.00
M. Cl. Sc - 405.00
L. L. M - 490.00

Fees 9

EXAMINATION FEES

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	5.00
Graduate Record Examination (institutional plan)	5.00
Aptitude Test, at date other than regular testing-period	6.00
Special examination, at date other than May or August, each paper	15.00

LATE REGISTRATION

For intramural students (waived only when a medical certificate of serious illness is presented)	5.00

CERTIFICATES

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

DEGREES AND DIPLOMAS

Degree of B.D.	24.00

(The fees for all other degrees and diplomas are included in the annual fees.)

STUDENT EXPENSES

A statement of annual expenses can, at best, be approximate; purely personal items (e.g., laundry, clothes, recreation, transportation) 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	$ 425.00	to	$ 500.00
Board (34 weeks)	$ 600.00	to	$ 700.00
Books and supplies	$ 60.00	to	$ 80.00
	$1,085.00		$1,280.00

Housing

Accommodation for nearly 1,000 students is provided in University and College residences.

Spencer Hall, for women, fourth concession London Township, has a capacity of 104. Freshmen in the Colleges of the University are given preference. Fees are $600 for the academic year. For information write to: Dean of Women, University of Western Ontario.

Medway Hall, for men, University Drive, has a capacity of 300. Freshmen are given preference but some accommodation is reserved for students in other years. Fees are $650 for the academic year. For information write to: Dean of Men, University of Western Ontario.

Brescia Hall, for women, Western Road, is the residence of Ursuline College. Only students enrolled in Ursuline College are accepted for residence. For information write to: The Dean, Ursuline College.

Huron College, for men and women, Western Road, has a capacity of 250 in several residences. Men students from other colleges are accepted. For information write to: Dean of Residence, Huron College.

Christ the King College, for men, Waterloo Street, gives preference to students enrolled in Christ the King College but accepts some men from other colleges. For information write to: Dean of Residence, Christ the King College.

Lutheran Student Centre: Accommodation for nine men is available at 1079 Richmond St. For Information write to: The Resident Pastor, Lutheran Student Centre, 1079 Richmond St.

Newman House: Accommodation is available for 14 men at 76 Albert St. For information write to Rev. P. E. Crunican, College of Christ the King.

United Church University Residences for men and women: Accommodation is available for 48 men in the former London Hunt Club buildings and for 15 women at 1223 Richmond St. For information write to: The Bursar, United Church University Residences, Box 5105, London.

Students who will not be living in residence may apply to the Housing Bureau, Room 13, Thames Hall between August 1 and October 15 for assistance in finding accommodation in private homes in the University area. Students registering in an affiliated college should apply to the Dean of Residence of their college for help in finding private accommodation.

Health Services

A physical examination by practising physicians under the supervision of the University Health Service is required of all students who are enrolling in this University as intramural students in the winter session for the first time.

The University Health Service operates a clinic, Room 17, Thames Hall, where students may consult the University Physician for diagnosis, treatment or advice. A V.O.N. nurse is in attendance. 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 advice.

All students entering this University for the first time must take intracutaneous testing for tuberculosis Students showing a positive reaction must have chest x-rays. Students with a negative reaction should have the skin test repeated once yearly.

Examination results will not be sent to students who fail to observe these regulations.

Since 1 January, 1959, the Ontario Plan of Hospital Care Insurance offered by the Ontario Hospital Services Commission has been the only form of basic hospitalization permitted in Ontario. All students are expected to possess this protection as individuals or, if under 19, through their parents' policies.

Students registering for the first time from provinces which do not possess a reciprocal provincial hospital scheme, and those coming from outside Canada, are reminded that the Ontario Plan now requires a three-months' waiting period before benefits may be obtained.

Medical in-hospital, surgical and diagnostic benefits are arranged by the University for all full-time students through a group of associated life insurance companies.

Conduct of Students

The University of Western Ontario is a private university. In accordance with the University of Western Ontario Act, 1955, the University is governed by the Board of Governors, which is responsible for its property and financial affairs, and by the Senate, which is responsible for its educational policy.

The Board of Governors and the Senate have established the regulations and the conditions of admission to and continuance at the University. The payment of tuition fees, which represent approximately one-third of the cost to the University of a student's education, does not alone entitle the student to membership in the University. As the Senate imposes academic standards so, too, the Board of Governors requires a standard of personal conduct in keeping with the status of a university student. The following regulations must be observed by all students:

All students are expected to conduct themselves in a manner becoming scholars and ladies and gentlemen. The University reserves the right at any time to suspend or dismiss a student whose conduct or academic standing is in its judgment unsatisfactory.

Intoxication, or disorder and bad manners arising from the use of alcoholic beverages, are particularly serious offences and may subject the student involved to the penalty of suspension or dismissal from the University.

Any student may be placed under discipline when, in the opinion of the Dean of a Faculty or the Dean or Principal of a College or School, his attitude toward his University obligations has been unsatisfactory.

A student who is suffering from any illness or physical disability is expected to report it immediately to the University Health Office even if he or she is to be treated by physicians outside the University.

The Board of Governors grants permission to students to bring cars into the grounds of the University on condition that the University's traffic regulations are obeyed and that the cars are parked in parking areas designated by the Board. This general privilege may be restricted by the Board from time to time as need arises, and will be withdrawn from any student who persistently disobeys the regulations.

The Board of Governors reserves the right to establish regulations with respect to dress as well as conduct on the premises of the University.

"Hazing" and/or "initiation" of University students is prohibited by virtue of a 1934 resolution of the Board of Governors.

The Board of Governors collaborates fully with the University Students' Council in the interpretation and enforcement of these regulations.

STUDENT ACTIVITIES

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 of the Board of Governors. Nor may the name of the University be used in any publication 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.

Military Studies

Military Studies may be credited as a half course in the General Program.

THE RESERVE PLANS

The University Naval Training Division (UNTD) of the Royal Canadian Navy, the Canadian Officers' Training Corps (COTC) of the Canadian Army, and the University Reserve Training Plan (URTP) of the Royal Canadian Air Force offer undergraduates a training plan to qualify for the Queen's Commission in the service of their own choice while attending University.

Winter Training is one night a week up to a maximum of 64 hours a winter for three or four academic years with pay up to a maximum of 16 days (approx. $112) a winter.

Summer Training taken with the Regular Force is a minimum of 12 weeks up to a maximum of 22 weeks for a minimum of two summers but usually three, paid at the rate of $210 a month. Rations, quarters, transportation, uniforms, medical and dental care are provided.

When the student completes the service training program and graduates from university he will have qualified for the Queen's Commission and will be qualified to serve with the Regular or the Active Reserves, or be transferred to the non-active reserve.

After registering at the University apply to any one of: University Naval Training Division, Room 113, Thames Hall; Canadian Officers' Training Corps, Room 117, Thames Hall; RCAF University Reserve Squadron, Room 112, Thames Hall.

THE REGULAR FORCE PLANS

The Tri-Service Regular Officer Training Plan (ROTP) is a completely subsidized university plan covering tuition, books, and year-round room and board, pay, and medical and dental care for up to four years of undergraduate study.

The subsidization plan for medical students covers the above, with the addition of a graduated pay and rank throughout four years of undergraduate study.

Graduates of this plan are commissioned in the Regular Force and are given the option of release after three years' Regular Service as an officer.

Apply to ROTP Selection Board, National Defence Headquarters, Ottawa prior to enrolment at University, or to the Service of your choice, as shown above, at any time after enrolment at University and prior to graduation.

Academic Awards

ADMISSION SCHOLARSHIPS FOR THE COLLEGES OF THE UNIVERSITY

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.

For information about the admission scholarships available in the affiliated colleges, write the Registrars of the respective colleges.

The following scholarships will be awarded on the results of the Ontario Grade XIII examinations.

No scholarship will be awarded unless a candidate obtains an average of First Class Honors (75 per cent) on the papers involved in the award.

Candidates must write all the papers on which an award is based. No credits by "recommendation" will be considered.

Each candidate must write at least six papers in order to be eligible for competition for any scholarship.

The winners of the scholarships must register in University College, Middlesex College or Music Teachers' College.

Scholarships cannot be deferred. Winners must register for a full year's work beginning the academic session following the award.

In order to retain the privileges of these scholarships the winners must maintain a satisfactory degree of proficiency from year to year of their programs.

BOARD OF GOVERNORS' SCHOLARSHIPS

Two General Proficiency Scholarships awarded on nine papers:

English, Mathematics (any two), History, two foreign languages;

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).

Six Scholarships awarded on six papers:

English, Mathematics (any two), and two other papers;

English, French and German or Greek or Latin or Spanish;

French, two of German, Greek, Latin, Spanish;

Mathematics (Algebra, Geometry, Trigonometry), Physics and two other papers;

Biology, Mathematics (any two) and two other papers;

Latin, French and German or Greek or Spanish;

Total value of each scholarship, $500 ($300 in the first year, $200 the second).

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 nine papers of the examination written in June of the year of the award, and chosen from the following subjects: English, French, German, Greek, History, Latin, Mathematics, Spanish, Botany, Zoology, Physics, Chemistry, Geography. Total value of each scholarship, $200 (payable the first year).

Scholarships for proficiency in single subjects:

Awarded to the applicant with an average of 75 per cent. on six papers and the highest standing in one of the following subjects:

(a) Latin; (b) Greek; (c) English; (d) Mathematics (Algebra, Geometry, Trigonometry); (e) French; (f) German; (g) Biology; (h) Physics and Chemistry; (i) Geography and History. 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 larger award.

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. Total value of scholarship, $500 ($300 the first year, $200 the second year).

(The capital fund for this scholarship was bequeathed to the University by the late George Williamson Young of Port Stanley.)

The Aluminum Company of Canada Scholarship:

One General Proficiency Scholarship for the highest ranking student in Grade XIII Physics, Chemistry, Mathematics (any two papers) and two other papers. Total value of scholarship, $500 ($300 the first year, $200 the second year).

The Ontario Hockey Association Scholarship:

An entrance award of $150, 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 London Life Actuarial Scholarship:

One General Proficiency Scholarship of $2400 ($600 a year) based on nine papers of Grade XIII, especially on high standing in Mathematics for admission to General Program 1 or 2. The Scholarship Committee shall select a winner (to be approved by the London Life Insurance Company) from the students who make application for the award and agree to take the actuarial option of the Honors Mathematics or the Honors Mathematics and Physics Program. If the winner fails to maintain First Class Honors he will forfeit the award until he regains that standard; if he withdraws from the actuarial option he will forfeit the award permanently.

Academic Awards

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The following Admission Scholarships are awarded to assist deserving students to obtain a university education and have the following stipulations in common:

They are based on standing in nine papers of Grade XIII in Ontario, written in the year of the award, or Senior Matriculation from the other provinces of Canada.

Both financial need and academic standing will be considered by the Selection Committee, which comprises the Chairman of the University Scholarship Committee, the Principals, the Dean of Men, the Dean of Women, and the Registrar.

All applicants for these awards must supply the Selection Committee with information regarding their personal contributions toward their education, and the amount of help available from family and other sources. Such information will be used by the Selection Committee, and will otherwise be kept entirely confidential.

The winners may hold these awards for the duration of their undergraduate courses in this University, if they maintain academic standing satisfactory to the University Scholarship Committee.

Applications must be submitted to the Registrar by May 1st, and must be accompanied by a letter from the applicant's Secondary School Principal, certifying that he is an outstanding and deserving student.

The General Motors Canadian Scholarship:

General Proficiency Scholarships of $200 to $2,000 a year, depending on financial need, throughout an undergraduate program. The choice of program is unrestricted.

The International Nickel Company of Canada Limited Scholarship:

One Inco Scholarship of $300 a year, in addition to tuition and incidental fees; limited to students in the field of engineering, geology, geophysics, mathematics and physics.

The Union Carbide Canada (Limited) Scholarship:

One General Proficiency Scholarship of $2,000 ($500 a year). 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. The Secondary Principal should state in his recommendation to the Selection Committee the applicant's talents for business or industry.

The Scholarships of the Institute of Chartered Accountants of Ontario:

Two General Proficiency Scholarships of $1,000 each for the two students entering a Business Administration or Commerce Program at any Ontario University, who have the highest standing in eight Grade XIII papers, including English Literature, English Composition, and Algebra. The winners may not accept other scholarships and bursaries for their freshman year valued in the aggregate at more than $500. Application must be made to the Institute of Chartered Accountants of Ontario, 69 Bloor Street East, Toronto 5, before June 20th.

The Queen Elizabeth Scholarships of the Corporation of the City of London:

Two, $1,000 each, payable the first year, for the man and the woman with the highest standing in nine Grade XIII papers. The winners must have lived in the City of London for at least three years and must have been enrolled in secondary schools in the City of London for their three final years.

The National Secretaries' Association Scholarship:

$100 for a student from a secondary school in Windsor or Riverside, Ontario, who enters a Secretarial Science program in any university in Ontario. Apply to the Scholarship Chairman, Windsor Chapter of the National Secretaries' Association, 2318 Moy Ave., Windsor, Ontario.

UNDERGRADUATE SCHOLARSHIPS AND PRIZES IN THE COLLEGES OF THE UNIVERSITY

Unless otherwise specified, these awards are competitive and are assigned by the Scholarship Committee, without the necessity of application, except as indicated for certain special scholarships.

The Board of Governors of the University provides the scholarships and prizes unless other donors are indicated. Students enrolled in affiliated colleges are not eligible for university scholarships and prizes.

Except for final 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 a college of the university.

An award requires a minimum average standing of 75 per cent., based on the Honors subjects for the Honors Program awards, and on all subjects for all other scholarships.

An award is made to the registrant with the highest average standing, who is carrying a full year's work as laid down for his year and program in the Calendar.

Students who take courses out of sequence are not eligible for an award unless the whole class follows the same sequence.

Students who fail to write one or more examinations, for illness or other reasons, are disqualified to receive awards.

A student may hold more than one award in one year, if the combined value of the awards does not exceed $500. Any amount in excess of $500 must revert to the next highest student eligible to receive it.

In cases of reversion, the honor of each award will be given to the original winner.

Awards will be paid in two instalments on November 1st and February 1st.

Board of Governors' Scholarships:

Scholarships: For general proficiency in the following:

General Program 1, first year: $60.

General Program 2, first year: $60.

Premedicine, first year: $60.

Premedicine, second year: $60.

The F. G. Jewell Scholarship: $50; the highest ranking student in General Program 2, first year, who plans to enter one of the professional programs: Honors Business Administration, Business Administration and Secretarial Science, Journalism or Physical and Health Education. Given in memory of the late Francis G. Jewell, C.A., former Auditor of the University.

The W. J. Roche Scholarship: *$50; for the highest ranking student in* General Program 2, first year, who plans to enter one of the social science programs: Honors Economics, Politics, Geography, History or Psychology. Given in honor of the late Hon. W. J. Roche, M.D., LL.D., C.M.G., former Chancellor of the University.

The B'Nai Brith Scholarship: $50; for the highest ranking student in General Program 2, first year, who plans to enter one of the humanities programs: English, Ancient or Modern Languages and Literatures, or Philosophy. Given each year by the London Branch of the Order.

Board of Governors' Scholarships: $60 each for highest standing in the following Second Year Honors Programs: Business Administration and Secretarial Science, Chemistry and Physics, Classics, English and French, English and German, Engish and Latin, English and Philosophy, French and Latin, Geology, Journalism, Modern Languages, Philosophy, Physical and Health Education, Psychology.

Third Year Honors Programs: Business Administration and Secretarial Science, Chemistry and Physics, Classics, English and German, English and Latin, English and Philosophy, French and Latin, Geology, Journalism, Modern Languages, Philosophy, Physical and Health Education, Psychology, and History, in alternate years, when the Joseph Henry Marshall Scholarship is not available; next in 1960-61.

The Albert O. Jeffery Scholarship, No. 3: $60; 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: *$60; for Second Year Honors* Botany. This Scholarship was bequeathed to the University by the late Mrs. Mary E. B. Moorhouse.

The A. N. Knowles Scholarship: *$60; for Honors Chemistry, Second Year.*

The J. C. Knowles Scholarship: $60; 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: $60; for Honors English Language and Literature, Second Year.

The William Wyatt Scholarship, No. 2: $60; 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: $60; 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 Ontario Hydro Engineering Scholarships: Three awards of $300 each, for outstanding students in the first and second and third years of the Engineering Science Program.

The Royal Canadian Engineers Memorial Scholarship: $125; to be awarded to a third year Engineering Science student who is also a member of C.O.T.C., provided he has completed one summer season of training with the C.O.T.C., or who is a member of the Canadian Army (Regular) attending the university under the terms of the R.O.T.P. Application for this scholarship must be made to the University Registrar before July 1st.

The J. P. Bickell Foundation Scholarship: $1,200; for a student entering the second year of the Honors Geology Program; $600 the second year, $400 the third year, and $200 the final year, if he maintains First Class Honors standing from year to year.

The Johnson's Wax Scholarship: $600 a year for a period of three years, to the outstanding man in General Program 1, first year, who enters Honors Chemistry or the Chemistry Option of the Honors Chemistry and Physics Program. The selection is to be made by the Scholarship Committee, who may take into consideration the financial need of the applicants; the award is to be announced each Spring. If the successful candidate falls below First Class standing in Chemistry or fails to attain reasonably high standing in his accessory subjects, the scholarship shall revert to the top ranking First Class student in the same year provided his financial need warrants his selection.

The Rhoda Ann Rinn Scholarship in English Literature: $1,000; to be awarded on the basis of academic standing in General Program 2, first year, to a student in a college of the university who enrols in the second year of Honors English Language and Literature. The winner will be selected by the Scholarship Committee, on recommendation of the Department of English, from applications to be received by the Registrar before May 1st. $500 will be payable in the second year, $300 in the third year and $200 in the final year, provided the student maintains First or Second Class Honors and remains in the Honors Program in English Language and Literature. This Scholarship was established as a memorial to his mother, by the late Lionel Harris Rinn, Honors English graduate of this University in 1927.

The Hon. Edward Blake Scholarship, No. 1: $60; for Honors Economic and Political Science, Second Year. Offered in 1961-62.

The Hon. Edward Blake Scholarship, No. 2: $60; for Honors Economic and Political Science, Third Year. Offered in 1961-62. These 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.

The Joseph Henry Marshall Scholarship: $60; for Honors History, Third Year. Open only to Canadian-born students. To be awarded in 1961-62. 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: $60; for Honors Economic and Political Science, Second Year. Offered in 1960-61.

The Andrew Grant Scholarship, No. 2: $60; for Honors Economic and Political Science, Third Year. Offered in 1960-61.

The Andrew Grant Scholarship, No. 3: $100; for Honors Political Science, Second Year.

The Andrew Grant Scholarship, No. 4: $100; for Honors Political Science, Third Year. These Scholarships were bequeathed to the University by Mrs. Grant as memorial to her husband, Mr. Andrew Grant, St. Thomas.

The John Gordon McIntosh Scholarship, No. 1: $60; for Honors Mathematics and Physics, Second Year.

The John Gordon McIntosh Scholarship, No. 2: $60; for Honors Physics, Third Year. These Scholarships were endowed by the late Mrs. John Gordon McIntosh, of Winnipeg, in memory of her husband.

The Wilhelmina and J. Gordon McIntosh Prize, No. 1: $100; for highest standing in Honors Business Administration, Second Year.

The Wilhelmina and J. Gordon McIntosh Prize, No. 4: $60; for Honors Geography, Second Year.

The Wilhelmina and J. Gordon McIntosh Prize, No. 5: $60; for Honors Geography Third Year. These prizes were bequeathed to the University by the late Wilhelmina Morris McIntosh, of Winnipeg and London.

The Famous Players Canadian Corporation Scholarship: $500; to be awarded for high standing in the Journalism subjects of the penultimate year of the Journalism honors program; 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: $100; for the student with the highest standing in Journalism 20, who registers in the Honors Journalism program.

The Albert O. Jeffery Scholarship, No. 1: $60; for Honors Biology, Second Year.

The Albert O. Jeffery Scholarship, No. 2: $60; for Honors Biology, Third Year.

The California Standard Company Scholarship in Geology and Geophysics: $400; as an aid to the completion of the third or fourth year in Honors Geology or Geophysics. The selection committee is to be the Scholarship Committee. Women and foreign students are only 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 Kennecott Copper Corporation Minerals Exploration Scholarship: $1,000; to be awarded to a male student entering the third or the fourth year of the Honors Geophysics Program. Application must be made to the Registrar by May 1st.

Khaki University and Y.M.C.A. Scholarship: $60; 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 program in a college of the University.

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, $100 scholarships, one for the man, one for the woman, from Bruce County who stand highest in any year of any regular program 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, $100 scholarships, 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 program in the University. These Scholarships were voted by the Council of Elgin County in June, 1945.

Huron County Scholarships: Two, $100 scholarships, one for the man, one for the woman, from Huron County who stand highest in any year of any regular program in the University. These Scholarships were voted by the Council of Huron County in 1944.

William C. Benson Prize: $50; for the highest standing in the Accounting course of Second Year Honors Business Administration.

Ursuline College Home Economics Prize, No. 1: $25; for Third Year Clothing (Home Economics 30x).

Ursuline College Home Economics Prize, No. 2: $25; for Third Year Foods (Home Economics 32x).

W. W. Tamblyn Prize: $75; for the highest standing in the use of language (English Composition and Public Speaking) at the first year 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.

The International Nickel Company Award in Journalism: A plaque and a portable typewriter for the student completing the Graduate Diploma Program in Journalism with the highest average, provided the average is at least 66 per cent. The award shall be made by the Scholarship Committee on recommendation of the Head of the Department of Journalism.

Legation of Switzerland: Book prizes to students in modern languages, on recommendation of the Departments of Romance Languages and German.

Alumnae Association Prize: $10; Third Year Canadian History (History 31); only women are eligible for competition.

Gamma Phi Beta Alumnae Jubilee Prize: $10; Third Year Secretarial Science (Secretarial Science 30, 37, 38, 39).

Chemical Institute of Canada Prize: $25; in books to be awarded to the student with highest standing in Chemistry Courses in the Honors Chemistry or Chemistry and Physics Programs of the third year.

The Canadian Association of Geographers: Book prize to the graduating student in Honors Geography who has demonstrated the greatest proficiency in this subject.

Applications for the following scholarships available for study at the Summer School for French and English, Trois-Pistoles, Quebec, 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; $150 each.

Imperial Oil Company Limited Scholarship: $150.

Board of Governors' Scholarship: $60.

The Northern Electric Undergraduate Scholarships: Two, $500 each, one in Honors Business Administration and the other in Engineering Science, Radio Physics or Honors General Physics, for a student who is a Canadian citizen or landed immigrant with at least one year successfully completed at a recognized university. The award is renewable for one year and is tenable in any year except the first.

The Mathematics Class of 1949 Prize: $25; for the highest standing in first year Calculus.

The Stan C. Reade Award: $250; for the student with the highest (at least Second Class Honors) standing in the Honors courses of the second year, who registers for the third year of the General Physics Option of the Honors Physics program.

The Stan C. Reade Essay Prize: A single lens reflex camera, for competition among fourth year Honors students in Physics.

UNDERGRADUATE MEDALS

These awards for final year students are competitive requiring a minimum average of 75% and are assigned by the Scholarship Committee without the necessity of application.

Students in affiliated colleges are eligible for medals only if their relevant examination papers have been marked by members of the Faculty of Arts and Science of the University.

University Gold Medals: For competition in the following Honors Programs:

Botany, Business Administration and Secretarial Science, Chemistry, Chemistry and Physics, Classics, English Language and Literature, English and French, English and German, English and History, English and Latin, English and Philosophy, French and Latin, Geography, Geology, Geophysics, Journalism, Modern Languages (French and German, and French and Spanish), Philosophy, Physical and Health Education, Physics and Mathematics, Psychology, Radio Physics and Mathematics, Zoology.

Governor-General's Medal: General Program.

The Robert LaVerne Eagleson Gold Medal in History: Endowed by Miss Lyla Eagleson of Toronto, in memory of her brother who graduated from this University with the University Gold Medal in History in 1925.

The Joseph J. and Annie R. Kingston Gold Medal: Mathematics, endowed by Dr. H. R. Kingston in memory of his parents.

The London Life Insurance Company Gold Medal: Actuarial Mathematics.

Ursuline College of Arts Award: Gold Medal: Home Economics.

The S. F. Glass Awards: Gold Medals: for the highest standing in the Honors Economics and Political Science Program, one in Honors Economics and the other in Honors Political Science. Endowed by the estate of the late S. F. Glass of London.

The Raymond Compton Dearle Gold Medal: Physics and Mathematics. Endowed by former students and friends of Dr. Dearle, M.B.E., F.R.S.C., Head of the Department of Physics, 1919-1949; Research Professor of Physics, 1949-57.

Financial Assistance

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ADMISSION BURSARIES AND LOANS

These forms of financial assistance are available to students entering the first year of a degree program in the university.

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 of Education of Ontario.

Applications must be submitted by May 1st of the final year in Grade XIII.

Ontario Department of Education Provincial Student-Aid Loans: Unsuccessful applicants for Student-Aid Bursaries, Type A, will automatically be considered for Student-Aid Loans.

Leonard Foundation Bursaries: The income of a trust created by the late Lieut.-Col. and Mrs. Reuben Wells 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.

Application forms may be obtained from Professor J. D. Ralph, Room 208, University College, and must be returned to him by February 15th.

The Atkinson Charitable Foundation Grade XIII Bursaries: These are available to residents of the Province of Ontario who obtain an average of 66 per cent, 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 final year in Grade XIII.

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 Veteran Affairs.

A.T.A. Trucking Industry Bursaries: The A.T.A. Trucking Industry Educational Foundation aids deserving students entering university. Value of each bursary is $500 to non-resident students; half this amount if the student lives in the City of London. Applications should be sent by May 1st to R. D. Grant, Chairman, A.T.A. Trucking Industry Educational Foundation Inc., 439 Queens Quay West, Toronto 2B, Ontario.

The London Free Press Printing Company Award: This award provides assistance and on-the-job training for students interested in a career in newspaper editorial departments. Value of the award is $250 per year plus the offer of summer employment at not less than $1000 per summer. Applicants should meet the requirements for admission to the University and come from the counties of Middlesex, Elgin, Kent, Lambton, Huron, Bruce, Perth, Oxford, Brant, Norfolk, Wellington, Waterloo, Grey or Essex.

Applications should be sent in typewritten letter to the Personnel Services Department, London Free Press Printing Company Limited, London, Ontario by June 1st.

Other Bursaries: Entering students are also eligible for the W. F. Thomas Bursaries, the C. W. Loaring Bursaries, the Huron County Bursaries, the Perth County Bursaries, the Y-Mac Club Bursary, the Olga Alice Miller Bursary, the Procter and Gamble Company of Canada Bursaries, the Canadian Bechtel Limited Bursary, Local 27 U.A.W.-C.I.O. Bursary, and various I.O.D.E. Bursaries. All of these bursaries are described in the section on Undergraduate Bursaries and Loans.

An entering student may apply for these undergraduate bursaries up to November 1st of his first university year.

UNDERGRADUATE BURSARIES AND LOANS

Unless otherwise stated, applications for Bursaries are to be submitted to Dean T. L. Hoskin, Secretary of the Student Loans and Bursaries Committee, by November 1st.

Dominion-Provincial Student-Aid Bursaries, Type B: These bursaries, up to $500 are for second, third and fourth year students with financial need and a record of Grade B, 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, by October 10th.

Ontario Department of Education Provincial Student-Aid Loans: A student who has been a resident of Ontario for at least one year and has been in attendance at a Canadian University or an affiliated College or a Canadian Service College during the preceding year, may apply for a Provincial Loan up to $500. These loans are available to students who attained a minimum average of 60 per cent on the preceding year's work with no unremoved failures or conditions; and to students who for other reasons are unable to qualify for a Dominion-Provincial Student-Aid Bursary. Consideration will not be given to a student enrolled under the Regular Officer Training Plan. Unsuccessful applicants for Student-Aid Bursaries Type B will automatically be considered for a Provincial Student-Aid Loan.

UWO Combined Loans: The University has a number of loan funds for graduate and undergraduate students. Loans of up to $400.00 in any one year may be approved by the Student Loans and Bursaries Committee of the Board of Governors, and applications may be submitted to T. L. Hoskin, Secretary, Student Loans and Bursaries Committee, any time during the academic year between registration and the 15th of February.

Loans will be approved for students with a satisfactory academic record providing the money is needed for purely academic expenses. No interest is charged until the student graduates or withdraws from the University, at which time interest begins at the rate of 4% per annum.

Student-Aid Bursaries from the W. F. Thomas Estate: Grants of $100 to $300 are available for students in financial need, in any year of a degree. 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.

Atkinson Charitable Foundation Student-Aid Grants: These awards are made to deserving undergraduates in any year of a degree program. Applicants must be residents of the Province of Ontario, able to give evidence of financial need.

The Bill McKibbon Bursary: $500 a year throughout Premedicine and Medicine, provided 66 per cent standing is maintained. A male student, preferably from southwestern Ontario, is to be selected by the Secretary of the Loans and Bursaries Committee and the donor. Academic standing and personality will count equally in the selection. This Bursary is endowed by Dr. Walton McKibbon of Wingham, a Medical graduate of this University, in memory of his son.

The C. W. Loaring Bursary: $150; for an undergraduate student in any year of Engineering Science at this University, preferably a student from Western Ontario, to be selected by the Student Loans and Bursaries Committee, on the basis of proven academic ability (66 per cent or better) and evidence of financial need. This Bursary is the gift of Mr. John W. Loaring, graduate of this University in 1940.

The Canadian Women's Press Club (London Branch) Bursary: $50; for a woman student entering the third or fourth year of the Honors Journalism program.

The London Free Press Journalism Bursary: $500; for a graduate of any Canadian university entering the Diploma Program in Journalism at this University. The Selection Committee (the Head of the Journalism Department of this University, the president of the London Free Press Printing Company or his delegate, and the Dean of Men) shall base the award on undergraduate record, financial need, character and personality, evidence of aptitude for journalism as a profession and on anticipated ability to improve the status of journalism as a profession. Applications shall be made to the Registrar not later than August 31st. The first half of the award shall be payable upon registration and the other half at the beginning of the second term.

The Canadian Bechtel Limited Bursaries: These bursaries are for students in any year of a program in Engineering Science or Business Administration. Value of the awards is $100-$300.

Huron County Bursaries: Five tuition bursaries up to $100 a year each are available for students who have been residents of Huron County for the past three years. These Bursaries are tenable only in colleges of the University, and are renewable on the same terms as the Dominion-Provincial Student-Aid Bursaries. Awards will be made by a committee of Huron County representatives, the University Registrar, and the Secretary of the Student Loans and Bursaries Committee. These Bursaries were voted by the County Council of Huron County in 1948.

Perth County Bursaries: Five tuition bursaries of $100 each, tenable only in the colleges of the University, are awarded to Perth County students (outside St. Marys 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 and University Scholarship and Bursaries representatives) may award a maximum of $200 to a student, depending on the degree of financial need, if the total sum of $500 a year is not exceeded. These awards were voted by the County Council of Perth County in 1955.

Y-Mac Club Bursary: $100; for a student of Y.M.C.A. background in any year of a degree program; 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: $100; for a woman in any year of any program, 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.

Pi Beta Phi Fraternity Bursary: $50; to be awarded on February 1st to a woman student in any year of any program in any faculty, by a committee composed of the Dean of Women, the Registrar, the Secretary of the Loans and Bursaries Committee and the Scholarship Chairman of the local Fraternity Chapter.

University Women's Club Bursary: $100; for a woman student in her third or preferably, her fourth year in any faculty. This bursary 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 representative of the University Women's Club of London. 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.

Local 27 U.A.W.-C.I.O. Bursary: One bursary valued at $250 is available annually to a student in any year of any degree program.

The Olga Alice Miller Bursary: $100; for a woman in any year of any program. 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 and History, Assistant Registrar, 1933-51, by her mother Mrs. A. E. Miller and her sister Helen.

The O-Pee-Chee Company Bursaries: One of these awards valued at $500 each will be available annually to a deserving freshman who may continue to hold it for a maximum of three years. Total value is therefore $1500. Apply by October 1st. Awards will be announced by October 15th.

The Steel Company of Canada Bursaries: One of these awards valued at $500 each will be available annually to a deserving freshman who may hold the award for a maximum of four years. Total value is therefore $2000. Apply to the Secretary, Student Loans and Bursaries Committee by June 1st. Awards will be announced by September 1st.

The Procter and Gamble Company of Canada Bursaries: $100 minimum; to benefit students of good academic standing in any year of a degree program who are in financial need.

I.O.D.E. (Municipal Chapter) Bursary: $100; for a student in any year of a degree program in pure or applied Science.

I.O.D.E. (William E. Saunders Chapter) Bursary: $100; for 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 program other than Botany.

I.O.D.E. (Dr. John Dearness Chapter) Bursary: $100; 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: $100; awarded annually by the Scholarship Committee to a student in any branch of Honors Physics, preferably Radio Physics, third year.

I.O.D.E. (Nina Moore Jamieson Chapter) Bursary: $100; awarded annually to the student with the highest standing in the Third Year of the Honors Program in English and French.

I.O.D.E. (Lord Roberts Chapter) Bursary: $100; awarded annually to a woman student enrolled in the final year of the Medical course or in the Public Health Option of the degree program in Nursing.

I.O.D.E. (The Colonel William Gartshore Chapter) Bursary: $100; awarded by the Scholarship Committee to a student in any year in the Humanities.

I.O.D.E. (The Princess Patricia Chapter) Bursary: $100; awarded by the Scholarship Committee to a student in any year in the Social Sciences.

I.O.D.E. (The Sir George Ross Chapter) Bursary: $100; awarded by the Scholarship Committee to a student in any year in the Humanities or the Social Sciences.

I.O.D.E. (The Colonel G. Eric Reid Chapter) Bursary: $100; awarded by the Scholarship Committee to a student in any year of any program.

I.O.D.E. (The David Crombie Chapter) Bursary: $100; awarded annually by the Scholarship Committee to a student in any year of any program.

A.T.A. Trucking Industry Bursaries: The A.T.A. Trucking Industry Educational Foundation provides a limited number of bursaries for second and third year students. Value of the awards is up to $250. Awards will be made at the end of the first term.

Academic Regulations

LENGTH OF PROGRAMS

General Programs in Arts and Science leading to the Bachelor of Arts general degree require three years for students admitted with Grade XIII standing.

Honors Programs leading to either the B.A. with honors in Arts or the B.Sc. with honors in Science require four years from Grade XIII standing. The first year of the General Program 1 or 2 is followed by three years of honors work.

The professional program in Engineering Science requires four years and leads to B.E.Sc. degree. Professional programs in Journalism; Business Administration and Secretarial Science; and in Physical Health and Recreation Education (P.H.R.E.) require four years and lead to the B.A. with honors. Three year programs lead to a general B.A. with Home Economics, Secretarial Science or Pre-theological options.

The Pre-business program requires two years and followed by two years in the School of Business Administration, leads to the B.A. with honors in Business Administration.

The Pre-medical program requires two years in University College and is followed by four years in the Faculty of Medicine leading to the degree of M.D.

The program for the B.Sc.N. degree requires one year in University College, three years professional training in a recognized hospital, followed by one year in the School of Nursing.

ATTENDANCE

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 attending Extension classes held by this University or by the transfer of credit from an approved college or university.

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 instructor, is absenting himself too frequently from class or laboratory periods will be reported to his Dean. On recommendation of the Department concerned and with the permission of the Dean, after due warning has been given by the Dean, the student shall be debarred from taking the regular examinations in that course.

Academic Regulations

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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.

An optional course need not be given unless it is elected by at least five students. Students are warned that the timetable often limits wide choice of options.

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 other additional course must be obtained from the Academic Standing Committee. Tuition and laboratory fee for such additional courses will be charged at the usual rate for Special students.

Any student of the two final years who shows an unsatisfactory knowledge of spoken or written English must do additional assignments until his work satisfies his instructors.

A student by his registration subscribes to the regulations as stated from time to time in the University official announcements.

EXAMINATIONS

Regular Examinations:

Regular course examinations for the winter session are conducted in April and May and for the summer session in August.

A student who fails to appear for an examination at the time set in the 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.

A student who is compelled because of personal illness or death in his family, to miss an examination must have his physician forward to the Registrar a certificate specifying the dates on which he was unable to be present. The Registrar will then request recommendations from the instructors.

Supplemental Examinations:

Supplemental examinations, for which special application must be made to the Registrar, are conducted in August for students who have been conditioned (40 to 49 per cent) in any course of the General Program. (See Failures.)

Supplemental examinations for Summer School courses, governed by the same rules, are held in January.

Students whose grade is less than 40 per cent in any course may not write a supplemental examination in that subject.

Supplemental examinations will not be allowed any student in more than the equivalent of two full courses.

A student may not write a supplemental to raise his grade in a course in which he has already received a passing grade, except by permission of the *Academic Standing Committee.*

No supplemental examination will be allowed in Honors courses.

No supplemental examination will be held within three months following the regular examination period.

Special Examinations:

A special examination is any examination other than the regular or supplemental examinations.

No special examination may be assigned except on the recommendation of the Head of the Department concerned, after consultation with the instructor involved.

Students may 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.

No General Program student may write special examinations on more than the equivalent of one full course in one academic year.

No Honors Program 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.

Comprehensive Examinations:

Various departments of University College and Middlesex College require 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 Program and are additional to the course examinations.

GRADES

General Programs:

In the General Programs the following grades are used: A, B, C. D. E. F. *The minimum for Grade A is 75 per cent of the marks obtainable; for 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. Grade F, less than 40 per cent, indicates a total failure and the necessity of repeating the course in class.

No student will be admitted to the degree of Bachelor of Arts in the General Program unless he has obtained an average of 60 per cent in the Major subject, with 60 per cent in each of six courses out of the eleven required in the Senior Group, in addition to 50 per cent in all other courses.

No student will be admitted to the degree of Bachelor of Arts in the General Program with Home Economics, Secretarial Science, Music, or the Pre-Theological Options, who has not obtained a minimum of 50 per cent on all the prescribed and elective work of his course, and a minimum of 60 per cent in half the courses of his senior year.

Honors Programs:

In Honors Programs the following grades are used: Class I—75 per cent or over; Class II—66 to 74 per cent; Class III—60 to 65 per cent; and Class IV—50 to 59 per cent.

A student in an Honors Program must obtain an average of at least 60 per cent in the courses of the Honors subjects of the second and third years, with an average of at least 60 per cent in other subjects, to be permitted to continue in Honors.

An average of at least 60 per cent in the Honors subjects of the fourth year, with no failure on any examination, is required for an Honors degree.

Term Work:

A student may be debarred from writing the final examination for failure to maintain satisfactory academic standing throughout the year.

Term work in a course will not be credited to a student beyond the year in which the course is taken.

Repeat Examinations:

If a student writes more than one examination in a course, the last mark he obtains shall be the only one considered.

FAILURES

A student who fails to obtain 50 per cent in the regular or supplemental examination in a subject will not be eligible for re-examination without a further year's attendance at the lectures in the subject 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 not take the same course more than twice, except by permission of the Academic Standing Committee.

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 program); a student who fails to satisfy this requirement shall withdraw from his program.

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, available without clash of timetable, for a subject in which he has obtained a minimum of 66 per cent.

A candidate in an Honors Program for the degree of Bachelor of Arts who has obtained 50 per cent in each course of his final year, but has failed to obtain the requisite average for honors (60 per cent), may on the recommendation of the Academic Standing Committee, be awarded a General degree. The candidate may write a subsequent examination for an Honors degree.

A candidate in an Honors Program for the degree of Bachelor of Science who has obtained 50 per cent in each course of his final year, but has failed to obtain the requisite average for honors (60 per cent), may on the recommendation of the Academic Standing Committee, be awarded a Bachelor of Science degree without honors. The candidate may write a subsequent examination for an Honors degree.

CONDITIONS

A student who is permitted by the Admissions Committee to enter a program with one condition must remove that condition within two years of his admission.

Students conditioned at the regular examinations should attempt to remove their conditions at the next supplemental examinations. If a condition is not removed the course must be repeated.

APPEALS AND PETITIONS

A copy of the Senate regulations governing appeals by students may be consulted in the Registrar's office.

A student who wishes to petition the Academic Standing Committee for special consideration on medical, compassionate or other grounds, should submit his petition in writing to the secretary of the Committee (the Registrar).

TEACHERS' COURSES AND CERTIFICATES

Programs for Teachers:

The University through its Extension and Summer School Department offers the General Program for students unable to attend the intramural winter sessions. Certain courses are available from the correspondence division of the Department of Extension.

High School Assistants' Certificates:

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 programs approved by the Minister of Education.

TYPE A: Subject to the conditions specified below, an Honors degree in Arts or in Science (66 per cent.) is the academic standing required 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 History, English and Latin, French and German or Spanish, Geography, History, Latin and French, Mathematics, Mathematics and Physics, Physical Education, Physics and Chemistry, or Science.

For the University of Western Ontario, the courses specified above shall be the corresponding Honors Programs as defined in the current Calendar of the Faculty of Arts and Science.

The programs 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 nine papers.

Candidates shall attend for at least the complete third and fourth academic years.

The Minister of Education 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 Programs who wish to obtain Type A standing should submit formal transcripts of their University records to the Ontario College of Education for evaluation.

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:

An Honors Degree in Arts or Science in accordance with the present agreement prescribed for Type A qualifications.

or

A General Program Degree in Arts and Science with a standing of 66 per cent. on the work of the final year of the program; and including English in any three of the first, second, third and fourth year courses of study.

For professional requirements, candidates should consult the Ontario Department of Education, Toronto 5, Ontario.

Programs

First year students will register in one of the following programs:

General Program 1: Mathematics and Natural Sciences

General Program 2: Humanities, Social Sciences, Mathematics, Journalism and Physical, Health and Recreation Education.

General Program: Secretarial Science Options

General Program: Pre-Theological Options

General Program: Home Economics Options

General Program: Music Options (see Music Teachers' College)

Degree Programs in Nursing

Engineering Science

Pre-Business

Pre-Medicine

Course-Numbering System

Courses 1-9 are equivalent to corresponding subjects of Secondary School Grade XII (Ontario).

Courses 10-19 are equivalent to corresponding subjects of Secondary School Grade XIII (Ontario).

Courses 20-29 are First year General Courses.

Courses 30-39 are Second year General Courses.

Courses 40-49 are Third year General Courses.

Courses 200-299 are Second year Honors Courses.

Courses 300-399 are Third year Honors Courses.

Courses 400-499 are Fourth year Honors Courses.

A course-number followed by "a" is offered in the first term only; followed by "b" in the second term only; followed by "x" 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.

The General Programs

First Year

The purpose of the First Year General Programs is to offer a basic general education and to postpone the selection of a specific program until the beginning of the second year. Thus the student can make a final decision as to his future program on the basis of university work which will include subjects not available in the secondary school. On the successful completion of the first year of the General Program, the student is eligible to register in the second year of the General Program, or the second year of one of the Honors Programs.

The General Program requires two more years for completion and leads to the B.A. degree. Honors Programs require three more years and lead to an Honors B.A. or an Honors B.Sc. Degree, and permit specialization in one or two subjects.

GENERAL PROGRAM 1

This program leads to Mathematics and the Natural Sciences.

Requirements for Admission:

Grade XIII or equivalent standing in English, another language, Mathematics (Algebra, Geometry, Trigonometry and Statics), Physics and Chemistry, with an average of 60 per cent. If a student plans to specialize in Biology he may present Botany or Zoology instead of Trigonometry and Statics.

Courses:

Chemistry 20

English 20

Physics 20

Three of: Botany 20, Geology 20, Mathematics 24, Zoology 20.

~~Health, Library Science and Physical Education~~.

GENERAL PROGRAM 2

This Program leads to the Humanities, Social Sciences, Mathematics, Journalism and Physical, Health and Recreation Education.

Requirements for Admission:

Grade XIII or equivalent standing in English, another language, Latin or Mathematics (two of Algebra, Geometry, Trigonometry and Statics), and three additional papers, with an average of 60 per cent.

Courses:

English 20

French 20 or another language at the 20 level

Latin 20 or Mathematics 20 or a Natural Science at the 21-29 level

Two of: Economics 20, History, Philosophy 20

One of: Business 20, Economics 20, Geography 20, History 20, Journalism 20, Mathematics 20, Music 20, Philosophy 20, Politics 20, Psychology 20, Sociology 20, another language, another science.

~~Health, Library Science, and Physical Education~~.

GENERAL RULES

A student who plans to enter an Honors Program should study the requirements for that Program before selecting the options in first year. Because of certain limitations in the size of classes a student may not always be able to obtain the options he has selected.

No Grade XIII standing in a Natural Science may be substituted for a university course.

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

Any course taken in a first year General Program may be credited only once toward a degree.

The General Programs

Second and Third Years

1. The courses offered are grouped into four divisions:

   Division A—The Humanities

   Division B—The Social Sciences

   Division C—The Natural Sciences, Mathematics, and Astronomy

   Division D—Other Subjects

2. A student entering the second year of the General Program shall select a Major subject of concentration from either Division A, Division B, or Division C, and a Minor subject from a Division other than that of his Major subject.

3. Neither the Major nor the Minor subjects may be selected from Division D.

4. A Major subject shall consist of three or four Senior options in that subject.

5. Senior options are courses numbered from 30 to 499.

6. A Minor subject shall consist of two Senior options in that subject.

7. One or two Senior options of the Major subject shall be selected in the second year and two in the third year.

8. Prior to registration, a student shall consult with the Head of the Department of his Major subject who will advise him concerning his choice of options, and sometimes may permit him to register in an Honors Course, at the appropriate level.

9. A minimum of four courses, three of which must be Senior Courses shall be selected from each of Division A, and Division B.

10. A minimum of two courses, one of which must be a laboratory science course shall be selected from Division C.

11. A maximum of two courses from Division D may be credited towards a degree.

12. Not more than one course from those numbered between 10 and 19 may be credited towards a degree.

13. The following courses must be included in every program:

Economics 20

One of: History 20, 35, 36

One of: English 32, 35, 36, 38, 44, 45, 49

One of: French 20, Latin 20, Greek 20, German 20, Spanish 20, Russian 20, Italian 20

One laboratory course in a natural science

One of: Philosophy 20, 30, 32

One of: Psychology 20, 30

If any of the Senior courses in the above list have been selected in the Major or the Minor, the requirements under this rule have been fulfilled for that subject.

14. No more than five courses may be taken in any one subject.

15. Eight of the eleven required courses of the two final years must be Senior options. A minimum of six of these Senior options must be taken at this University.

16. A minimum of 60 per cent must be obtained in each of six courses out of the eleven required in the second and third years, and an average of 60 per cent in the options of the major subject.

GENERAL PROGRAM 1

Prerequisite: First Year General Program 1.

Second Year

Six courses to be selected as follows:

French 20 or another language at the 20 level

Economics 20

One option from the Major subject

One option from the Minor subject

Another option from the Major subject or a senior option from any Division in which one is required under rules 9 and 10.

One option from:

English 32, 35, 36, 38, 44, 45, 49

History 35 or 36

Philosophy 30 or 32

Psychology 30

If one of these six subjects is selected as a Minor, a course in another of these subjects should be taken.

Third Year

Five courses to be selected as follows:

The courses required for graduation under rule 13 but not previously selected.

Two options from the Major subject

One option from the Minor subject

Another option in Division A or B if needed under rule 9.

GENERAL PROGRAM 2

Prerequisite: First Year General Program 2.

Second Year

Six courses to be selected as follows:

One option from the Major subject

One option from the Minor subject

Three options not previously selected from the following subjects, one course from each of which must be taken ultimately under rule 13.

English 32, 35, 36, 38, 44, 45, 49

Economics 20

History 35 or 36

Philosophy 30 (if Philosophy 20 was not selected in first year.)

Psychology 20

A laboratory course in Natural Science or Mathematics 20

Another option from the Major subject, or a senior option from any Division in which another is required.

Third Year

Five courses to be selected as follows:

Two options from the Major subject
One option from the Minor subject
One option from Senior courses in any Division
One laboratory course in Natural Science; or if both courses from Division C have been completed, another Senior option must be selected. It may be from any division (see Rule 11).

THE DIVISIONS

DIVISION A (The Humanities)

At least four courses are to be selected, three of which must be senior courses.

Junior Courses

(numbered 1-29)
Classics: Greek 1, 10, 20, 29
Latin 1, 10, 20
English 20
German 1, 10, 20, 22; 5, 15
Hebrew 1-10 (or 1 and 10), 20
Music 10, 20
Philosophy 20
Romance Languages:
French 10, 20
Italian 1, 10, 20
Spanish 1, 10, 20
Russian 1, 10, 15, 20, 22

Senior Courses

(numbered 30-499)
Classics: Greek 30, 39, 40
Latin 30, 39, 40
English 32, 35, 36, 38, 39, 44, 45, 46, 49
German 30, 40, 45, etc.
Hebrew 30, 40
Music 30, 40
Philosophy 30, 31, 32, 35, 36, 42, 43, 44, 47, 48, etc., and in affiliated colleges 30x-36x, 42x-47x
Romance Languages:
French 30, 31, 40, 41, 45, 48
Spanish 30, 31, 40, 41, 45, 48
Russian 30, 45

DIVISION B (The Social Sciences)

At least four courses are to be selected, three of which must be senior courses.

Junior Courses

(numbered 1-29)
Economic and Political Science:
Economics 20, Politics 20,
Sociology 20
Geography 20
History 20
Psychology 20

Senior Courses

(numbered 30-499)
Economics 30, 33, 34, 37, 355
Politics 31, 37, 42, 44, 348, 434, 451b, 462a, 462b
Sociology 30, 38, 40
Geography 30, 32, 36, 39, 40, 41, 43, 45, 46, 47
History 31, 33, 35, 36, 44
Psychology 30, 35, 36, 38, 39, 46, 48, 49

DIVISION C (The Natural Sciences, Mathematics, and Astronomy)

At least two courses are to be selected, one of which must be a laboratory science.

Junior Courses

(numbered 1-29)

Astronomy 29
Biological Science:
Botany 21 or Zoology 21
Botany 20
Chemistry 20
Geology 20 or 21
Mathematics 20 or 24
Physics 20
Physical Science:
Chemistry 21 or Physics 21
Zoology 20

Senior Courses

(numbered 30-499)

Botany 30, 31, 33, 36, 37, 42
Chemistry 32, 33, 44, 46
Mathematics 30, 32, 35, 45
Physics 34, 46, other courses with permission.
Zoology 30, 34, 37, 41, 43, 44, 45

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 Program degree.

Junior Courses

(numbered 1-29)

Business Administration 20
Home Economics 23, 24, 25, 26
Journalism 20
Military Studies
Religious Knowledge (in the affiliated colleges) 10x, 20x, 21x
Secretarial Science (not available for General Program 1 or 2 students; those who have transferred from the General Program with Secretarial Science options to General Programs 1 or 2 may count two of Secretarial Science 28, 29, 30, 36, 37, 38, 39)

Senior Courses

(numbered 30-499)

Business Administration 250
Journalism
Physical Education 251, 253, 258, 352, 366
Religious Knowledge (in the affiliated colleges) 30x, 31x, 32x, 37x, 40x, 41x, 42x, 44x, 47x

GENERAL PROGRAM: SECRETARIAL SCIENCE OPTIONS

Requirements for Admission: Secondary School Graduation Diploma, and Grade XIII or equivalent standing (with an average of 60%) in English, another language (French preferred), Latin or Mathematics (two papers), and three papers from Biology, Geography, History, Music, Physics, Chemistry, another language, another Mathematics.

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

Enrolment is limited and students are admitted on the quality of their secondary school certificates.

Students must obtain credit for all of the first year before beginning any second year work.

First Year

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

Second Year

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

Third Year

One of: English 32, 36, 38, 44, 45, 49
History 31
Secretarial Science 47, 48, 49
One of: French 43, German 30 or 40, Spanish 40, 41

GENERAL PROGRAM: PRE-THEOLOGICAL OPTIONS

Requirements for Admission: Secondary School Graduation Diploma, and Grade XIII (or equivalent) standing in English; History; and six papers, including a language, from: Latin, French, German, Spanish, Mathematics (at least two of Algebra, Geometry, Trigonometry and Statics) and Science. An average of 60% is required.

This program is open to students of any denomination and is offered in the Colleges of the University and Huron College.

It leads to the degree of Bachelor of Arts and is the normal requirement for admission to a three-year course in Theology. If, however, a prospective Theological student wishes to take another program leading to a General or an Honors degree, he may do so. In such a case, the student should include Greek 1x, 25x and 35x among his undergraduate options.

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

First Year

English 20
Greek 5x
History 20
Mathematics 20 or a Natural Science at the 21-29 level
Philosophy 20
Psychology 20
Health Lectures, Library Science and Physical Education

Second Year

Economics 20
English 32
Greek 15x
Philosophy 30
Religious Knowledge 30x
One of: History 31, 36, 44, Politics 20
Psychology 36, 46, 48, 49, Sociology 20

Third Year

English 38
Greek 25x
Religious Knowledge 40x
One of: Philosophy 31, 36, 42, 47
Two of: Hebrew 1-10x, History 31, 36, 44; Psychology 36, 46, 48, 49

GENERAL PROGRAM: HOME ECONOMICS OPTIONS

Requirements for Admission: Grade XIII standing in English, another language, Latin or Mathematics (any two) or Music (Grade VIII Practical and Grade II Theory), Botany, Zoology, Chemistry, with an average of 60% and with a grade of 60% in each Science course.

This program, which leads to the B.A. 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. Home Economics and Chemistry courses must be taken in the order and year designated.

On graduation, 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 final 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.

First Year

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

Second Year

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

Third Year

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

GENERAL PROGRAM: MUSIC OPTIONS

This program is available at Music Teachers' College, one of the Arts colleges of the University, located in the A. E. Silverwood Building, Waterloo Street North. Students wishing to follow this program will register at Music Teachers' College.

Requirements for Admission:

(1) Satisfactory results in audition tests; (2) Grade XIII or equivalent standing with an average of 60% in English, French, Latin or Mathematics (any two), Music (Grade VIII Practical and Grade II Theory, or Grade IV Theory), and one other paper, preferably History.

Two programs lead to a B.A. with Music Options: General Music and the Performer's Program. The General Music Program combines performance, pedagogy, and theory and is designed to equip graduates for private teaching, teaching in elementary or secondary schools, or work in related fields. The Performer's Program is available to those with special aptitude for public performance. Musical requirements for entrance to the latter program will be more demanding and the College reserves the right to refuse entrance or to transfer students to the General Music Program at the end of the first year upon recommendation of the Examining Committee. Details of the Performer's Program are available upon request.

Both programs 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 may be admitted to the Supplementary Music Option at the Ontario College of Education.

One subject from the Arts options is to be continued consistently throughout the program. Students who expect to attend the Ontario College of Education should select Geography and History as their options.

A student who enters the University with Grade XIII German will do German 20, 30, 40 as his prescribed or optional language.

A student may major in piano, voice, organ or composition. Detailed outlines of courses for students wishing to major in violin, clarinet or trumpet are available on request.

Note: Before graduation each student must have passed the Associate of Music examination in his major subject.

First Year

Music 21c for Piano majors
Music 21d and 21cd for voice majors
Music 21e and 21ce for organ majors
Music 29 and 21c or 21e for composition majors
Music 22 for piano and organ majors
Music 23, 24, 25, 26, 27 and 28
English 20
French 20 or German 1
~~Italian 1 for voice majors~~

One of:
~~Economics 20~~
~~Geography 20~~
History 20
~~Mathematics 20~~
Philosophy 20
Psychology 20
A second language

Health lectures, Library Science and Physical Education

For your calendar

GENERAL PROGRAM: Music Options

First Year

Music 21c for Piano majors (21d and 21cd for voice majors, 21e and 21ce for organ majors, 29 and 21c or 21e for composition majors); 22 for piano and organ majors; 23, 24, 25, 26, 27 and 28 for all students
English 20
French 20 or German 1

Italian 1 for voice majors
One option from:
History 20
Philosophy 20
Psychology 20
A second language
Health Lectures, Library Science and Physical Education

Second Year

Music 31c for piano majors (31d and 31cd for voice majors, 31e and 31ce for organ majors, 39 and 31c or 31e for composition majors); 33, 34, 35, 36, 37, 38 for all students;
English 32
French 30 or German 10

Italian 10 for voice majors
Two options from:
History 36
Another course in French or German
Philosophy 30
Psychology 36
~~A second language~~
~~Sociology 40~~

Third Year

Music 41c for piano majors (41d and 41cd for voice majors, 41e and 41ce for organ majors, 49 and 41c or 41e for composition majors); 44, 45, 46, 47, 48
English 36
French 40 [redacted] German 20

For voice majors one of the following options, and for all others two options:
History 31 or 44
Italian 20
Another course in French or German
Philosophy 35 or 48 [redacted]

Second Year

Music 31c for piano majors
Music 31d and 31cd for voice majors
Music 31e and 31ce for organ majors
Music 39 and 31c or 31e for composition majors
Music 33, 34, 35, 36, 37, 38
English 32
French 30 or German 10
~~Italian 10 for voice majors~~

Two of:
Economics 30
Geography 36
History 38
Mathematics 24
Philosophy 30
Politics 20
Psychology 20 or 36
~~A second language~~
~~Sociology 20~~

Third Year

Music 41c for piano majors
Music 41d and 41cd for voice majors
Music 41e and 41ce for organ majors
Music 49 and 41c or 41e for composition majors
Music 44, 45, 46, 47, 48
English 38
French 40 or German 20

For voice majors one of, and for all others two of:
~~Economics 48~~
~~Geography 45~~
History 31, 44
Italian 20
Another ~~language~~ course in French or Ger...
Philosophy 35, 48
~~Politics 42~~
~~Psychology 20, 49~~

DEGREE PROGRAMS IN NURSING

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

PROGRAM A

Requirements for Admission: Secondary School Graduation Diploma and Grade XIII (or equivalent) standing in English, another language (French preferred) Latin or Mathematics (any two of Algebra, Geometry, Trigonometry and Statics), Botany, Chemistry and Zoology, with an average of 60%, and with 60% in each Science Course.

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

Botany 36
Chemistry 32
Sociology 20
English 20
A second language at the 20 level
Psychology 20
Zoology 24
Health, Library Science and Physical Education

Part B: The completion of Diploma requirements in a Hospital School of Nursing where there is 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 or the Nursing Service Administration 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 program, without the written permission of both the Dean of the School of Nursing and the University Registrar.

French + Engl. St.

PROGRAM B

For Registered Nurses only.

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

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.
Proof of registration as a graduate nurse in good standing.

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

English 20
A second language at the 20 level
Physical Science 21 (Chemistry section) or Zoology 21
Library Science, and
Physical Education

Three options from: English 36 or 38 (if English 20 has been passed), Geography 20, History 36, 31, Journalism 20, 260, 355, Philosophy 42, Politics 20, Psychology 20, 48, 49, Sociology 20, 30, 38

PRE-BUSINESS

Requirements for Admission: Grade XIII (Ontario) or equivalent standing in at least nine papers. These must include English, Mathematics (a minimum of two papers), one other language, and three other papers to be selected according to the program which the student proposes to follow.

The courses taken in the Arts and Science faculty represent half the total taken by the student. Of the twelve courses taken in the Faculty of Arts and Sciences, eight courses are required, two are to be selected by the student to meet the concentration requirements (described below) and two are to be selected by the student to satisfy the option requirement (described below).

Required Courses:

Economics 20
English 20
English 35
Foreign language at the 20 level
Mathematics 20
Psychology 20

One of: Botany 21 Chemistry 21, Geology 21, Physics 21, Zoology 21
One of: History 20, History 31, History 33, History 36, Philosophy 30, Politics 20

Concentration Requirement: In addition to the eight required courses above, the student must take two courses which continue the study of a field started with one of the required courses. The student is free to select the field of concentration from among those represented by the required courses.

Option Requirement: The student must select two additional courses in Arts and Sciences. These courses may be in the field of concentration or they may be in one or two of the fields offered by the Faculty of Arts and Sciences.

First Year

Business 20
Economics 20
English 20
Foreign Language 20
Mathematics 20
Psychology 20

~~Health~~
~~Library Science~~
~~Physical Education~~

Second Year

Business 250
English 35
One of: History 20, History 31, History 33, History 36, Philosophy 30, Politics 20

One of: Botany 21, Chemistry 21, Geology 21, Physics 21, Zoology 21
Two courses in Arts and Sciences leading to filling the concentration requirement, the option requirement, or both.

Admission to the Business School is granted by the School of Business Administration on the courses of the first two years with an overall average of 60%.

PRE-MEDICINE

Requirements for Admission: Grade XIII standing in English and Mathematics (Algebra and Geometry), French or German or Latin, Chemistry and Physics, Botany or Zoology or Trigonometry and Statics, with an average of 60%.

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.

First Year

Chemistry 20
English 20
~~Health Lectures~~
~~Library Science~~
~~Physical Education~~
Physics 20
Zoology 20

Two options from:
Botany 20
Economics 20
Geography 20
History 36
Mathematics 20
Philosophy 20
Politics 20
Sociology 20

If student takes Math 24 first year
" 45 next year.

Second Year

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

Two options from:
- Botany 31 or 36 (to follow 20)
- Economics 30 or 33 (to follow Economics 20)
- Geography 30 (to follow 20)
- History 31 (to follow 36)
- Mathematics 35
- Philosophy 30 (or another senior Philosophy option)
- Sociology 30 (to follow 20)
- Politics 42 (to follow 20)

On the completion of this program, a student accepted by the Admission 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.

A student who is not accepted for admission to the Faculty of Medicine may proceed, if his record is satisfactory, to one of the Honors Science Programs or to the General Program with Science options. On completion of the Honors third year or the General Program, he may again apply for admission to the Faculty of Medicine.

Please see the Announcement of the Faculty of Medicine for the four years of Medicine leading to the M.D. degree.

Honors Programs

The first year of an Honors Program is First Year General Program 1 or 2.

The length of an Honors Program is four years past Grade XIII or equivalent standing.

The Honors Programs in Biology, Chemistry, Chemistry and Physics, Geology, Geophysics, and Physics and Mathematics lead to the degree of Bachelor of Science (B.Sc.). The Honors Program in Engineering Science leads to the degree of Bachelor of Engineering Science (B.E.Sc.) All other Honors Programs lead to an Honors Bachelor of Arts degree (B.A.).

The Department of Education accepts a degree in an Honors Program as the academic qualification for a High School Assistant's Certificate, Type B, for teaching in the elementary and secondary schools of Ontario. Some Honors Programs lead to Type A Certificates for High School Specialists, and these are indicated at the top of the respective programs.

A student expecting to enter an Honors Program should consult that program before selecting his options in General Program 1 or 2.

In all years of all Honors Programs options must be approved by all departments concerned.

ASTRONOMY

Requirements for Admission: First Year General Program 1, with an average of 60% in the Science and Mathematics subjects, at least 60% in Mathematics 24, and at least 60% in Physics 20.

Students who plan to continue into graduate studies are advised to begin a second foreign language in the third year, if they have not done so earlier.

Second Year

Astronomy 229
Mathematics 250, 256
Physics 250, 256

Third Year

Mathematics 378
Astronomy 359
Physics 350
Two additional Mathematics or Physics courses, at the 300 or 400 level.
One course from Division A or B.

Fourth Year

Astronomy 459
Two of: Physics 454, 455, 457
Two additional courses, at the 300 or 400 level, from Mathematics, Physics, Geophysics, or Chemistry.
One course from Division A or B.

Honors Programs

50

BIOLOGY

Requirements for Admission: First year General Program 1, 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 program satisfies the academic requirements for the High School Assistant's Certificate, Type A, Science, of the Department of Education of Ontario.

Second Year

Botany 250
Chemistry 200
German 5 or Russian 1
Mathematics 35
Physics 204
Zoology 250
One of:
- Economics 20
- English 32 or 35
- Philosophy 20
- Politics 20
- Psychology 30
- Sociology 20

All Third and Fourth year students are required to participate in the Biological Field Studies Course (463) which will be conducted jointly by the Departments of Botany and Zoology.

Third Year

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

Botany 352
Chemistry 303
German 15 or Russian 10
Zoology 337, 350
Three of:
- Botany 354, 361
- Zoology 354, 360b

Fourth Year

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

(a) Botany Option

Botany 453, 457, 454, 460a, 460b, 461a, 466b, 452 (optional)
Chemistry 406
French 45
German 45 or Russian 45
Zoology 455

(b) Zoology Option

Botany 453 or 457 or 466b
Chemistry 406
French 45
German 45 or Russian 45
Zoology 452, 453, 454, 455, 456, 460, 470

BUSINESS ADMINISTRATION AND SECRETARIAL SCIENCE

Requirements for Admission: First Year General Program 2, with at least 60% in Economics 20 and Business 20.

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

Second Year

Business 250 (Accounting)
Geography 39
Economics 237, 333
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 courses.

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 courses.

Business 456 (Commercial Law and Documents of Commerce)
One of Business:
460b (Auditing)
461 (Retailing)
471 (Advertising)
Secretarial Science 47

Two of:
Economics 46
English 32, 36, 38, 44, 45, 49
History 36, 31, 44
Philosophy 30

CHEMISTRY

Requirements for Admission: First Year General Program 1, 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 program 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 General Program 1 and either Botany or Zoology in the third year.

Second Year

Chemistry 207, 253, 254, 261
French 10 or German 5 or Russian 1 or Spanish 1
Mathematics 277
Physics 256

Third Year (1960-61 only)

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 courses.

Chemistry 351, 353, 354
German 15 or Russian 10 or Spanish 10
Physics 254
One of:
Economics 20
English 35
Philosophy 32
Politics 20
Sociology 20

Fourth Year (1960-61 only)

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 courses.

Chemistry 451, 452, 453, 458, 459
Physics 456 or Chemistry 406
Two of:
French 45
German 45
Russian 45
Spanish 45

CHEMISTRY AND PHYSICS

Requirements for Admission: As for Honors Chemistry.

This program satisfies the academic requirements for the High School Assistant's Certificate, Type A, Physics and Chemistry, of the Department of Education of Ontario.

Second Year

Chemistry 253, 254, 261
French 10 or German 5 or Russian 1 or Spanish 1
Mathematics 277
Physics 250, 251, 256

Third Year (1960-61 only)

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 courses.

Chemistry 351, 353, 354
German 15 or Russian 10 or Spanish 10
Mathematics 377 or Physics 250 or 351
Physics 353, 366

Fourth Year (1960-61 only)

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 courses.

One of: Economics 20, English 44, Philosophy 32, Politics 20, Sociology 20
Two of: French 45, German 45, Russian 45, Spanish 45
Chemistry 458 and 459, or Physics 458 and 459
Any five of: Chemistry 451, 452, 453, 454, Physics 454, 455, 456, 457

CLASSICS

Requirements for Admission: First Year, General Program 2, with an average of 60% in Latin 20 and 60% in Greek 20. This program satisfies the academic requirements for the High School Assistant's Certificate, Type A, Classics, of the Department of Education of Ontario.

Second Year

English 32
One of: French 20, German 20, Hebrew 20
Greek 230, 250, 251

History 257
Latin 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

ECONOMICS

Requirements for Admission: First Year General Program 1 or 2 with an average of 60%, and 60% in Economics 20 if taken. If Economics 20 is not taken in first year, it must be elected in the second year and a mark of at least 60% obtained. If Economics 20 is taken in the second year, Economics 230 must be deferred until the third year. It is recommended that an option in Mathematics, be taken as early as possible.

To graduate with an Honors degree, a student must have taken at least one course in Sociology and one course in Politics.

Second Year

Economics 230, 237
Business 250 or Mathematics 20 or 24

Three options other than 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 courses.

Economics 333, 350, 355
One of: Economics 334, 336, 351a and 351b, 363, 447, 455.

Two options other than 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 courses.

Economics 440, 460, 480

Two of: Economics 334, 336, 351a and 351b, 363, 447, 455. (Not all of these are offered in any one year.)

ECONOMICS AND POLITICAL SCIENCE

Offered only to students enrolled in this program prior to July 1, 1959.

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 courses.

Economics 350, 460, 480
Politics 237 or 434

Two of:
Economics 440, 447, 455
Geography 45
Politics 344, 348, 462
Sociology 440, 478
Mathematics 355, 455
Psychology 48, 49
Other courses.

ENGINEERING SCIENCE

Requirements for Admission: Grade XIII or equivalent standing in English, another language, Algebra, Geometry, Trigonometry and Statics, Physics, and Chemistry, with an average of 60%, and with an average of 66%, preferably, in the mathematical and science subjects.

The program in Engineering Science is designed to provide the academic basis for the profession of engineering. Emphasis is placed on mathematics, physics, chemistry, the engineering sciences, and the analysis and synthesis of engineering systems and structures.

The option selected in the Third Year must be continued in the Fourth Year.

The number of students in the First Year is limited. Selection will be made according to the qualifications of the applicants.

First Year

Chemistry 24
Engineering Science 20, 21, 22
English 20
Mathematics 27
Physics 26
Health, Library Science, and Physical Education

Second Year

Chemistry 201, 203
Engineering Science 200, 201, 202, 204
History 36
Mathematics 277
Philosophy 20
Physics 216

Third Year

One Option in humanities or social sciences
Engineering Science 300, 301, 303, 307
Mathematics 377
Option A (Chemical Engineering):
Chemistry 304
Engineering Science 305a, 306b, 314
Option B (Civil Engineering):
Engineering Science 308, 309
Option C (Electrical Engineering):
Engineering Science 302
Physics 356
Option D (Mechanical Engineering):
Engineering Science 310

Fourth Year

One Option in humanities or social sciences
Engineering Science 412, 413
Option A (Chemical Engineering):
Chemistry 403
Engineering Science 417, 418a, 419b, 420, 421
Option B (Civil Engineering):
Engineering Science 407, 408, 409, 411
Option C (Electrical Engineering):
Engineering Science 404, 405, 406
Physics 417, 455, 479
Option D (Mechanical Engineering):
Engineering Science 400, 401, 402, 403, 406 (part), 410

ENGLISH AND FRENCH

Requirements for Admission: First Year, General Program 2, with 60% in English 20 and in French 20.

This program 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

English 254, 270, 280
French 270, 271
Greek 29
One of: German 290, Latin 230 and 250, Spanish 231 and 230 or 340

Students who begin Spanish in the University will take Spanish 20 in the second year and defer Greek 29 and 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 courses.

English 356, 360, 373
French 380, 381
One of: History 35, 36, Philosophy 31, 35, Psychology 20, 49

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: First Year, General Program 2, with at least 60% in English 20 and in German 20. History 20 must be chosen as an option in First Year.

This program 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

English 254, 270, 280
German 290, 291
History 36

One of: French 270, Greek 20, Latin 230, 250, Politics 32, Russian 10, Spanish 20, 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 courses.

English 356, 360, 373
German 333, 390, 391

One of: Economics 20, French 380, Latin 340, 350 and 352, Greek 30, Philosophy 30, Russian 20, Spanish 230, 340

Fourth Year

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

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

ENGLISH AND HISTORY

Requirements for Admission: First Year, General Program 2, with 60% in English 20 and in History 20.

This program is accepted by the Department of Education of Ontario as academic qualification for the High School Assistant's Certificate, Type A, in English and History, provided that the student takes English 373 and two courses in Geography. Geography 20 should be taken in first year and another Geography course in second year. English 373 should be taken in third year.

Second Year

English 254, 280
History 236, 257

One foreign language option
One of: Philosophy 30, a second language, Politics 20, Economics 20, Sociology 20, a senior social science course

Third Year

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

English 32, 356
History 35, 331

A foreign language option
Another option

Fourth Year

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

English 480
Three of:
English 438, 459
History 444, 452

History 460

ENGLISH AND LATIN

Requirements for Admission: First Year, General Program 2, with 60% in English 20 and 60% in Latin 20.

This program 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

English 254, 270, 280
Greek 29
History ~~35~~ 257

Latin 230, 250, 251
One of: French 270, Greek 20, Greek 230 and 250, German 20, 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

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

ENGLISH AND PHILOSOPHY

Requirements for Admission: First Year, General Program 2, (including History), with 60% in English 20 and 60% in French 20 or German 20 or Latin 20.

Sequence 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.

Sequence A

Second Year

English 254, 270
Philosophy 230, 231

Two options

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
Philosophy 336, 347

Two options

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 courses.

English 280, 459, 480

Philosophy 457, 448, and one of: 443, 456, 462, 466

Sequence B

Second Year

English 254, 270, 280
Philosophy 230, 231

One of: French 270 and 271, German 290 and 291, Latin 230 and 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
One of: French 380, German 390, Latin 340 and 250

Philosophy 347, 335

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 courses.

English 459, 480; and 436 or 438

Philosophy 336, 457, 448

ENGLISH LANGUAGE AND LITERATURE

Requirements for Admission: First Year, General Program 2, with 60% in English 20 and an average of 60% in History 20, Geography 20 and a foreign language, or an average of 60% in the two languages taken. The student who has History 20 and Geography 20 will enter Sequence A; the student with two languages in First Year will enter Sequence B. Philosophy 20 is strongly advised as a First Year option.

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

Second Year

English 254, 270, 280
One of: Greek 29, English 441, English 45a
History 36

Sequence A:
History 257
One of: French 30, German 30, Latin 30, Greek 30.
Sequence B:
Two of: French 270, German 290, Latin 230 and 250, Greek 230 and 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 courses.

English 356, 360, 373, 436
Sequence A:
History 31 or 35
Geography 35

Sequence B:
One of: French 380, German 390, Latin 340 and 352, Greek 340 and 352
One of: History 31, History 35, Philosophy 30, Geography 35, Geography 45, French 48, an Honors course in a second foreign 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 courses.

English 438, 459, 463, 470, 480
Sequence A:
History 460

Sequence B:
One of: French 490, German 480, Latin 450 and 452, Greek 452

FRENCH AND LATIN

Requirements for Admission: First Year, General Program 2, with at least 60% in French 20 and 60% in Latin 20.

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

Second Year

English 35
French 270, 271
German 20 or Greek 20
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 courses.

French 380, 381
German 30 or Greek 30
Greek 29
One of: English 49, History 35, 36, Philosophy 31, 35, Psychology 20, 49
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 courses.

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

GEOGRAPHY

Requirements for Admission: First Year, General Program 1 or 2, with an average of at least 60% in the subjects taken.

This program is accepted by the Department of Education of Ontario as academic qualification for the High School Assistant's Certificate, Type A, Geography, providing the following options are selected: Astronomy 29, History 20, 36 and two of History 31, 33, 35, 44.

Second Year

Geography 20, 239
Mathematics 35 or Astronomy 29
One course from Economics, History, Mathematics, Politics, Sociology
Sequence A: (Follows General Program 1)
Economics 20
German 5 or Russian I or Spanish I
Psychology 30
Sequence B: (Follows General Program 2)
Two Junior courses from Division C
Philosophy 30 or one additional year's work in a modern foreign language.

Anyone who has taken Geography 20 (with 66%) may take Geography 330.

Third Year

Geography 330
332.
336.
one of 441 or 443

Two senior options from: Economics, English, Geology, History, Mathematics, Politics, Sociology or one additional year's work in a modern foreign language or the beginning work in a second foreign language.

40 - 440 - 43-443 not given in 1960

Anyone who has taken Geography 330 may take Geology 367.

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.

Fourth Year

Geography 445, 441 or 443, 450
Any two of: ~~440~~, 446 (one section), 447
Geology 367
One of: German 45, French 45, Spanish 45, Russian 45

Anyone who has taken Geology 367 may take an additional Geography option or the second year of a modern foreign language.

GEOLOGY

Requirements for Admission: First Year, General Program 1, with an average of 60% in the science subjects and not less than 60% in Geology 20. The student is strongly advised to have credit in Mathematics 24.

During the second week 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-five dollars.

Second Year

Chemistry 200
Engineering Science 256
Geology 251, 263
German 5 or Russian 1
Physics 204
One of: Botany 20, Mathematics 277, Zoology 250, Physics 251

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 courses.

One non-natural science option
Geography 30
Geology 351, 354, 355, 363, 365, 367
German 15 or Russian 10

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 courses.

French 45
Geology 458, 460
Three of: Geology 452, 454, 462, 463, 465, 470
One non-natural science option

GEOPHYSICS

Requirements for Admission: First Year, General Program 1, 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.

Second Year

Geology 261
German 5
Chemistry 200
Mathematics 277
Physics 250, 251, 256

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 courses.

Economics 20
Geology 351
German 15
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 courses.

French 45
Geology 452, 355
German 45
Geophysics 465
One Humanities or Social Science option
Physics 455, 456, 458
Applied Mathematics 378

HISTORY

Requirements for Admission: First Year, General Program 2, with 60% in History 20 and an average of 60% in English, one other language and either Economics or a second language.

This program is accepted by the Department of Education of Ontario as the academic qualification for the High School Assistant's Certificate, Type A, History if the following options are taken: Economics 20, Geography 20, Geography 335, Geography 445.

Second Year

Two of: Philosophy 30, Economics 20, English 32
History 236, 257
Two of: French 30, 40, German 30, Greek 30, Latin 30, Spanish 30, 40, Geography 20

Third Year

One of: Geography 335, Politics 237, Economics 333, Economics 237
History 35, 331, 333, 356
One of: English 32, 36, 38, 44, 45, 49 or a literature course in another language

Fourth Year

History 444, 452, 460

Two of: Politics 237, 242, 434, Economics 237, 333, Geography 445, literature course in another language

HISTORY AND PHILOSOPHY

Requirements for Admission: First Year, General Program 2, with an average of 60%, and preferably with 60% in History 20 and Philosophy 20.

Second Year

History 236, 257
One course in English

One option (History 20 if not taken previously)
Philosophy 230, 231

Third Year

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

History 35, 331
Two options

Philosophy 336, 347

Fourth Year

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

History 444, 460
One of: History 333, 452

Three of: Philosophy 335, 443, 448, 456, 457, 462, 466

JOURNALISM

Requirements for admission: First Year, General Program 2, with Journalism 20 (60%).

Transfer students from other colleges or programs must include Journalism 20 in the second year of the Honors Journalism program if it has not been completed previously.

Second Year

Journalism 250, 260, 270
Politics 20
English 35

One of: Economics 20 (if not completed previously), Psychology 20, Sociology 20.
One option

Third Year

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

Journalism 351, 355, 365, 375
History 31
Politics 242
One of: English 32, 36, 38, 44, 45, 49.
One option

Fourth Year

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

Journalism 451, 455
History 44
Politics 331 or 348
One of: English 254, 356, 436, 438 459
One option

DIPLOMA PROGRAM IN 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 program is required for the Diploma.

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

MATHEMATICS

Requirements for Admission: First Year, General Program 1, with an average of 60% in the Science and Mathematics subjects, and at least 60% in Mathematics 24; or General Program 2 with at least 60% in Mathematics 20.

Second Year

Mathematics 250, 256
Three options, at least one of which must be from Division A or B.

Third and Fourth Years

In the Third and Fourth Years, a student may select one of four Programs. Students who plan to continue into graduate studies are advised to commence a second foreign language in the second year of the program.

MATHEMATICS (PROGRAM 1)

Third Year

Mathematics 350, 356
One of: Mathematics 351, Physics 350, 356
One additional Mathematics course at the 300 or 400 level.
One course from Division A or B

Fourth Year

Mathematics 456
One of: Mathematics 450, 452
Physics 456
Three additional Mathematics courses at the 300 or 400 level.

ACTUARIAL MATHEMATICS (PROGRAM 2)

Program 2 will prepare students to write the Preliminary Actuarial Examinations, prepared by the Educational Testing Service, and also to write Parts 4A and 4B of the Actuarial Examinations. In 1960, these examinations will be held on May 11 and November 16. They may be written in London. Applications to write the examinations must be received by the Society of Actuaries not later than April 1 and October 1 respectively.

Third Year

Mathematics 353, 355, 356
One additional Mathematics course at the 300 or 400 level
One option from Division A or B

Fourth Year

Mathematics 463
Two of Mathematics 450, 452, 455, 456, 460
Two additional Mathematics courses at the 300 or 400 level, one of which must be Mathematics 363 (if not previously taken).

MATHEMATICAL STATISTICS (PROGRAM 3)

Third Year

Mathematics 355, 356
Two additional Mathematics courses at the 300 or 400 level
One option from Division A or B

Fourth Year

Mathematics 445, 455
One of: Mathematics 450, 456, 460
Two additional Mathematics courses at the 300 or 400 level

APPLIED MATHEMATICS (PROGRAM 4)

Third Year

Mathematics 356, 378
One additional Mathematics course at the 300 or 400 level
Two options at the 300 or 400 level
One course (or its equivalent) from Division A or B

Fourth Year

Mathematics 478
One of: Mathematics 450, 456, 460
Two additional Mathematics courses at the 300 or 400 level
Two options at the 300 or 400 level

In Program 4, a department other than the Department of Mathematics may prescribe the options in each year, subject to the approval of the Department of Mathematics. In this case, Program 4 will be called "Applied Mathematics, ... Option," where the blank space is to contain the name of the field in which the non-mathematics options are selected. (For options in Physics, see below.) A student may select options in more than one field of application, and, in this case, the program will be called "Applied Mathematics." The departments concerned will, however, require that the selections provide a coherent program.

The following courses must be chosen in the Physics Option:

First Year — First Year General Program 1, with at least 60% in Physics 20;

Second Year — Physics 250, 256;

Third Year — Mathematics 350; Physics 350, and either Physics 353 or 377;

Fourth Year — Mathematics 363; Physics 455, 457.

MODERN LANGUAGES AND LITERATURES

Requirements for Admission: First Year, General Program 2, with at least 60% in French 20 and in German or Spanish.

This program 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

English 35
French 270, 271
German 290, 291 or Spanish 230 or 340, 231, 260
Greek 29
At least one course in a foreign language not chosen as a major.

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.

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 courses.

French 380, 381
German 333, 390, 391 or Spanish 340 or 230, 341, 365
One of: English 49, History 35, 36, Philosophy 31, 35, Psychology 20, 49
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 courses.

French 450, 490, 491, 499
German 420, 480, 481 or Spanish 455, 460, 461, 465
One course in the minor foreign language continued from the Third Year

PHILOSOPHY

(This program is offered in the Colleges of the University only.)

Requirements for Admission: *The completion of the First Year, General* Program 1 or 2, or of the first year of the General Program: Pre-Theological Options with at least 60% in English and 60% in each of five other courses.

Second Year

English 32 or 38 or History 257
A Natural Science 21
Philosophy 230, 231
Two or more options

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 courses.

Philosophy 336, 347 Philosophy 335, or 350 A course in Psychology	Two options

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 courses.

Philosophy 443, 448, 456, 457, 462, 466	One option

PHILOSOPHY AND PSYCHOLOGY

Requirements for Admission: First Year, General Program 2, with an average of 60% and preferably with 60% in Philosophy 20 and Psychology 20.

Second Year

Philosophy 230, 231 Zoology 30 (or 21, if not qualified to register in 30)	Psychology 236, 349 One option (Psychology 20 must be elected if not taken previously)

Third Year

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

Students who plan to continue into graduate studies are advised to begin work in a second foreign language in the third year of this program, if they have not done so earlier.

Philosophy 336, 347 Psychology 337, 338, 355	One option

Fourth Year

For admission to the Fourth Year an average of 60% is required in the Philosophy and Psychology of the Third Year and 60% in the option.

Psychology 444, 448, 459	Three of: Philosophy 335, 443, 448, 456, 457, 462, 466

PHILOSOPHY AND SOCIOLOGY

Requirements for Admission: First Year, General Program 2, with an average of 60% and preferably with 60% in Philosophy 20 and Sociology 20.

Second Year

Philosophy 230, 231
Economics 237
Politics 20

Sociology 330
One of: English 32, 36, 38

Third Year

For admission to the Third Year an average of 60% is required in the Economics, Philosophy, Politics and Sociology of the Second Year. 60% is required in the English course selected.

Philosophy 336, 347
History 36
Psychology 30

Sociology 440
Economics 333 or Politics 434

Fourth Year

For admission to the Fourth Year an average of 60% is required in the Economics (or Politics), Philosophy and Sociology of the Third Year. An average of 60% must be obtained in other courses.

Students who plan to continue into graduate studies are advised to begin work in a second foreign language, if they have not done so earlier.

Philosophy 448, 462
Politics 237
Psychology 49

Sociology 478
One option

PHYSICAL, HEALTH AND RECREATION EDUCATION

Requirements for Admission: First Year, General Program 2, with an average of 60%. Psychology 20 and Zoology 21 should be selected.

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

Second Year

English 35
Psychology 36
Zoology 24
P.H.R.E. 251, 253, 258

One option beginning a field of concentration in the Humanities, the Social Sciences, or the Natural Sciences.

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 courses.

English 39
One of: Sociology 20, Psychology 49, Philosophy 30
P.H.R.E. 351, 352, 354, 366

First Aid (if not taken previously)
Two options

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 courses.

P.H.R.E. 451, 453, 454, 456, 457 Two options

PHYSICS AND MATHEMATICS

Requirements for Admission: First year General Program 1, or First Year Engineering, with an average of 60% in the Science and Mathematics subjects, and at least 60% in Mathematics and 60% in Physics.

This program 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.

Students who are primarily interested in the application of Mathematics to the Physical Sciences are referred to the Honors Applied Mathematics (Program 4) with Physics options. Admission to the Third Year of this program is open to students who have completed the Second Year of Physics and Mathematics.

Second Year

One of: German 5, Russian 1, Spanish 1

Mathematics 250, 256
Physics 250, 251, 256

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 of the courses of that year.

Students may choose either the General Physics or the Radio Physics options for the last two years of this program.

One of: German 15, Russian 10, Spanish 10
Mathematics 356

General Physics Option
Physics 353, 356, 359

Physics 350
One of: Mathematics 378, Physics 351

Radio Physics Option
Physics 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 of the courses of the Third Year.

French 45
One of: German 45, Russian 45, Spanish 45
Physics 455, 457, 458

One of: Economics 20, English 32 or 35, Psychology 30, Philosophy 31 or 32

General Physics Option
Physics 454, 456, 459

Radio Physics Option
Physics 477, 479
One of: Mathematics 478, Physics 476

POLITICS

Requirements for Admission: First Year, General Program 2, with an average of 60%, and 60% in Economics 20 and Politics 20 if taken. If Economics 20 and Politics 20 are not taken in First Year, they must be elected as options in the second year and a mark of at least 60% obtained in each.

Second Year

Politics 237, and 242 or 344
History 236, 331

Two of: Economics 230, 237, 334, Sociology 220, Psychology 20, Geography 20, Philosophy 42, History 35, other courses.

Third Year

Two of: Politics 242, 331, 344, 348, 434
One of: History 331, 356, 444

Three of: Economics 333, 350, 363, Sociology 330, 38, History 236, 257, 35, 333, Philosophy 32, Psychology 349, other courses.

Fourth Year

Three of: Politics 331, 348, 434, 462, 480, Politics 451b and Economics 351a

Two of: Philosophy 462, History 444, 452, Economics 351, 440, 447, other courses.

NOTE: Students wishing to stress International Politics are advised to carry a foreign language, preferably French, German or Russian, and the following courses: Politics 348, 351, 451b, History 236, 356, Geography 20 and 40, Economics 351a, and a half course in International Law. They will be required to take a total of seven courses in Politics and two in History, instead of eight and three respectively.

PSYCHOLOGY

(This program is offered in University College only.)

Requirements for Admission: First Year, General Program 1 or 2, with an average of at least 60%. Zoology should be selected as an option in First Year.

Second Year

English 35
Philosophy 30
Psychology 234, 235, 236
One option
Zoology 30 (or 21 if not previously completed).

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 courses.

Psychology 337, 338, 339, 349, 355 Two options

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 courses.

Psychology 444, 446, 448, 459 Three options

University and Middlesex Colleges Faculties and Courses

BOTANY

University College

Professors:

Clarence James Hickman, B.Sc., M.Sc., Ph.D., Birmingham, Head of the Department

Ezra Henry Moss, M.A., Ph.D., Toronto; F.R.S.C. (Part-time)

Associate Professor:

Duncan Archibald McLarty, B.A.; Ph.D., Columbia — Acting Head of Department

Wilbert Ezekiel McKeen, B.Sc., M.Sc.; Ph.D., Toronto

David George Wilson, B.A. *Toronto and Queen's*, M.A. Queen's, Ph.D. Wisconsin

Assistant Professor:

Frankland Shaw Cook, B.A., Ph.D. Toronto

Honorary Lecturers (Part-time):

Wolfgang Albert Andreae, M.Sc., Ph.D. McGill

William Harold Minshall, B.S.A. Toronto; M.Sc., Ph.D. McGill

Lloyd Thomas Richardson, B.A. McMaster; M.A., Ph.D. Toronto

Instructor:

John K. Johannesen, Diploma, Royal Agricultural College, Copenhagen (Plant Culture)

Preceptor:

Clara Winifred Fritz, M.Sc. McGill; Ph.D. Toronto

Nationa Research Council Postdoctorate Fellow:

Angela Myra Ham, B.Sc., Ph.D. Bristol

John Labatt Fellow:

Jack Behrent Secor, B.Sc. Butler; Ph.D. Washington State

Demonstrators:

Syed Shahid Husain, B.Sc. Agra; M.Sc. Aligarh; Jagmohan Singh Jhooty, B.Sc. Punjab; Janet M. D. Melvin, B.A. Acadia; Rosemary Scott (Mrs.), B.Sc. King's College, Dunelm; Jean McL. Wright (Mrs.), B.A. British Columbia; Ramon Clemence Zimmer, B.Sc. Ohio.

Courses

20. Introductory Botany: For students of General Program 1; the the general principles of Botany. To qualify for the Honors Program in Biology a student must obtain 60 per cent in this course.

2 lectures, 3 laboratory hours a week.

21. Biological Science (Botany Section): 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 zoology as well as botany.
2 lectures per week and 2 laboratory hours on alternate weeks.

30. Plant Culture: The elementary principles of plant growth, propagation and care with particular reference to plants of the garden and home.
1 lecture, 2 laboratory hours a week.
Prerequisite: Botany 20 or Biological Science 21 or 60% in Grade XIII Botany and Zoology.

31. Plant Diseases and Fungi: A study of pathogenic fungi, bacteria and viruses and their host-parasite relationships. The recognition of poisonous and edible fungi.
1 lecture, 2 laboratory hours a week.
Prerequisite: Botany 20 or Biological Science 21 or 60% in Grade XIII Botany and Zoology.

33. Plant Ecology: Plants and types of vegetation in relation to environment; aspects of conservation.
1 lecture, 2 laboratory hours a week.
Prerequisite: Botany 20 or Biological Science 21 or 60% in Grade XIII Botany and Zoology.

36. Bacteriology: The common economic organisms in reference to water, food supplies, public health and civic problems. Prescribed for students in Home Economics: optional for others.
1 lecture, 2 laboratory hours a week.
Prerequisite: Botany 20 or Biological Science 21 or 60% in Grade XIII Botany and Zoology.

37. Plant Taxonomy: Recognition and classification of common plants, including reference to their occurrence and adaptational features.
1 lecture, 2 laboratory hours a week.
Prerequisite: Botany 20 or Biological Science 21 or 60% in Grade XIII Botany and Zoology.

42. Elementary Plant Physiology: A study of physiological processes in plants and their organs. 1 lecture, 2 laboratory hours a week.
Prerequisite: Botany 20 or Biological Science 21 or 60% in Grade XIII Botany and Zoology.

Honors Courses

250. The Vascular Plants: The morphology, anatomy and development of the vascular plants.
Prerequisite: Botany 20. 2 lectures, 3 laboratory hours a week.

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

352. Plant Physiology: The function and reactions of plants and their organs.
Prerequisite: Botany 250. 1 lecture, 3 laboratory hours a week.

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

Prerequisite: Botany 250. 1 lecture, 3 laboratory hours a week.

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.

453. Plant Ecology: The structure of vegetation and its relation to the environment.

Prerequisite: Botany 250. 1 lecture, 3 laboratory hours a week.

454. Plant Anatomy: The anatomy and histology of the Pteridophyta and Spermatophyta, including some Palaeobotany. Optional for fourth year Honors and graduate students.

Prerequisite: Botany 352. 1 lecture, 3 laboratory hours a week.

455. Genetics: See Zoology 455.

457. Plant Taxonomy: Principles of taxonomy, nomenclature; identification of seed plants, ferns and mosses, using manuals and monographs.

Prerequisite: Botany 250. 1 lecture, 3 laboratory hours a week.

460a. Cryptogamic Botany, Algae: The morphology, evolution and classification of the Algae.

2 lectures, 6 laboratory hours a week, one term.

Prerequisite: Botany 352.

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.

463. Biological Field Studies: An obligatory course of study of living organisms in their environment. The student should be prepared to meet part of his expenses for travel and subsistence.

Prescribed but non-credit.

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

University College

(Members of the Faculty of the School of Business Administration)

Associate Professor:
Donald Hammond Thain, M.B.A., D.B.A. Harvard

Lecturers:
Jack F. Lintott, B.Sc. British Columbia; M.B.A.
Samuel A. Martin, M.B.A. Harvard; C.A.
John G. Myers, B.S.F. British Columbia; M.B.A.

Courses

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

250. Fundamentals of Accounting: 3 hours a week.

CHEMISTRY

University College

Professors:
Frederick Lewis Maitland Pattison, B.A., M.A., Ph.D. Cantab., Head of the Department
John Aberdeen Gunton, B.A., M.A. McMaster; Ph.D. Illinois (on leave 1960-61)
James Wendel Burns, B.A.Sc. New Brunswick; M.Sc. Queen's
Christian Sivertz, B.A.Sc. British Columbia; M.Sc., Ph.D. McGill
Donald Charlton Bradley, B.Sc., Ph.D., D.Sc. London
Paul de Mayo, B.Sc. M.Sc., Ph.D. London
James Keith Watson, B.A., M.A. McMaster; M.A., Ph.D. Toronto
Hubert Martin, M.S., D.Sc. London (Honorary part-time)

Associate Professor:
Armas John Sukava, B.Sc., M.Sc. Manitoba; Ph.D. McGill

Assistant Professors:
Walter Colston Howell, B.Sc., M.Sc., Ph.D.
James Frederick King, B.Sc., Ph.D. New Brunswick

Lecturers:
Howard Wesley Baldwin, B.A., M.A. Saskatchewan; Ph.D. Chicago
Donald McLean Graham, B.Sc., M.Sc.; Ph.D. Brooklyn Poly. Inst.
John Bailie Stothers, B.Sc., M.Sc.; Ph.D. McMaster

Senior Preceptor:
Duncan Archibald MacRae, B.A.

Honorary Lecturers (Part-time):
Kenneth K. Carroll, B.Sc. New Brunswick; M.Sc. Toronto, Ph.D.
David Milroy Miller, B.Sc., M.Sc. Alberta; Ph.D. McGill
Elvins Y. Spencer, M.Sc. Alberta; Ph.D. Toronto
George Denis Thorn, B.Sc. Alberta; M.A. Queen's; Ph.D. McGill

Demonstrators:

Ronald L. Buchanan, B.Sc.; Livio Davanzo, D.Chem.Eng., Padua; Janet Hunten, B.Sc.; M.Sc. McGill; Michael Ktenas, Dip. Athens; Wilfred J. Newby, B.Sc. McGill; Alvin N. Starratt, B.Sc. Acadia.

Fellows and Scholars:

Malkiat S. Bains, B.Sc., M.Sc. Panjab; Ph.D. London; Floyd H. Dean, B.S.A. Toronto; T. Dumas, B.Chem.Eng., Bucharest; Martin J. Hillyer, B.Sc. London; John M. MacDonald, B.Sc.; Trevor McMorris, B.Sc., M.Sc., Ph.D. London; Albert E. Millson, B.Sc.; Ian M. Thomas, B.Sc., Ph.D. London; Robert W. White, B.Sc. Mount Allison; M.Sc.; Y. S. Yu, B.Sc. Lien Shen.

Courses

20. General Chemistry and Qualitative Analysis.
2 lectures, 3 laboratory hours a week.

21. Physical Science 21 (Chemistry Section).
2 lectures, 2 laboratory hours a week.

24. Elementary Physical Chemistry: For Engineering Science students.
3 lectures, 1½ laboratory hours a week.

32. Quantitative Analysis: For Home Economics, Nursing and General Program students. 1 lecture, 3 laboratory hours a week.

33. Organic Chemistry: For Home Economics and General Program students. 2 lectures, 3 laboratory hours a week.

44. Physical Chemistry: For General Program students.
Prerequisite: Chemistry 32. 2 lectures, 3 laboratory hours a week.

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

Honors Courses

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

201. Principles of Inorganic Chemistry: For students in Engineering Science. 2 lecture hours a week.

203. Elementary Organic Chemistry: For students in Engineering Science. 2 lecture hours a week.

Honors Courses

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

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

½ **207. Treatment of Experimental Data:** For students in Honors Chemistry. ½
1 lecture hour a week.

253. Elementary Organic Chemistry: First Course for students in Honors Chemistry and Honors Chemistry and Physics.

For students in Honors Chemistry: 2 lectures, 3 laboratory hours a week.

For students in Honors Chemistry and Physics: 2 lecture hours a week.

254. Elementary Physical Chemistry: For students in Honors Chemistry and Honors Chemistry and Physics. 2 lecture hours a week.

261. Principles of Inorganic Chemistry: For students in Honors Chemistry and Honors Chemistry and Physics.

For students in Honors Chemistry and Physics:
2 lectures, 4 laboratory hours a week.

For students in Honors Chemistry: 2 lectures, 6 laboratory hours a week.

304. Intermediate Physical Chemistry: For students in Engineering Science. 3 lecture hours a week.

351. Inorganic Chemistry: A survey of the more common elements with emphasis on electronic structure; offered in 1960-61 only.
1 lecture, 3 laboratory hours a week.

353. Intermediate Organic Chemistry: For students in Honors Chemistry and Honors Chemistry and Physics. 2 lectures, 4 laboratory hours a week.

354. Intermediate Physical Chemistry, Chemical Thermodynamics: For students in Honors Chemistry and Honors Chemistry and Physics.
3 lectures, 3 laboratory hours a week.

403. ~~**Intermediate Organic Chemistry.** For students in Engineering Science.~~ 3 lectures, 3 laboratory hours a week. not being offered in 1960

406. Biochemistry: For students in Honors Biology.
2 lectures, 3 laboratory hours a week.

451. Advanced Inorganic Chemistry: 2 lecture hours a week.

452. Advanced Analytical Chemistry: Instrumental Analysis.
1 lecture, 3 laboratory hours a week.

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

454. Advanced Physical Chemistry:
3 lectures, 3 laboratory hours a week.

½ **458. Seminar:** Presentation of papers on topics selected from the current chemical journals, dealing with the more recent and fundamental developments of the science. Half course. ½

459. Research: Six hours a week will be devoted to a project upon which report will be required as a senior thesis. 6 hours a week.

CLASSICS

Professors:

John Danby Ralph, B.A. Queen's, Ph.D. Chicago, W. Sherwood Fox Professor of Classics, Head of the Department

Robert Edward Kingsdown Pemberton, M.A. Oxon.

Associate Professor:

Alfred Ernest Raymond, B.A., M.A. Toronto; Ph.D. Chicago

Lecturer:

Douglas Earl Gerber, B.A., M.A.; Ph.D. Toronto

GREEK COURSES

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 I.

20. Plato, "Crito"; Euripides, "Alcestis"; Xenophon, "Oeconomicus"; Demosthenes, "In Cononem"; composition, sight translation.
Prerequisite: Greek 10 or Grade XIII Greek. 3 hours a week.

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

230. Plato, "Apology"; Aristophanes, "Clouds", "Wasps"; public, social and political life of Athens in the fifth century, B.C.
Prerequisite: First Year, General Program 2, including Greek 20.
2 hours a week.

250. The Greek Epic: Selections from the "Iliad" and the "Odyssey".
Prerequisite: First Year, General Program 2, including Greek 20.
1 hour a week; half course.

251. Syntax and Composition:
Prerequisite: First Year, General Program 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, V. Prerequisite: Greek 340, 350. 3 hours a week.

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.

LATIN COURSES

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" II; 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-IV; Horace, "Satires", "Epistles"; Juvenal, "Satires"; composition, sight translation. 3 hours a week.
Prerequisite: Latin 30.

Honors Courses

230. Catullus; Virgil, selections from the "Bucolics" and "Georgics"; selections from Horace Odes and the Elegiac Poets. 2 hours a week.
Prerequisite: First Year, General Program 2, including Latin 20.

250. Cicero, "De Amicitia". 1 hour a week: half course.
Prerequisite: First Year, General Program 2, including Latin 20.

251. Syntax and Composition. Two hours a week.
Prerequisite: First Year, General Program 2, including Latin 20.

257. *Ancient Civilizations:* *The Near-East, Greece, Rome.* Identical with History 257 and Greek 257. 3 hours 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.
Prerequisites: Latin 230, 250. 1 hour a week: half course.

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" 1, 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.

ECONOMICS AND POLITICAL SCIENCE

University College

ECONOMICS

Professor:

Mark Keith Inman, B.A. Acadia; M.A., Ph.D. Harvard, Head of the Department

Associate Professor:

Grant Louis Reuber, B.A.; A.M., Ph.D. Harvard

Assistant Professors:
Walter Donald Ridley Eldon, B.A.; A.M., Ph.D. Harvard
Ronald Johnston Wonnacott, B.A.; A.M., Ph.D. Harvard

Instructor:
Steve Gabriel Peitchinis, B.A., M.A. (on leave)

SOCIOLOGY

Lecturer:
Kenneth John Duncan, B.A., M.A. Toronto

Middlesex College

ECONOMICS

Professor:
David Ivor, B.A., M.A.; Ph.D. London, Head of the Department

Assistant Professor:
John Joseph Madden, B.A. Manitoba; M.A. Toronto; Ph.D. Cantab.

POLITICAL SCIENCE

Professor:
Henry Bertram Mayo, B.A. Dalhousie; M.A., D.Phil. Oxon.

Assistant Professors:
Peyton Vaughan Lyon, B.A. Manitoba; M.A., D.Phil. Oxon.
Robert Nathaniel Kelson, B.A., M.A. Boston; Ph.D. Duke

Instructor:
T. Robert Sansome, B.A. New Brunswick; London

Economics Courses

20. Introduction to Economics: Nature of economics, economic organization, national income, money and banking, economic fluctuations, public finance and fiscal policy, price determination, international trade, and Canadian economic problems. 3 hours a week.

30. Economic Theory: An intensive course in economic analysis. 3 hours a week.
Prerequisite: Economics 20 (with at least 60%) or permission of the Instructor.

33. Money, Banking and Income: Measurement and determination of national income, employment, prices; capital flows, banking, money supply; money-flow accounts; brief review of institutions and policies in the U.K. and U.S.; Canadian institutions and monetary and fiscal policies, particularly since 1935. 3 hours a week.
Prerequisite: Economics 20

34. Economic Organization of Society: Problems of monopoly and economic concentration with special reference to Canada. Government intervention in agriculture, public utilities, transport, and foreign enterprise. Public ownership and state planning.
Prerequisite: Economics 20 2 hours a week.

36. 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. 2 hours a week

37. Economic History of North America: A survey of the economic development of the North American continent with special emphasis on the influence of the European economy in this development. 3 hours a week.

Honors Courses

Where honors and general course students attend the same lectures, additional assignments may be required from Honors students.

230. Economic Theory. 3 hours a week.

237. Economic History of North America. 3 hours a week.

333. Money, Banking and Income.
3 hours a week, and a Seminar, restricted to honors students.

334. Economic Organization of Society. 2 hours a week.

336. Labor Problems. 2 hours a week.

350. History of Economic Thought: A survey of the historical development of economic theory. 2 hours a week.
Prerequisite: Economic 230 or permission of the instructor.

351a. International Economics: A survey course designed to acquaint the student with balance of payments statistics; the economic basis of trade and investment; foreign exchange rates and their determination; recent developments in commercial policy, international investment and foreign aid. Prerequisite: Economics 20. 3 hours a week.

351b. International Trade and Economic Development: A study of the theory of international trade and investment, with special reference to the problems of economic development. 3 hours a week.
Prerequisites: Economics 230, 237, and 351a or permission of the instructor.

355. Statistics: Probability theory; sampling techniques; testing of hypotheses; interval estimation of economic parameters; index numbers; multiple regression and correlation techniques; identification, serial correlation and other statistical problems encountered in economics; special reference to Canadian data. 3 hours a week.

363. Public Finance: The economic theory of public revenues, expenditures and debt, and the application of public finance in the Canadian economy; the incidence, equity and economic effects of various forms of taxation; fiscal policy; inter-governmental financial relationships.
Prerequisite: Economics 230. 2 hours a week.

440. National Income Analysis: A critical examination of selected static and dynamic theories of income determination; the role of monetary and fiscal policies. A detailed study of the degree to which various trade cycle theories explain economic fluctuations since World War I.
Prerequisites: Economics 230, 333. 3 hours a week.

Not given in 1960

~~447.~~ **Economic History of Europe:** The economic development of Europe from the breakdown of the Roman Empire to World War I. In the first term the determinants of long-term economic growth will be studied. In the second term the determinants of cyclical economic change will be studied. 2 hours a week.

Prerequisites: Economics 230, 333 or permission of the instructor.
Not offered in 1960-61.

455. Mathematical Economics: Mathematical formulation of economic theory; an introduction to dynamic models and their solution; the use of linear systems in economic analysis; an introduction to input-output analysis and linear programming. 3 hours a week.

Prerequisites: Economics 230 and Mathematics 24 or permission of the instructor.

460. Modern Price and Distribution Theory: An intensive course in selected current theories of consumption, production and distribution under various market conditions. 2 hours a week.

Prerequisite: Economics 230.

480. Seminar: Contemporary Economic Problems. 2 hours a week.

Prerequisite: Permission of the Head of the Deparment.

POLITICS COURSES

Politics 20 is a prerequisite for all courses in Politics unless permission of the Department is obtained.

20. Government of Canada: An introduction to democratic theory and practice primarily through the study of Canadian political institutions and processes. 3 hours a week.

31. International Politics: A study of the factors governing international relations; an analysis of certain current problems to illustrate the principal concepts of international politics and diplomacy. 3 hours a week.

37. History of Western Political Thought: A study of the major political thinkers from Plato to the present. 3 hours a week.

42. Britain and the Commonwealth: A study of the governmental institutions and political processes of the United Kingdom; a survey of the politics of other Commonwealth countries; problems of transition in British Africa; the nature and function of the Commonwealth relationship. 3 hours a week.

44. American Government and Politics: A study of the American Constitution, institutions of government and political processes. 2 hours a week.

Honors Courses: Politics 237, 242, 331, 344 are identical respectively with 37, 40, 31, 44.

348. Comparative Foreign Governments: A study of the governmental institutions and political processes of leading West European and Communist countries, followed by an analysis of particular political institutions on a comparative basis. 3 hours a week.

434. Contemporary Political Theory: A study of the chief political doctrines of the present day, such as communism, socialism, fascism, and the theories associated with democracy; an analysis of concepts in political philosophy such as the state, freedom, and authority. 3 hours a week.

451b. International Organization: A study of the workings of the United Nations, NATO, West European Communities, and similar organizations. 2 hours a week

462a. Public Administration: The basic principles of public administration in the modern state, including organization, procedures and the relation of administration to policy making. 2 hours a week.

462b. Local Government: A study of the organization, functions and power of local government in Canada, and especially in Ontario, with emphasis on selected problems such as provincial-municipal relations. 2 hours a week.

480. Seminar: Contemporary political problems and the implications for political science of developments in other fields such as law, economics, sociology and psychology. 2 hours a week.

SOCIOLOGY COURSES

20. Introduction to Sociology: The study of human society as persons in reciprocal relationships, involving a consideration of group interaction, social structures, institutions and social change. 3 hours a week.

30. Sociological Theory: The study of culture, personality and society, with emphasis on the development of a systematically related body of analytical concepts. 2 hours a week.
Prerequisite: Sociology 20 or consent of the instructor.

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. 2 hours a week.

40. Social Pathology: The study of personality disorganization and mal-adjustment from the point of view of sociology; alcoholism, insanity, delinquency and crime; social change and social disorganization, the pathology of social groups and classes. 2 hours a week.
Prerequisite: Sociology 20 or 30 or the consent of the instructor.

Honors Courses

Sociology 220, 330, 338 and 440 are identical respectively with 20, 30, 38 and 40, except that additional assignments will be required in Honors Courses.

478. Advanced Sociological Theories and Methods: The historical development of social thought; the application of scientific methods in social research; the analysis of social structures and social relations. 2 hours a week.

ENGINEERING SCIENCE

University College

Dean - Richard Dillon

Professor:

Lyman Stuart Lauchland, B.A.Sc., M.A.Sc. Toronto; P.Eng., Head of the Department

Associate Professors:

George Sinclair Emmerson, B.Sc.(Eng.), M.Sc.(Eng.) London; A.R.T.C., P.Eng.
John Edward Kendall Foreman, B.A.Sc. Toronto; M.M.E. Cornell; P.Eng.
John Leland Kearns, B.A.Sc. Toronto; Ph.D. Iowa State; P.Eng.; Abitibi Professor of Engineering Science

Assistant Professors:

Walter Bulani, B.Sc., MSc. Saskatchewan; Ph.D. McGill
Allan Theodore Olson, B.Sc. Queen's; M.Sc. Birmingham
Mellor Procter Poucher, B.Sc.(Eng.), M.Sc.(Eng.) London; D.I.C., P.Eng.
James William Stewart, B.A. and B.Sc. Saskatchewan; M.S. Michigan

Lecturers:

Gordon Felix Hestrim Chess, B.A.Sc. Toronto; M.Eng. McGill; P.Eng.
William Harry Davis, B.A.Sc. Toronto; O.L.S., P.Eng.

Lecturers (Part-time):

Richard Maurice Dillon, M.C., B.A., S.M. Mass. Inst. of Tech.; P.Eng.
Alexander Kobelak, B.Sc. Saskatchewan; P.Eng.

Demonstrators (Part-time):

Allan Goudie Blair, B.Sc. Queen's; Robert Glenn Caughey, B.Sc. Manitoba; Francis Arthur Libera, B.Eng. McGill; Kenneth Ralph Walker, B.Sc. Alberta; Wesley Lawrence Weber, B.Sc. Saskatchewan; Paul Cameron White, B.Sc. Manitoba.

Courses

20. Mechanics I: Principles of statics, resultants and equilibrium of force systems, analysis of simple structures, friction, centres of gravity, moments of inertia; principles of dynamics, rectilinear and curvilinear translation; rotation, plane motion, work and energy, impulse and momentum. 3 lectures, 3 laboratory hours per week.

21. Graphics I: Introduction to engineering drawing, incuding lettering, use of instruments, orthographic projection, auxiliary views, pictorial drawing, dimensioning, and working drawings.
1 lecture, 3 laboratory hours per week.

1/2 **22. Introduction to Engineering:** A series of orientation lectures on the profession, branches, and history of engineering. 1 lecture per week.

200. Mechanics of Materials I: Elastic properties of materials, stress, strain, bending and shearing stresses, torsion of shafts, compound stresses, deflection of beams, springs, statically-indeterminate problems.
2 lectures per week.

201. Electric Circuits I: Circuit parameters, complex numbers, steady-state and transient responses of simple circuits, series circuits, parallel circuits, network theorems, coupled circuits, polyphase circuits.
2 lectures per week.

202. Mechanics II: Continuation of Engineering Science 20. Kinetics of translation, rotation, and plane motion; work and energy, impulse and momentum, gyroscopic action; introduction to mechanical vibrations and balancing of rotating and reciprocating masses; fluid statics.
2 lectures, 3 laboratory hours per week.

204. Graphics II: Descriptive geometry of points, lines, planes, and curved surfaces; intersections and developments; graphical computation, including nomography. 3 laboratory hours per week.

256. Surveying and Drafting: Principles and practice of surface and mine surveying, particularly plane table mapping; photogrammetry. Principles of lettering and drafting; preparation of simple geological plans and mine sections. For students in honors Geology.
1 lecture, 5 laboratory hours per week.

300. Thermodynamics I: Properties of a pure substance, first law of thermodynamics, processes in open and closed systems, second law of thermodynamics, ideal gases, mixtures of ideal gases and psychrometry, compressors and ideal power cycles, introduction to heat transfer.
2 lectures, 1½ laboratory hours per week.

301. Fluid Mechanics: Principles of incompressible and compressible fluid flow; dimensional analysis and dynamic similarity; one- and two-dimensional ideal flow; fluid resistance; applications of principles to turbo-machines, fluid measurements, flow in conduits and open channels, and fluid machines. 2 lectures, 1½ laboratory hours per week.

302. Electric Circuits II: Analysis of linear networks, with emphasis on general network equations, network theorems, two-terminal-pair networks, and use of Fourier series and Laplace transforms in circuit analysis.
2 lectures per week.

303. Electric Machines and Electronics: Transformers, principles of electromechanical energy conversion and their applications in direct-current and alternating-current machines; principles of electronic devices and their applications in rectifiers, instrumentation, and control.
3 lectures, 3 laboratory hours per week.

305a. Process Engineering Calculations: Material and energy balances; introduction to estimation of properties from generalized correlations, principally critical properties and vapor pressures; calculation of specific heats, heats of solution, latent heats, heats of reaction, etc.
2 lectures, 3 laboratory hours per week, in first term.

306b. Unit Operations I: Unit operations of energy transfer, with some attention to fluid mechanics and machines but with emphasis on heat transfer. 2 lectures, 3 laboratory hours per week, in second term.

307. Mechanics of Materials II: Strain energy, impact stresses, columns, moment-area theorems, curved beams, plane stress-strain relationships, elastic constants, theories of failure, non-elastic behaviour; introduction to mechanical design.
2 lectures, 3 laboratory hours per week.

308. Theory of Structures: Maxwell's theorem, Castigliano's theorems, redundant frames, tension coefficients, deflections, continuous beams and frames, arches, influence lines, travelling loads, connections.
2 lectures per week.

309. Surveying: Plane surveying, including measurement of distance, direction, and elevation; topographic, boundary, route, and construction surveys; triangulation; introduction to photogrammetry.
2 lectures, 3 laboratory hours per week.

310. Mechanical Analysis and Design I: Principles of mechanisms, including analysis and synthesis of mechanical computing elements; static and inertia forces in machine components; torque and speed fluctuations; balancing, vibrations, and vibration control.
3 lectures, 3 laboratory hours per week.

314. Industrial Process Chemistry: A correlative discussion of a number of chemical industries in terms of unit processes, unit operations, physical chemistry, economics, and power. 2 lectures per week.

400. Thermodynamics II: Refrigeration, one-dimensional compressible fluid flow, gas-turbine cycles and components, jet propulsion, psychrometry, heating- and cooling-load calculations, air conditioning, combustion and effects of dissociation, general thermodynamic relationships.
2 lectures, 2 laboratory hours per week.

401. Heat Engineering: Principles of heat transmission, conduction, convection, radiation, condensation, and boiling; steam flow, steam-power engineering theory, process-steam plant theory; nuclear power plants.
2 lectures, 2 laboratory hours per week.

402. Internal-Combustion Engines: Ideal and actual cycles of operation, flame speed, detonation, ignition and valve timing, fuel-air ratio requirements, fuel rating, volumetric efficiency, carburetion, losses, manifolding, combustion-chamber design, compression ignition, supercharging, performance characteristics. 2 lectures, 2 laboratory hours per week.

403. Fluid Mechanics and Machines: Compressible fluid flow, shock waves, flow with friction and heat transfer; laminar and turbulent boundary layers; fluid machines, including fans, pumps, compressors, turbines, couplings, and torque converters; introduction to unsteady flow, fluid vibration and noise, instrumentation.
2 lectures, 2 laboratory hours per week.

404. Electric Machines: Direct-current and alternating-current machines, including rotating amplifiers and single-phase motors; electrical transients in machines; introduction to dynamics of electromechanical systems.
2 lectures, 3 laboratory hours per week.

405. Electric Power Systems: Parameters and performance of transmission lines, circle diagrams, symmetrical components, voltages and currents under balanced and unbalanced fault conditions, stability of power systems. 2 lectures, 1½ laboratory hours per week.

406. Control Systems: Feedback control systems, with emphasis on representative components, system stability, and analysis of both simple and complex systems. 2 lectures, 1½ laboratory hours per week.

407. Structural Analysis and Design: Moment distribution, sidesway, column analogy, relaxation methods, model analysis, introduction to plastic design, reinforced concrete, structural design.

3 lectures, 6 laboratory hours per week.

408. Soil Mechanics: Properties of soils, soil moisture and structure, compressibility, shear strength; shear analysis; applications of soil mechanics to earth slopes, retaining walls, spread foundations, pile foundations, settlement, subgrades, soil compaction and stabilization.

2 lectures, 3 laboratory hours per week.

409. Transportation Engineering: Economics, design, and construction of highways and other transportation systems.

2 lectures, 1½ laboratory hours per week.

410. Mechanical Analysis and Design II: Function, economic, and physical selection and design of machine components; processing of machine components; creative analysis and design, project synthesis; principles of experimental analysis—photoelasticity, strain gauges, similitude, analogies, stress coat, photo-stress, vibrations, and noise.

5 laboratory hours per week.

411. Hydrology and Sanitary Engineering: Rainfall, run-off, stream flow, sedimentation, and related topics; water supply, waste-water disposal; biological aspects, design, and construction of distribution systems and treatment works. 2 lectures, 1½ laboratory hours per week.

412. Engineering Practice: A study of the management techniques of engineering and related topics. The seminar consists of case studies and talks by outside speakers on aspects of business, law, and finance.

2 lectures, 3-hour seminar per week.

413. Project and Thesis: Selection and analysis of a particular engineering problem, with emphasis on original work by the student. A written thesis will be submitted to the Department and an oral presentation of the thesis will be given. 3 laboratory hours per week.

417. Unit Operations II: Theory of unit operations of mass transfer, with emphasis on special operations of gas absorption, distillation, and liquid-liquid extraction; experimental methods of obtaining design criteria, such as transfer coefficients.

3 lectures, 6 laboratory hours per week.

418a. Electrochemistry: Principles of electrolytic and electrothermal processes and their applications. 2 lectures per week, in first term.

419b. Instrumentation and Control: Theory and application of instruments used for measuring and controlling variables in industrial processes. 2 lectures per week, in second term.

420. Chemical Engineering Thermodynamics: Theory and application of thermodynamic laws to chemical-reaction equilibria, with emphasis on effects of pressure and temperature on these equilibria and on use of generalized correlations in evaluating these effects. 2 lectures per week.

421. Chemical Engineering Kinetics: Concepts of reaction rates, reaction order, adsorption, and catalysis, together with heat- and mass-transfer phenomena, are used to define and indicate methods of solving the problems of designing chemical-reaction equipment on a predictable rather than empirical basis. 2 lectures per week.

ENGLISH

University College

Professor:

Malcolm Hugh Murdoch MacKinnon, B.A., M.A., Ph.D. Toronto, Head of the Department

Associate Professor:

George E. Buckley, B.A. Mt. Allison; M.A. Columbia

Assistant Professors:

William Eric Duncan Atkinson, B.A. Cantab.; Ph.D. Chicago
Herbert Berry, B.A. Furman; M.A., Ph.D. Nebraska
John Whichello Graham, B.A. Manitoba; M.A., Ph.D. Toronto
John Reidy, M.A., Ph.D. London
Clifford Earle Sanborn, B.A., M.A., Ph.D. Toronto
Philip Coate Stratford, B.A.; D. de l'U. de Paris

Lecturers:

Ian Arnold McDonald, B.A. Sask.; M.A. Northwestern
Peter Mitcham, B.A. New Brunswick; M.A. Cambridge; Ph.D. Edinburgh

Lecturers (part-time):

Frank Stiling, B.A. McMaster; M.A., Ph.D. Michigan; Dean of Arts and Science, Principal of University College
Elizabeth Hillman Waterston (Mrs. D. L.) B.A. Toronto; M.A. Bryn Mawr; Ph.D. Toronto

Graduate Assistants (part-time):

Elizabeth Jeffery, B.A.; Arnold Stover, B.A.

Middlesex College

Professor:

Carl Frederick Klinck, B.A.; M.A., Ph.D. Columbia, Professor of Canadian Literature

Assistant Professors:

Betty Bandeen, B.A.; A.M., Ph.D. Radcliffe
Ronald Gordon Nudell Bates, B.A., M.A. Toronto
David Roswell Hauser, B.A. Grinnell; M.A., Ph.D. Johns Hopkins
James Reaney, B.A., M.A., Ph.D. Toronto
Ross Greig Woodman, B.A. British Columbia; M.A. Manitoba; Ph.D. Toronto, Head of the Department

Lecturer (part-time):

Alfred Brandon Conron, D.S.O., B.A., M.A.; A.M., Ph.D. Harvard; Principal of Middlesex College

Courses

Detailed descriptions of the following courses may be obtained from the office of the Department of English (Room 114B, Arts Bldg.) or from the Registrar's Office.

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

If a student offers four senior English courses for his major, one of those courses may be English 39 or English 46.

20. General Literature and Composition: Selections from the works of Chaucer, Shakespeare, Jonson, Donne, Milton, Dryden, Pope, Swift and Johnson. One hour a week will be allotted to the study of composition and the principles of public speaking; essays will be written and discussed with the instructor. 3 hours a week.

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. Novels, plays, poems, and prose readings. Essays will be required. 2 hours a week.

35. English Prose and Composition: Selected readings in expository, narrative, descriptive and persuasive prose from major English and American writers; essays and exercises in composition will be required. 3 hours a week.

36. Drama: A study of English and American dramatists against a background of Classical, Renaissance and Modern European 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: The major forms of oral discourse. 3 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. Apply to the Department of English for admission to this course. 1 hour a week: half course.

44. The English Novel: A survey of representative English and American novels from the eighteenth century to the present. 3 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 Joyce with particular emphasis on the growth of epic, drama, and fiction. 3 hours a week.

46. Dramatics: 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. Literature of the Twentieth Century: Selected works by poets and novelists, chiefly British. 3 hours a week.

Honors Courses

254. Criticism: A survey of the major critics, and problems in terminology and practical criticism. 2 hours a week.

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

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

356. English Drama: Shakespeare and his contemporaries. 3 hours a week.

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

373. Old and Middle English and the History of the Language. 3 hours a week.

436. Modern British and American Drama. 3 hours a week.

438. American and Canadian Literature (English-Canadian). 3 hours a week.

½ **441. Creative Writing.** 1 hour a week; half-course.

459. Literature of the Twentieth Century: Selected works by poets and novelists, chiefly British. 3 hours a week.

463. Old and Middle English Literature: With special emphasis on Beowulf and Chaucer. 3 hours a week.

½ **470. English Tutorial:** Methods of research in English; advanced bibliography. Prescribed for third year students in all Honors English programs. 1 hour a week: half-course.

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

GEOGRAPHY

University College

Professor:

Edward Gustav Pleva, B.A., M.A., Ph.D. Minnesota, Head of the Department

Assistant Professor:

Osmund Per Langtvet, C.Mag., C. Phil. Oslo

Lecturers:

Paul Martin Louis Bruer, B.A., M.A. Illinois (part-time)
Donald E. Guard, B.A.Sc. Manitoba (part-time)
Leonard N. Johnson, B.S.A. Toronto (part-time)
Charles Frederick John Whebell, B.A., M.Sc.

Preceptor:

Stephen Roussel Byles, B.A. Toronto

Graduate Assistants:

Duncan M. Anderson, B.S.A. Toronto; Angel D. Angelov, B.A.; Vincent E. Brown, B.A.; Alexander M. Blair, B.A.; Stephen A. Blasko, B.A., Assumption; Nicholas J. Siller, B.A. Assumption; James W. Simmons, B.Sc.

Middlesex College

Associate Professor:

Robert Wilfred Packer, B.A., M.A. Cantab.; F.R.G.S.

Courses

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

30. Advanced Physical Geography: Studies of the environmental factors, meteorology, climatology, geomorphology, hydrology, vegetation and soils; their inter-relationships; techniques of measurement and classification, including air photographs and map projections.
2 lectures and 2 hours practical work a week.
Prerequisite: Geography 20 or equivalent.

32. Cultural Geography: Principles of the study of man-made aspects of the total human environment; an introduction to the techniques of investigation and analysis.
2 lectures and 2 hours practical work a week.
Prerequisite: Geography 20, or 39, or equivalent.

36. 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. 2 lectures and 2 hours practical work a week.
Prerequisite: Geography 20 or Economics 20 (may be taken concurrently with Geography 39).

40. Political Geography: A general study of geographical factors in governmental organization; a survey of the political-territorial units of the world in their geographical settings; an introduction to Geopolitics (given in 1961-62). 2 lectures and 2 hours practical work a week.
Prerequisite: Two courses in Geography or equivalent.

41. Cartography: Scales and projections, map making, surveying on the ground and from the air, official and professional maps, cartographic specialties (given in 1960-61).
2 lectures and 2 hours practical work a week.
Prerequisite: Geography 30.

43. Field Methods and Practices: Standard techniques, special applications, the report (given in 1961-62).
2 lectures and 2 hours practical work a week.
Prerequisite: Geography 30.

45. Geography of Canada: The Natural Wealth of Canada and its Conservation: The geographic basis of human occupance in Canada. Conservation of natural resources.

2 lectures and 2 hours practical work a week.

Prerequisite: Two courses in Geography, or equivalent.

46. Advanced Area Studies in Regional Geography: Section 8 will be given in 1960-61.

Section 1. U.S.S.R. and Eastern Europe
2. Europe
3. Middle East
4. India, China, Japan
5. Africa
6. Latin America
7. Southeast Asia, Australia, New Zealand
8. U.S.A.

2 lectures and 2 hours practical work a week.

Prerequisite: Geography 36.

47. Historical Geography: A survey of the geographical factors in changing distributions of populations and political structures, with emphasis on Europe and North America (given in 1960-61).

2 lectures and 2 hours practical work a week.

Prerequisite: Geography 20 and one other Geography course.

Honors Courses

Geography 239, 330, 332, 336, 440, 441, 443, 445, 446, and 447 are identical with 39, 30, 32, 36, 40, 41, 43, 45, 46, and 47 respectively. Students in the Honors courses will cover additional material including advanced practical work.

450. Senior Research and Report in Geography: A report on a geographical problem including the results of field work, cartographical representation, and a study of the basic literature of the problem.

Prerequisite: Four courses in Geography. One course: Hours by arrangement.

GEOLOGY

University College

Professor:

George Harold Reavely, B.A., M.A.; D.I.C., London,
Head of the Department

Associate Professors:

George Gordon Suffel, B.Sc., M.Sc. Queen's; Ph.D. Stanford
Aleksis Dreimanis, M.Nat.Sc. Riga
Charles Gordon Winder, B.Sc.; M.Sc., Ph.D. Cornell

Lecturers:

Gary McGregor Boone, B.A. Bowdoin; M.A. Brown; Ph.D. Yale
James Richard Kramer, B.S., M.I.T.; M.S. Michigan; Ph.D. Michigan

Preceptor:

A. M. Reid, B.Sc. St. Andrews

Graduate Demonstrators:

J. C. Cowan, B.Sc. McMaster; J. F. Jones, B.Sc. Western; J. A. Leslie, B.Sc. Mount Allison; D. Mason, B.Sc. Birmingham; N. A. Rukavina, B.A. Toronto.

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 exercises. 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 and Elementary Petrology:

First part: the crystallo-chemical basis of mineral formation reached through a survey of the principles of crystallography and a study of the physical and chemical properties of minerals. The laboratory consists of practice in mineral identification.

Second part: a brief introduction to the basic principles and hypotheses of origin of igneous, sedimentary, and metamorphic rocks. Megascopic description, classification, and identification of important rock types of the earth's crust.

2 lectures and 4 laboratory hours a week.

261. Mineralogy: The crystallo-chemical basis of mineral formation, as in Geology 251, but offered for Honors science students not enrolled in Honors Geology. Individual problems in crystal chemistry and geochemistry. 5 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: Origin of mineral deposits and a study of the principal processes involved. Laboratory time will be devoted to readings on the theory of ore deposition as well as to the technique of polished section preparation and examination.

1 lecture, 2 laboratory hours a week.

355. 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.

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.

½ **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; economic aspect of Pleistocene deposits. Laboratory exercises.
4 hours a week.

452. Petrography and Petrology: The principles and theories of igneous *and metamorphic rock genesis; stress is laid on diversification 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 of ores of the principal metals, with a study of outstanding examples. Laboratory work consists of (a) a series of reports based on original sources and (b) studies of specific deposits, with emphasis on microscopic examination.
1 lecture, 5 laboratory hours a week.

1½ **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. One and one-half courses.

½ **460. Seminar:** Presentation and discussion of papers on various geological subjects; informal discussion of topic of current geological interest. 2 hours a week: half course.

462. Principles of Geochemistry: Review of the three laws of thermodynamics; multi-phase equilibrium; origin of the elements; application of above to hydrothermal solution, ocean chemistry, magma and biochemical processes. 2 lectures, 2 laboratory hours a week.

463. Sedimentation and Stratigraphy: Types of sediments and their habitat, conditions within the environment. Stratigraphic concepts of unit nomenclature, correlation and facies. Problems in stratigraphic paleontology, sediment analysis, and map interpretation.
2 lectures, 2 laboratory hours a week.

470. Micropaleontology: Morphology, classification, ecology and stratigraphic occurrence of fossil protista, foraminifera, annelida, ostracoda and conodonts. Laboratory and library research. Admission requires instructor's permission. 5 hours a week.

GEOPHYSICS

University College

Professor:

Robert James Uffen, B.A.Sc., M.A. Toronto; Ph.D.; P.Eng., Head of the Department

Assistant Professor:

Alan Edward Beck, B.Sc. London; Ph.D. Australian National University; A.Inst.P.

Senior Demonstrators:

Rama Chandra Murty, B.Sc. Andhra; M.Sc.

Research Associates:

Robert Mereu, B.Sc., M.Sc.; Charles Murray Carmichael, B.Sc., M.Sc.

Graduate Assistants:

Barry Hammond, B.Sc.; John Sass, B.Sc.

Course

465. Geophysics: An introductory course in the various geophysical 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

University College

Professor:

Herbert Karl Kalbfleisch, B.A.; M.A. New York; M.A., Ph.D. Michigan; Head of the Department

Lecturer:

Hanna Spencer (Mrs. E. Y.), Ph.D. Prague

Lecturer (part-time):

Ronald Alexander Allen, B.A., M.A. Toronto; Ph.D. Chicago; Dean of Graduate Studies; Vice-President of the University

Instructor:

Ted E. Frank, B.A., M.A.

Courses

1. Elementary German: The work of Grade XII 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 or its equivalent is covered. Prerequisite: Grade XII German or German 1. 3 hours a week.

15. 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.

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 or permission of the Department.

30. Outline of Modern German Literature: From Romanticism to the present. Prerequisite: German 20. 3 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 from textbooks and journals, supplemented by individual reading in the special field of study of each student. Prescribed for fourth year Honors science students. 1 hour a week: half course.
Prerequisite: German 15 or Grade XIII German.

Honors Courses

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

290. German Romanticism. Prerequisite: German 20. 3 hours a week.

291. Grammar, Conversation, Composition, Phonetics.
Prerequisite: German 20. 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.

430. German Classicism. 3 hours a week.

491. Grammar, Conversation, Composition. 2 hours a week.
Prerequisite: German 391.

HEALTH

The University Physician:
Richard John Bowen, B.A., M.D.

Course

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

Professor:
Roland Kenneth Harrison, B.A., M.Th., Ph.D. *London*

Courses

These courses are given by Professor Harrison of Huron College on behalf of University College and Huron College.

1-10. ***Grammar:*** *Text of Genesis 1-3, 1 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, parts 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

University College

Professors:
Wallace Klippert Ferguson, B.A.; M.A., Ph.D. Cornell; Litt.D.; F.R.S.C.; *J. B. Smallman Professor, Head of the Department*
Hartley Munro Thomas, B.A. Queen's; M.A., Ph.D. Harvard

Associate Professor:
Walter Balderston, B.A., Ph.D. Cornell

Assistant Professors:
John Rowland William Gwynne-Timothy, B.A., M.A. Toronto; D. Phil. Oxon.
William Herbert Stockdale, A.B., M.A. Alabama; Ph.D. New York

Lecturer (part-time):
Star Floyd Maine, B.A.; B.D. Victoria; M.A., Ph.D. Chicago, Director of Extension and Summer School Department

Middlesex College

Professor:
Donald Gordon Grady Kerr, B.A. McGill; Ph.D. London; Head of the Department

Assistant Professor:
George Alan Wilson, B.A., M.A. Dalhousie; Ph.D. Toronto

Lecturer:
Albert Victor Tucker, B.A., M.A. Toronto; Ph.D. Harvard

Lecturer (part-time)
John Purves McLaughlin, B.A. Queen's; Ph.D. London; Assistant Librarian

Courses

20. Medieval, Renaissance and Reformation History: Europe from the founding of the Roman Empire to the middle of the sixteenth century. 3 hours a week.

31. History of Canada: From the beginning of the French Regime, with emphasis on the nineteenth century. 2 hours a week.

33. The British Empire and Commonwealth: From the beginning of overseas expansion to the contemporary Commonwealth. 2 hours a week.

35. History of England: English History from the Anglo Saxons to the present. 3 hours a week.

36. Modern European History: From the middle of the sixteenth century to the Second World War. 3 hours a week.

44. History of the United States: The colonial period (general survey only), the Revolution and political and social history to the present. 3 hours a week.

Honors Courses

236. Modern European History: From the middle of the sixteenth century to the Second World War.
4 hours a week, lectures and seminars.

257. Ancient Civilization: The Near East, Greece and Rome. Identical with Latin 257 and Greek 257. 3 hours a week.

331. History of Canada: From the beginning of the French Regime, with emphasis on selected periods.
3 hours a week, lectures and seminars.

333. The British Empire and Commonwealth: From the beginning of overseas expansion to the contemporary Commonwealth.
3 hours a week, lectures and seminars.

356. History of International Relations: 1918 to the present.
Prerequisite: History 236 2 lectures and a seminar a week.

444. History of the United States: With emphasis on selected periods.
4 hours a week, lectures and seminars.

452. English Constitutional History: A study of the development of the English constitution from the Anglo-Saxon monarchy to the present.
3 hours a week.

460. The Transition from Medieval to Modern Civilization: The economic, social, political, religious and cultural developments of the period from 1300 to 1600. 3 hours a week.

HOME ECONOMICS

For Faculty and courses see the Ursuline College section.

JOURNALISM

University College

Professor:
John Leslie Wild, B.A.; M.A. Michigan; Head of the Department

Assistant Professor:
Earle Beattie, B.A. Manitoba; B.Ed., Toronto

Lecturers (part-time):
Thomas Hugh Bremner
Isabel Turnbull Dingman (Mrs. J. J.), B.A., M.A. Manitoba
John K. Elliott, B.A.
Arthur Rutherford Ford, B.A., LL.D. Toronto
Earl Hubert Slater, Q.C.; B.A. Toronto; Barrister-at-Law, Osgoode
James John Talman, B.A., M.A.; Ph.D. Toronto; F.R.S.C.; University Librarian
C. Robert Turnbull

Courses

Students should be proficient in typewriting by the beginning of the second year.

20. Introduction to Journalism: A survey of mass communication media, forms and styles of journalistic prose, reporting methods.
3 hours a week.

Honors Courses

250. Interpretive News Writing and Reporting: Reporting specialized fields, public affairs, socal, economic and political news. 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: half course.

355. History of Journalism: A survey of the development of journalism in the British Isles, United States and Canada. 2 hours a week: half course.

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: half course.

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; world news editing and reporting. 10 hours a week.

451. Communication Problems: Semantics, propaganda, seminars on problems in special fields; world news editing and reporting. 4 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.

LIBRARY SCIENCE

Lecturers (part-time):

Olga Bishop, B.A. and M.A. Mt. Allison, B.Pub.Admin. Carleton, A.M.L.S. Michigan
Madeleine Joan De La Haye, A.L.A.
Barbara Gene Luce, B.A.; B.L.S. McGill
John Purves McLaughlin, B.A. Queen's, Ph.D. London; Assistant Librarian
John Macpherson, A.L.A.
James John Talman, B.A. and M.A.; Ph.D. Toronto; F.R.S.C.; University Librarian

Course

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.

Textbook: Campbell and Welling: Library Science for Canadians.

PURE AND APPLIED MATHEMATICS AND ASTRONOMY

University College

Professors:

Gordon Richey Magee, B.A.; M.S., Ph.D. Chicago, *Head of the Department*
Randal Hudie Cole, B.A.; M.A., Ph.D. Wisconsin
Arthur Woods, B.A., M.A. Queen's

Associate Professor:

William Wehlau, A.B., Ph.D. California

Assistant Professors:

Harvey Arnold, B.A., M.A. Queen's; Ph.D. Princeton
George Cross, B.A., M.A. Dalhousie; Ph.D. British Columbia
James Sanders, B.A. Toronto; M.A. Queen's; Ph.D. Syracuse

Lecturers:

John Henry Blackwell, B.Sc. Melbourne; M.Sc., Ph.D.
John A. Mereu, B.A.; F.S.A. Society of Actuaries

Instructors:

William Herbert Adamson, B.A., M.A. Queen's
Robert M. Ellis, B.A.; M.Sc.

Mathematics Courses

20. Introductory College Mathematics: A study of logic, set theory, probability theory, and the algebra of vectors and matrices; introduction to calculus. 3 hours a week.

Prerequisite: Grade XIII Mathematics (any two papers), or equivalent mathematics.

24. Introductory Calculus: 3 lectures and 1 tutorial hour a week.
Prerequisite: Grade XIII Mathematics (three papers), or equivalent.

27. Calculus: For first year Engineering Science. 4 hours a week.
Prerequisite: Grade XIII Mathematics (three papers), or equivalent.

30. Algebra: Matrix algebra, determinant theory, applications to systems of linear equations; theory of polynominals. 2 hours a week.
Prerequisite: Mathematics 20 or 24.

32. Analytic Geometry: The general conic and pencils of conics; geometry of three dimensional space. 3 hours a week.

35. Elementary Calculus and Statistics: Introduction to Calculus: fundamental concepts of statistics with applications; nature and scope of statistical methods. Credit will not be given for mathematics 35 if credit has been given for mathematics 20 or 24. 3 hours a week.

Prerequisite: Grade XIII Mathematics (any two papers), or equivalent.

45. Statistics: Introduction to probability, distribution theory, hypotheses testing, estimation theory, regression analysis, analysis of variance.

Prerequisite: Mathematics 20 or 24. 3 hours a week.

(Credit will not be given for both Mathematics 35 and 45.)

Honors Courses

250. Algebra and Geometry: A course in linear algebra, with applications to analytical geometry. 4 hours a week.

Prerequisite: Mathematics 20 or 24.

Reference: Murdoch, Linear Algebra for Undergraduates (Wiley).

256. Calculus and Differential Equations: An extension of introductory calculus; ordinary differential equations. 4 hours a week.

Prerequisite: Mathematics 20 or 24. (Note: A student who has Mathematics 20 as a prerequisite will be required to take one additional tutorial hour per week.)

277. Calculus and Differential Equations: For second year Engineering Science and for the Natural Sciences. 3 hours a week.

Prerequisite: Mathematics 24 or 27.

Note: All 300 and 400 mathematics courses are 3 hours a week. For each 300 course, the prerequisites are Mathematics 250 and 256, or consent of instructor. For each 400 course, consent of the instructor is required.

350. Algebra I.

References: Miller, Elements of Modern Abstract Algebra (Harper).
Jacobson, Lectures in Abstract Algebra, Vol. I (Van Nostrand).

351. Geometry I.

References: Shively, Introduction to Modern Geometry (Wiley).
Coxeter, The Projective Plane (Cambridge).

353. Investment and Finite Differences.

References: Donald, Compound Interest and Annuities Certain (Macmillan).
Freeman, Mathematics for Actuarial Students, Vol. II (Macmillan).

355. Statistics I.

References: Hogg and Craig, Introduction to Mathematical Statistics (Macmillan).
Mood, Introduction to the Theory of Statistics (McGraw-Hill).

356. Analysis I.

References: Goursat-Hedrick, Mathematical Analysis, Vol. I (Ginn).
Knopp, Theory of Functions, Vol. I (Dover).

363. Numerical Analysis.
References: Kunz, Numerical Analysis (McGraw-Hill).
Milne, Numerical Calculus, (Princeton).

377. Engineering Mathematics: For third year Engineering Science students.
References: Irving and Mullineux, Mathematics in Physics and Engineering (Academic Press, London).
Sokolnikoff and Redheffer, Mathematics of Physics and Modern Engineering (McGraw-Hill).

378. Applied Mathematics.
References: Burkhill, Ordinary Differential Equations (Oliver and Boyd).
Webster, Partial Differential Equations (Dover).

445. Theory of Probability.
References: Cramér, Mathematical Methods of Statistics (Princeton).
Feller, Probability Theory and its Applications (Wiley).

450. Algebra II.
Reference: Jacobson, Lectures in Abstract Algebra, Vol. I (Van Nostrand).

452. Geometry II.
Reference: Semple and Kneebone, Algebraic Projective Geometry (Oxford).

455. Statistics II.
References: Cramér, Mathematical Methods of Statistics (Princeton).
Kempthorne, Design and Analysis of Experiments (Wiley).

456. Analysis II.
References: Titchmarsh, The Theory of Functions (Oxford).
Knopp, Theory of Functions, Vol. II (Dover).
Hardy and Rogosinski, Fourier Series (Cambridge).

460. Introductory Topology.

463. Life Contingencies.
Reference: Jordan, Life Contingencies (Society of Actuaries).

464. Introduction to Partial Differential Equations.

468. Differential Geometry and Tensor Calculus.
References: Willmore, Differential Geometry (Oxford).
Levi-Civita, Absolute Differential Calculus (Blackie).

470. Foundations of Mathematics.
References: Quine, Mathematical Logic (Harvard Press).
Wilder, Introduction to Foundations of Mathematics (Wiley).

478. Applied Mathematics.
Prerequisites: Physics 250, Mathematics 378.
Reference: Jeffreys and Jeffreys, Methods of Mathematical Physics (Cambridge).

488. Applied Mathematics.
Prerequisites: Mathematics 378.
(Note: Credit will not be given for both Mathematics 478 and 488.)

498. Mechanics of Continua.
References: Lamb, Hydrodynamics (Dover).
Love, Theory of Elasticity (Dover).

Astronomy Courses

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.

Honors Courses

229. Introduction to Astronomy: Coordinate systems; the solar system; motions and physical properties of the planets; normal variable and binary stars; stellar motions; nebulae; structure of our galaxy; other galaxies.
Occasional evening meetings. 2 hours a week.

359. Spherical and Practical Astronomy: A treatment of the determination of the positions of astronomical bodies, parallax, precession and nutation, and proper motion. An introduction to orbit determination.
2 hours a week.

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.

MILITARY STUDIES

Credit for military studies as a half-course may be obtained by serving for three years, including summers, with 80 per cent. attendance at lectures and parades. See also page 12.

MUSIC

See Music Teachers' College Section. Music courses ending in "O" are available to arts and science students.

PHILOSOPHY

University College

Professor:
Allison Heartz Johnson, B.A. Mt. Allison; M.A., Ph.D. Toronto; F.R.S.C.; Head of the Department

Associate Professor:
John Andrew Bruce, B.A., M.A.; Ph.D. London

Assistant Professors:
Harold Joseph Johnson, B.A. Alfred; Ph.D. Chicago
Perry Ronald Robinson, B.A., M.A.; Ph.D. London

Lecturer:
Peter Adam Angeles, B.A., M.A., Ph.D. Columbia

Instructor:
Stanley George French, B.A. Carleton; M.A. Rochester; Ph.D. Virginia

Teaching Fellow:
B. S. Alton, B.A.

Middlesex College

Assistant Professors:
John Whitney Davis, B.A., M.A., Ph.D. Boston, Head of the Department
Wilbert Cameron Henry, B.A., M.A.; Ph.D. Toronto

Instructor:
Martha Elaine Williams, B.S. William and Mary; M.A., Ph.D. Bryn Mawr

Courses

A student who has not chosen Philosophy 20 as a first year option is required to take Philosophy 30 (or 32 for Science students) for a General Program 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 problem. 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. 3 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, with an emphasis on those which form the background of scientific theory. (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. 3 hours a week.

350. Philosophical Texts: An examination of specified source materials in Greek and Modern Philosophy; critical works will also be studied.
2 hours a week.

456. Seminar in Plato and Aristotle. 2 hours a week.
Prerequisite: Philosophy 336.

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

University College

Professor:
Willard Joseph L'Heureux, B.A.; M.A. Michigan; Head of the Department

Associate Professor:
John Russell Fairs, B.Sc.; M.A. Columbia

Assistant Professors:
Elfrida M. Berzins (Mrs.) M.M.Riga
John Arthur Faulkner, B.A., B.P.H.E. Queen's; M.S. Michigan
Michael S. Yuhasz, B.A.; M.S. Illinois

Lecturers:
Edgar J. DeArmon, B.Sc. Northeastern State Teachers'
John Pius Metras, Director of Intercollegiate Athletics, (Special Lecturer)

Lecturers (part-time):
Theodore Henry Coffey, D.P.E. Harvard; M.D., C.M. Queen's
William John Pillsworth, B.A.; M.A. New York

Instructors:
Helen Vieno Kunkel (Mrs.), B.A.
Marlo Keddie (Miss), B.A., B.P.H.E. Queen's
Murray McNie

Courses

10. Prescribed Program: The instructional year is divided into two sessions (fall and winter). Each undergraduate entering the University will, if medically fit, be tested in aquatics and motor ability. Attainment of a satisfactory standard in both these areas may enable a student to be exempted from class instruction.

Non-swimmers and beginning swimmers will enrol in the beginning swim classes in the fall session.

Activities Available:

(1) Aquatics: Beginning swimming, aquatic fitness; Red Cross Water Safety Instructor's Course, Royal Life Saving Courses.

(2) Recreational: Badminton, tennis, golf, squash, handball, archery.

(3) Team: Volleyball, soccer, basketball.

(4) Combative: Personal defense, wrestling (men only).

(5) Gymnastic: Apparatus, trampoline.

(6) Fitness and developmental: Physical fitness, weight control.

Honors Courses

251. Team Games and Individual Activities: The theory and mechanics of activities as instruments in the education of the individual; the development of personal skills in the following: Men—aquatics, basketball, football, gymnastics, track and field, volleyball, group games and dance. Women—aquatics, archery, basketball, dance, field games, group games, gymnastics, track and field, and volleyball.

2 lectures and 4 laboratory hours a week.

253. School Health Education: An approach to intelligent planning for healthful living; the study of personal health from the standpoint of Biology, Psychology and Nutrition; community and institutional public health; methods and materials of school health teaching.

3 lectures a week.

258. History of (and Introduction to) Physical, Health and Recreation Education: Development of these three sections of education; their interrelationship in modern society; their connection with learning; the social significance of competitive games and sports; contemporary development through public and private agencies. 3 lectures a week.

351. Team Games and Individual Activities: A continuation of work taken in P.H.R.E. 251; the purpose of this course is to continue to a higher level of development the more complex skills of physical education activities; tactics and strategy of competitive play are studied.

Prerequisite: P.H.R.E. 251. 1 lecture and 4 laboratory hours a week.

352. Organization and Administration of Physical and Health Education: The function of administration with respect to curriculum planning, budget, finance, staff, public relations; principles and organization of intramural and inter-school programmes; scheduling and management of athletic contests. 2 lectures a week.

354. Functional Human Anatomy.

1 lecture and 1 laboratory hour a week: half course.

366. Methods and Materials: A theory and laboratory course designed to acquaint the student with the program of physical education, selection of activities, planning, sources of materials and evaluation; analysis of materials in fundamental, individual and dual games, rhythmics, gymnastics, and team games; gymnasium practice.

3 lectures a week (laboratory as required).

451. Team Games and Individual Activities: The study of team games with particular reference to coaching responsibilities in planning, methodology, skill analysis, personnel management, etc.; personal performance in individual activities is continued to a higher level of skill.

Prerequisite: P.H.R.E. 351. 1 lecture, 2 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 including observation at 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).

456. Seminar: The interpretation of physical education in its relationship to education; ends and means of physical activities in their philosophical context; principles underlying program; a study of the scientific foundations of physical education; presentation of senior thesis; supervised observation and field work. 3 hours a week.

457. Tests and Measurements in Physical and Health Education: The techniques of evaluation in health and physical education and the use of tests to aid in program and student evaluation; construction and administration of test batteries; the use of descriptive statistics in the handling of data for evaluation, grading and classification.
2 lectures and 2 laboratory hours a week.

PHYSICS

University College

Professors:

Austin Donald Misener, B.A., M.A. Toronto; Ph.D. Cantab.; F.R.S.C., Head of the Department
Ray Leroi Allen, B.A., M.A. Mt. Allison
Ralph William Nicholls, B.Sc., Ph.D. London; A.R.C.S. (on leave 1959-60)
John Henry Blackwell, B.Sc. Melbourne; M.Sc., Ph.D.

Associate Professors:

A. M. I. A. W. Durnford, B.A., M.A.; Ph.D. Toronto
Eric Brannen, B.A., M.A. Toronto; Ph.D. McGill
Peter Arthur Fraser, B.Sc., M.Sc. Wisconsin; Ph.D.

Assistant Professors:

Eric Harold Tull, B.A.Sc. British Columbia; M.Sc.; P.Eng.
Donald Ross Hay, B.Sc., M.Sc.; Ph.D. McGill

Lecturers:

Charles Murray Carmichael, B.Sc., M.Sc.
James Arthur Fulford, B.Sc.
Harry Ian Symons Ferguson, B.Sc., M.Sc., Ph.D.
John Francis Hart, B.A., M.A., Ph.D. Toronto
John Campbell Forrester MacDonald, B.A., M.A. British Columbia; Ph.D. Toronto; (Honorary Lecturer)

Instructor:

Thomas William Wallace Stewart, B.Sc., and M.Sc.

Research Associates:

William Ross Jarmain, B.A.; M.A. Wisconsin
John Cecil Breeze, B.Sc., Ph.D. Wales

Demonstrators:

Reginald Charles Greenwood, B.Sc. Manchester; M.A. Western Reserve; Janet Hunten, B.Sc.; M.Sc. McGill; Raffi-Uddeen Khan, B.Sc., M.Sc. Punjab; Peter James McKee Moogk, B.Sc.; Anne Elisabeth Stevens, B.Sc. McMaster; Roy Albert Wentzell, B.Sc. Acadia.

Research Fellows and Scholars:

James Philip Fallona, B.Sc.; Fouad Kwam Said Hussein Fanaki, B.Sc. Alexandria; Heinrich Roman Froelich, B.Sc. Berlin; M.Sc.; Gérard Rosaire Hébert, B.Sc. Ottawa; M.Sc. British Columbia; M.Sc. Catholic U. of America; Peter William Manuel, B.Sc., M.Sc.; Hans Carl Martin, B.Sc. Manitoba; Robert Paul McEachran, B.Sc., M.Sc.; Andrew Thomas McGregor, B.Sc.; Robert Frank Mereu, B.Sc.; M.A. Toronto; Rama Chandra Murty, B.Sc. Andhra; M.Sc., Dip. Lib. Bombay; Garth Lloyd Olde, B.Sc., M.Sc.; Eric Vernon Pemberton, B.Sc.; William Maurice Reid, B.Sc. St. F.X.; M.Sc.; Jacob Sosniak, B.Sc., M.Sc. McGill; John Harvey Stockhausen, B.Sc., M.Sc. London (Ext.); Michael Douglas Watson, B.Sc., M.Sc.

Courses

20. Mechanics and Heat: Lectures, demonstrations and laboratory exercises covering a selection of topics.
2 lectures, 3 laboratory hours a week.

21. Physical Science: Lectures, lecture demonstrations, and laboratory assignments designed (1) to present an historical review of the development of physical science; (2) to describe some of the modern practical applications of physical science; and (3) to outline some present trends in science. 2 lectures, 2 laboratory hours a week.

26. Introduction to Modern Physics I: The first year of a two-year sequence designed to present the qualitative ideas and the simpler quantitative results of microscopic physics. The emphasis is laid on the fundamental laws of conservation, and the interaction of radiation with matter. For First Year Engineers. 2 lectures, 3 laboratory hours a week.

34. General Physics: A study of the laws and principles of light, sound, electricity, magnetism, thermionics and atomic physics.
2 lectures a week; 3 laboratory hours in alternate weeks.
Prerequisite: Physics 20 or 21.

46. Atomic Physics: (1) A review of the laws and theories of classical physics; (2) the development of physical science from the late 19th century to the present. 3 lectures a week.

Prerequisites: Physics 20 or 21; and Mathematics 24 (this may be taken contemporaneously).

Honors Courses

204. General Physics: A study of the laws and principles of light, sound, electricity, magnetism, thermionics and atomic physics.
Prerequisite: Physics 20. 2 lectures, 3 laboratory hours a week.

204M. General Physics: Same as Physics 34. For second year Pre-Medical students.
2 lectures a week; 3 laboratory hours a week in alternate weeks.

216. Introduction to Modern Physics II: The second year of a two-year sequence designed to follow Physics 26. The quantum theory and the special theory of relativity are introduced, with applications to nuclear and solid state physics.
For Second Year Engineers. 3 lectures, 3 laboratory hours a week.

250. Mechanics: An introduction to vector calculus; motion of a particle and systems of particles; Harmonic Motion (simple, damped, forced); central orbits; dimensional analysis. 2 lectures a week.

251. Theory of Measurements: Lectures and practical work on the presentation and treatment of experimental data by graphical and numerical methods. 4 lecture and laboratory hours a week.

254. Elementary Optics and Acoustics: Historical development of optical theories, including an introduction to quantum optics; wave motion and elementary acoustics; photometry, plane reflection and refraction; spherical reflection and refraction; optical instruments; interference; diffraction; polarization. 2 lectures, 3 laboratory hours a week.

For Third Year Honors Chemistry students.

Not to be offered after 1960-61.

256. Light, Acoustics, Electricity and Magnetism: An introductory course in geometrical and physical optics; acoustics; electrostatics; magnetism; and electromagnetism. 3 lectures, 3 laboratory hours a week.

350. Advanced Mechanics: Vector analysis, including integral theorems and their applications; virtual work and generalized co-ordinates formulation for statics and dynamics; Lagrange's and Hamilton's equations of motion and their application; normal mode analysis. 2 lectures a week.

351. Methods of Mathematical Physics I: An introduction to the methods of the common partial differential equations of Physics, in the simple co-ordinate system and under various boundary conditions; the eigenvalue and eigenfunction approach is emphasized, and, in particular, the physical applications of Fourier series are considered in detail.
3 lectures a week.

353. Thermodynamics and Properties of Matter: A treatment of the laws of thermodynamics; heat engines; reversible cycles; change of phase; heat transfer and radiation; kinetic theory of gases. Theoretical and mathematical derivation of concepts of fluids and solids.
3 lectures a week.

356. Electronics: A treatment of the underlying principles of electronic conduction in vacuum tubes, gaseous tubes and semi-conductor devices; an analysis of rectifying circuits and of amplifiers.
2 lectures, 3 laboratory hours a week.

359. Laboratory: Designed to give training in the techniques of advanced physics. 6 laboratory hours a week.

366. Electronics: Similar to 356.
2 lectures a week, 3 laboratory hours a week for 1 term.

376. Electronics: An introduction to physical electronics, including the treatment of charged particles moving in electric and magnetic fields; thermionic emission; conduction in metals and semi-conductors; photo-electricity; vacuum tubes and transistors; electrical discharge in gases; rectifier and amplifier circuits; sinusoidal oscillators. 3 lectures a week.

377. Circuit Analysis: An introduction to electric circuit analysis, commencing with simple transient circuits, but chiefly concerned with the steady state A.C. method. 3 lectures a week.

2 **379. Laboratory:** Designed to accompany the lecture work of the third year Radio-Physics option.

9 laboratory hours a week; double course.

417. Communication Circuits: A study of high-frequency transmission line theory; Maxwell's equations and their application to antenna and wave-guide systems; radio signal modulation and detection; power amplifiers; and an introduction to radio noise theory. For Engineering students.

2 lectures a week.

454. Advanced Optics and Spectroscopy: The principle of superposition of amplitudes; Huygen's Principle; wave packets and line profile; advanced aspects of interference, diffraction and polarization; introduction to atomic and molecular spectroscopy. 2 lectures a week.

455. Electromagnetic Theory: A vector treatment of the theory of the static and dynamic electromagnetic fields, based on the fundamental experiments. 2 lectures a week.

456. Atomic and Nuclear Physics: A course designed to give a thorough knowledge of the fundamental particles, and of the experimental basis of modern concepts of atomic and nuclear structure. 2 lectures a week.

457. Introductory Quantum Mechanics: The course stresses the physical ideas behind wave-particle duality, wave packets, operational definitions. Schroedinger's equation is solved for barrier problems, tunnelling, etc. The operator formalism and postulatory basis of Quantum Mechanics is developed. 2 lectures a week.

½ **458. Seminar:** Preparation of papers and reports; reading of historical essays and of articles from current magazines. Prescribed for fourth year students in Chemistry and Physics, Geophysics, Physics and Mathematics; optional for other students in those programs.

1 hour a week; half course.

2 **459. Laboratory:** Designed to accompany the lecture work of the fourth year Physics and Mathematics. 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. Methods of Mathematical Physics II: A continuation of Physics 351 with particular emphasis on the application of integral transform methods and the theory of the complex variable to the differential, integral, partial differential, and difference equations of the physical sciences.

2 lectures a week.

477. Communication Circuits: An extension of Physics 376 and 377; the analysis of power and voltage amplifiers, using both vacuum tubes and transistors; high-frequency transmission, including the derivation and use of the Smith diagram; modulation and detection; wave-guide and antenna theory; some aspects of the theory of noise. 2 lectures a week.

479. Laboratory: Designed to accompany the lecture work of the fourth year Radio-Physics option. The course consists of experiments illustrating various aspects of electronics. In addition, each student is required to complete the design and construction of at least one project of his own.
12 laboratory hours a week; double course.
For Engineering students, 6 laboratory hours a week; full course.

PSYCHOLOGY

University College

Professor:
Gordon Haslam Turner, B.A., M.A., Ph.D. Toronto; Head of the Department

Associate Professors:
Leola Ellen Neal, B.A., M.A.; Ph.D. Toronto; (Dipl. Clin.); Dean of Women; (part-time)

Assistant Professors:
Jaroslav Havelka, M.A. Masaryk; Ph.D. Milan; M.Sc. McGill
John Paul, B.A., M.A., Ph.D. Toronto

Lecturers:
Charles Hart Aharan, B.A., M.A., (Honorary part-time)
Harold Neil Blackwell, B.A., M.A.; Ph.D. Toronto (part-time)
William John McClelland, B.A., M.A. Toronto; Ph.D. London (part-time)
Moira Selby Sansom, B.A. Mt. Allison; B.L.S. Toronto; B.A. New Brunswick; Ph.D. London (part-time)

Graduate Assistant:
Penelope Ann Proudfoot, B.A.

Middlesex College

Associate Professor:
Mary Jean Wright, B.A.; M.A., Ph.D. Toronto; Chairman of the Department

Assistant Professor:
Morris Modris Schnore, B.A., M.A.; Ph.D. McGill

Lecturers:
Kingsley George Ferguson, B.A.; M.A., Ph.D. Toronto (part-time)
Frank William Ralph Taylor, B.A., M.A. Toronto

Courses

In the Colleges of the University, Psychology 20 or 30 is ordinarily prerequisite to all other courses in psychology.

20. Introduction to Psychology: Problems and Methods; individual differences and their assessment; learning; memory; thinking; sensation and perception; motivation; emotion; 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 Pre-medical students who have neither had nor are taking Psychology 20. 3 hours a week.

35. Experimental Psychology I: Basic research techniques in psychology, including an introduction to statistical methods.
2 lectures, 2 laboratory hours a week.

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: Critical examination of research techniques in psychology with special emphasis on the control, manipulation and measurement of psychological variables.
Prerequisite: Psychology 35. 2 lectures, 2 laboratory hours a week.

39. Problems in Clinical Psychology: A clinical approach to behaviour problems including a discussion of the historical development of clinical psychology; current problems and the role of research; theoretical frames of reference; diagnostic and psychotherapeutic methods. 2 hours a week.

46. Applied Psychology: The application of psychological principles to practical problems, with the major emphasis on problems in education and industry. 2 hours a week.

48. Abnormal Psychology: A consideration of abnormal activities in sensation, perception, memory, emotion, thought and behaviour; 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 the Colleges of the University only.)

The following courses for honors students cover the same areas as the corresponding General courses (in parentheses). Additional assignments may be required in cases where there are not separate seminars. 235 (35), 236 (36), 338 (38), 339 (39), 349 (49), 446 (46), 448 (48).

234. Historical Introduction to Psychology: A study of persistent problems in the history of psychology and an introduction to the traditional systems of psychology: Structuralism, Functionalism, Behaviorism, Gestalt Psychology, and Psychoanalysis. 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. Contemporary Psychology: A critical examination of the theories of representative modern and contemporary psychologists. 2 hours a week.

459. Research Problems: A seminar course in which students will select topics for special investigation. 3 hours a week.

RELIGIOUS KNOWLEDGE

See the affiliated colleges section.

ROMANCE LANGUAGES

University College

Professors:

Robert Warren Torrens, B.S. Dartmouth; M.A. Harvard; Ph.D. Cornell; Head of the Department
William Edwin Collin, L. ès L. Toulouse; M.A.

Associate Professor:

Frances Kathleen Montgomery, B.A., M.A.; D. de l'U. de Paris

Assistant Professor:

Norman Adrian Bennetton, B.A., M.A., Southern California; Ph.D. Johns Hopkins

Instructors:

Bruce Davies, B.A. McMaster; M.A. Harvard
John Alan McClelland, B.A., M.A. Toronto
Basil Peter Seymour, B.A. Oxon; M.A. Toronto

Teaching Fellow:

Gertrude Helen Kearns, B.A.

Middlesex College

Associate Professor:

Robert Newton Shervill, B.A.; M.A., Ph.D. North Carolina; Head of the Department

Assistant Professors:

Théophile Joseph Casaubon, B.A. Laval
Lionel Jacques Seymour Metford, B.A., M.A. British Columbia; D. de l'U. de Paris

Lecturers:

Maximilian Alvarez, B.A. Valladolid (Spain)
Douglas George Creighton, B.A., M.A. Toronto; Ph.D. Columbia
Lethem Sutcliffe Roden, B.A., M.A., Ph.D. Toronto

French Courses

20. Advanced French: Introduction to French literature, grammar, translation, oral practice. 3 hours a week.
Prerequisite: French 10 or Grade XIII French.

½ **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. The French Novel: Study of typical examples of the novel taken from French literature of the seventeenth through the twentieth centuries.
Prerequisite: French 20. 3 hours a week.

31. Grammar, Composition, Oral Practice. 3 hours a week.
Prerequisite: French 20.

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. French Drama: Study of typical examples of French dramatic literature of the seventeenth through the twentieth centuries.
Prerequisite: French 20. 3 hours a week.

41. Advanced Grammar, Composition and Oral Practice.
Prerequisite: French 20. 3 hours a week.

43. Commercial French: Advanced transactions, reading. For students in Secretarial Science. 3 hours a week.
Prerequisite: French 33.

½ **45. Scientific French:** 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 historical 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. The French Classical Period: Study of representative literature of the seventeenth century; reading, lectures, discussion and reports.
Prerequisite: French 20. 3 hours a week.

271. Phonetics, Grammar, Composition and Oral Practice.
Prerequisite: French 20. 3 hours a week.

380. French Literature of the Eighteenth Century: Lectures, reading, discussion, reports. 3 hours a week.
Prerequisite: French 270.

381. Grammar, Composition, Oral Practice. 3 hours a week.
Prerequisite: French 271.

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 and Oral Practice. 2 hours a week.
Prerequisite: French 381.

499. Contemporary French Literature: Study of some typical examples of the novel and drama of the twentieth century: reading, lectures, reports.
Prerequisite: French 380. 3 hours a week.

Italian Courses

1. Elementary Italian: Grammar, oral practice, reading of simple texts. Students who have an A standing at the end of the first semester may transfer to Italian 10. 3 hours a week.

10. Intermediate Italian: Review of grammar, reading of contemporary Italian, oral practice. 3 hours a week.
Prerequisite: Italian 1 or its equivalent.

20. Outline of Italian Literature and Civilization: Composition, reading, history of literature. 3 hours a week.
Prerequisite: Italian 10 or Grade XIII Italian.

30. Study of the 'Trecento' in Italy: Readings in Dante, Petrarch and Boccaccio, history of literature. 3 hours a week.
Prerequisite: Italian 20

Spanish Courses

1. Elementary Spanish: Grammar, translation, dictation, oral practice. Students who have an A standing at the end of the first semester may transfer to Spanish 10. 3 hours a week.

10. Intermediate Spanish: Grammar, composition, translation, dictation, oral practice. 3 hours a week.
Prerequisite: Spanish 1 or its equivalent.

20. Survey of Spanish Literature: Grammar Review, Translation, Oral Practice. 3 hours a week.
Prerequisite: Spanish 10 or Grade XIII Spanish.

22. Conversation: Systematic oral practice for developing fluency in speaking Spanish. 2 hours a week: half course.
Prerequisite: Spanish 10.

45. Scientific Spanish: *Reading of scientific Spanish from journals* supplemented by individual reading in the special field of study of each student. (Not offered 1960-61.)
1 hour a week: half course.
Prerequisite: Spanish 10 or Grade XIII Spanish.

48. Latin-American Literature: Study of typical examples of modern prose and poetry. 2 hours a week.
Prerequisite: Spanish 20.

Note: Spanish 30, 31, 35, 40 and 41 are Pass Courses identical with 230, 231, 260, 340 and 341 respectively.

Honors Courses

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

230. Spanish Drama of the Nineteenth and Twentieth Centuries: Lectures, reading, discussion, reports. 2 hours a week.
Prerequisite: Spanish 20.

231. Phonetics, Prose Composition, Conversation.
Prerequisite: Spanish 20. 2 hours a week.

260. Spanish Poetry of the Nineteenth and Twentieth Centuries: Lectures, reading, discussion, reports. 2 hours a week.
Prerequisite: Spanish 20.

340. Spanish Prose of the Nineteenth and Twentieth Centuries: Lectures, reading, discussion, reports. (Not offered 1960-61.)
Prerequisite: Spanish 20. 2 hours a week.

341. Commercial Spanish: Composition, Oral Practice.
Prerequisite: Spanish 231. 2 hours a week.

365. Spanish Poetry: Garcilaso de la Vega to the end of the Golden Age. (Not offered 1960-61.) 2 hours a week.
Prerequisite: Spanish 260.

455. Spanish Literature of the Mediaeval Period. 2 hours a week.
Prerequisite: Spanish 365.

460. Spanish Drama before Lope de Vega, and Spanish Drama of the Golden Age. 2 hours a week.
Prerequisite: Spanish 365.

465. The Spanish Novel and Non-fictional Prose of the Golden Age.
Prerequisite: Spanish 365. 3 hours a week.

461. Advanced Composition and Oral Practice.
Prerequisite: Spanish 341. 1 hour a week: half-course.

RUSSIAN STUDIES

University College

Instructors (part-time):

Helen Isyumov (Mrs. P. N.) B.A. University of Moscow
Nina Bernotas, (Mrs. N.) B.A.
Paul Varnai, B.A. Budapest; M.A. University of Montreal.

Courses

1. Elementary Russian: A beginning course; pronunciation, grammar, dictation, translation, oral practice. 3 hours a week.

10. Intermediate Russian: Grammar, dictation, translation, composition and conversation. 3 hours a week.
Prerequisite: Russian 1.

15. Elementary Scientific Russian: The elements of Russian grammar with the reading of easy scientific Russian. 3 hours a week.

20. Advanced Russian: Special problems of grammar, translations, conversation, composition. 3 hours a week.
Prerequisite: Russian 10.

30. A Survey of Russian Literature. 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 15

SECRETARIAL SCIENCE

University College

Professor:
Mary Hamilton Gillespie, B.A.; M.A. Columbia, Head of the Department

Assistant Professors:
Elaine Woodrow Chapman, (Mrs. C. B.), B.A.
Roma Lucille Waller (Mrs.), B.A.; M.A. Columbia

Instructor:
Eleanor Gertrude Ward, (Mrs. Bruce) B.A.

Assistant:
Shelagh A. Morrison

Courses

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. 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 the Mathematics of Business.* 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; tabulation; 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.

Prerequisite: Secretarial Science 37, 38, 39.

48-49. Shorthand and Typewriting: Shorthand speed up to 130 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.

Prerequisites: Secretarial Science 38, 39. 10 hours a week.

ZOOLOGY

University College

Professors:

Anthony William Aldridge Brown, B.Sc.F., M.A., Ph.D. Toronto; M.B.E., Head of the Department
Helen Irene Battle, B.A., M.A.; Ph.D. Toronto
William Alexander Kennedy, B.A., Ph.D. Toronto; Honorary (part-time)

Associate Professors:

William Wallace Judd, B.A. McMaster; M.A., Ph.D. Toronto
David Maxwell Scott, B.Sc., Ph.D. McGill

Assistant Professors:

Thomas Kenneth Richard Bourns, B.A., M.A. British Columbia; Ph.D. Rutgers
Robert Harvey Stinson, B.A. McMaster; Ph.D. Toronto

Lecturer:

Donald Burley McMillan, B.Sc., M.Sc.; Ph.D. Toronto

Honorary Lecturers (part-time):

William Chefurka, B.Sc. Manitoba; M.A. Montana State; Ph.D. Harvard
Ernest Howard Colhoun, B.S.A. Toronto; Ph.D. Cantab.; F.R.E.S.
Andrew Hampden Lawrie, B.A., M.A. Toronto
Hector Alexander Urquhart Monro, B.Sc. (Agr.), M.Sc., Ph.D. McGill
Richard Desmond O'Brien, B.Sc. Reading; B.A., Ph.D.
David Paul Scott, B.Sc., M.Sc. McGill; Ph.D. British Columbia
John James Tibbles, B.S.A. Toronto; M.Sc., Ph.D. Wisconsin

Graduate Demonstrators:

Marjorie Eleanor Prouse, M.Sc.; Theodore Harne MacDonald, B.Sc. McGill; Paul Gerhardt Fast, M.S.S. Oklahoma; John Farley, B.Sc. Sheffield; James Gordon Towgood, B.A. British Columbia; Hans Willer Laale, B.S. Bob Jones; Garner Francis Mason, B.A.; Doreen Lewin Scott, M.A. (part-time).

Postdoctorate Fellows:

Amar Nath Chattoraj, M.Sc., D. Phil., Allahabad; Zille Hasan Abedi, M.Sc., Ph.D. Aligarh; Nawab Hasan Khan, M.Sc. Aligarh; Ph.D. Massachusetts.

Graduate Assistants and Scholars:

Robert Spencer Oldham, B.Sc. Sheffield; Avid Gabriel Carmichael, B.A. Saskatchewan; Fumio Matsumura, B.Sc. Tokyo; M.Sc. Alberta.

Courses

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.

Students who obtain 60 per cent. in this course may select options for further study in Botany and Zoology.

2 lectures and 2 laboratory hours a week.

24. Mammalian Zoology: The anatomy (first term) and physiology (second term) of the mammals. For students in the Nursing, Home Economics (first term only), and Physical and Health Education courses.

2 lectures and 3 laboratory hours a week.

Prerequisite: Zoology of Grade XIII or Zoology 21.

30. Senior Mammalian Zoology: The anatomy and physiology of the mammals. Students who have received credit in Zoology 24 will not be permitted to take Zoology 30. 2 lectures and 3 laboratory hours a week.

Prerequisite: Zoology 20 or 21.

34. Vertebrate Histology: An introduction to the microscopic structure and development of tissues and organs.

Prerequisite: Zoology 24 or 30. 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.

Prerequisite: Zoology 20 or 21 and one other college course in Zoology.

41. Entomology: The biology and economic importance of the insects, and in addition the spiders, mites, crustacea and other arthropods.

Prerequisite: Zoology 20 or 21 (60%).

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

43. Animal Ecology: Effects of environmental factors; distribution of animals; animal communities; population dynamics. Given in alternate years, next in 1960-61. 2 lectures a week.

Prerequisite: Zoology 24 or 30.

44. Embryology: Principles of development as illustrated by selected invertebrate and vertebrate types.
Prerequisite: Zoology 24 or 30. 1 lecture, 3 laboratory hours a week.

45. Principles of Genetics: The principles of Mendelian genetics and chromosome theory. 2 lectures a week.
Prerequisite: Zoology 20 or Zoology 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, with the general physical and chemical principles involved in the functioning of the animal cell. 2 lectures and 3 laboratory hours a week.
Prerequisite: Zoology 350.

453. Animal Ecology: Effects of environmental factors; distribution of animals; animal communities; population dynamics. 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 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.

463. Biological Field Studies: An obligatory course of study of living organisms in their field environment. The student should be prepared 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 3 laboratory hours a week.

THE SUMMER SCHOOL AND EXTENSION DEPARTMENT

Director:
Star Floyd Maine, B.A., B.D. Victoria; M.A., Ph.D. Chicago

Associate:
Angela Armitt, B.A.

Assistant:
Olive M. Hodgins

The Summer School and Extension Department offers four types of courses which count towards the Bachelor of Arts degree.

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.

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.

Correspondence Courses. Some courses in the following subjects are available by correspondence during the winter; Economics, English, French, Geography, German, History, Latin, Mathematics, Philosophy and Spanish.

Students in these classes write the regular examinations and their papers are marked by members of the University Faculty.

Summer School Courses. On the campus in London there is a Summer School extending for six weeks from July 4 - August 13, 1960. The credit subjects offered in the Summer School are mainly those listed in the announcement as belonging to the General Program. Some Honors courses in English, Geography and Mathematics are available each summer for graduate students who wish to earn Type A certificates for secondary school teaching.

A student enrolled in the Summer School, Correspondence and Extension Department may take as many as five courses a year (two in a Summer Session and three during a Winter Session). Any student who wishes to take more courses than the maximum mentioned must petition the Academic Standing Committee for permission.

A candidate for a degree must attend this University 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.

No intramural student may register in an extension or correspondence course without the written permission of his Dean. Any student who receives such permission is expected to pay the full extension or correspondence fee unless he presents to the Registrar and the Comptroller a credit slip to be obtained from the Extension or Correspondence Department and countersigned by both his Dean and the Director of the Extension Department.

Information about Summer School and 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 the Registrar.

TROIS-PISTOLES SUMMER SCHOOL FOR FRENCH, ENGLISH AND PAINTING, TROIS-PISTOLES, PROVINCE OF QUEBEC

Middlesex College

Director: Theophile Joseph Casaubon, B.A. Laval

In 1960 the School will operate from July 7 to August 24. Although formal instruction is given in phonetics, composition, etc., the emphasis is on the spoken language.

For the bulletin concerning the courses apply to the Director of the Trois-Pistoles Summer School, Middlesex College, or to the University Registrar.

Music Teachers' College

(Founded and Affiliated in 1945; in 1958 it became a college of the University's Faculty of Arts and Science)

Principal — Clifford von Kuster, Mus.Bac., L.R.C.T.

Professors:

John Cook, B.Mus. Dunelm; A.R.C.M., F.R.C.O., Head of the Theory Department
Kathleen Parlow, Head of the String Department
Alfred Rusè, B.A., Head of the Voice Department

Lecturers:

Howard Munn
Donald McKellar, Mus.Bac. Toronto
Earle Terry, B.A., B.Paed., M.Mus.
Lillian Wilson

Courses:

Music 10. For Arts and Science students. There are three parts of this course: history of music, theory and performance. To obtain credit, two of the three parts must be taken. If a student chooses performance, he must pay for the private lessons.

History of Music: Introduction. Medieval music. The epoch of vocal Counterpoint. The development of monophony. Bach, Handel.

Theory, first course: rudiments and elementary form and analysis. 2 hours a week.

Music 20. For Arts and Science students. There are three parts of this course: History of music, theory and performance. To obtain credit, two of the three parts must be taken. If a student chooses performance, he must pay for the private lessons.

History of Music: Gluck. Classical music. Romantic music to Liszt.

Theory, second course: elementary harmony, including keyboard harmony and improvisation. 3 hours a week.

Music 20s. Music Education. Summer School only. 10 hours a week.

Music 20y. A listener's course designed for Arts students to acquaint them with the landmarks of the orchestral, choral and chamber repertoire through guided listening to recordings and live performance. No prerequisite. 2 hours a week.

Music 21c. Individual piano lessons for piano majors. Fundamentals of technique presented. Repertoire assigned from each representative period of piano literature. 40 minutes a week.

Music 21cd. Piano lessons for voice majors. Basic principles of technique presented. Course of study designed to suit individual needs and previous experience, with special emphasis on sight reading. 40 minutes a week.

Music 21ce. Piano lessons for organ majors; see 21cd. 40 minutes a week.

Music 21d. Individual voice lessons. Vocal production and its fundamental laws. Exercises, studies, simple songs in English. Italian diction applied to singing. Simple Italian repertoire. Participation in University Choir. ½ hour twice a week.

Music 21e. Individual organ lessons. Elements of organ construction and registration. Basic technique. Study of Bach Chorale Preludes. Transposition and elementary score reading. 40 minutes a week.

Music 22. Pedagogy as related to keyboard instruments. Teaching approach to all phases of technique and tone production, phrasing, style, interpretation, memorizing, practice methods, etc. 1 hour a week.

Music 23. Teaching Materials. Grades I, III, V, VII analyzed and studied. Assignments in listing, and performing teaching repertoire. Practice teaching. 1 hour a week.

Music 24. Repertoire. Lecture-recitals presenting the peaks of piano, vocal, violin and orchestral literature by faculty performance or by recordings. 1 hour a week.

Music 25. Theoretical studies. Aural training. Chord recognition and simple dictation of melodies. Harmony. Cadence patterns; triads and inversions. Improvisation of short phrases. Special courses of study outlined for students interested in teaching of theory.
2 hours a week.

Music 26. History of Music. Medieval music. The epoch of vocal counterpoint. The development of monophony. Bach and Handel.
1 hour a week.

Music 27. Music Education. Solfege and choral training. Choral conducting, repertoire and class methods. 2 hours a week.

Music 28. Performance Class. Performing experience and development of the critical faculties. Regular sessions.

Music 29. Major course in Composition. Details on request.
1 hour a week.

Music 30. For Arts and Science students. There are three parts of this course: history of music, theory and performance. To obtain credit, two of the three parts must be taken. If a student chooses performance, he must pay for the private lessons.

History of Music: Wagner, Nationalism in music. The musical impressionists. The twentieth century.

Theory, third course: "Free" Counterpoint; advanced harmony and composition. 3 hours a week.

Music 31c. Individual piano lessons for piano majors. Study and analysis of more advanced repetoire. More stress on performance.
40 minutes a week.

Music 31cd. Piano lessons for voice majors. Continuation of 21cd with added emphasis on accompanying and sight reading.
40 minutes a week.

Music 31ce. Piano lessons for organ majors. Continuation of 21ce, with added emphasis on accompanying and sight reading.
40 minutes a week.

Music 31d. Individual voice lessons. Use of increasingly difficult material. Emphasis on sight singing. Study of easier older operatic numbers. Introduction to repertoire study in French, French diction. Recitative and Oratorio. Participation in the University Choir.
½ hour twice a week.

Music 31e. Individual organ lessons. Bach Trio Sonatas. Introduction to contemporary organ music. Transposition, score reading and improvisation. 40 minutes a week.

Music 33. Teaching Materials of Grades II, IV, VI, VIII. Practice teaching.
1 hour a week.

Music 34. Repertoire. Continuation of Music 24. 1 hour a week.

Music 35. Theoretical studies. Analysis of binary forms. Fugal style. Analysis of sonata form. Keyboard harmony. Simple modulation. Improvisation of 8 and 16 bar phrases. Accompaniment of simple melodies. 2 hours a week.

Music 36. History of Music. Gluck. The Classical Period. Romantic music to Liszt. 1 hour a week.

Music 37. Music education. *Continuation of Music 27.* 2 hours a week.

Music 38. Performance. Continuation of Music 28. Regular sessions.

Music 39. Composition. Continuation of Music 29. 1 hour a week.

Music 40. For Arts and Science Students. An advanced course in score reading; orchestration; advanced form and analysis; composition. Individual research projects. 3 hours a week.

Music 41c. Individual piano lessons for piano majors. More extensive *repertoire assignments. Experience in ensemble playing,* chamber music and concerti. 40 minutes a week.

Music 41cd. Piano lessons for voice majors. 40 minutes a week.

Music 41ce. Piano lessons for organ majors. 40 minutes a week.

Music 41d. Individual voice lessons. Modern English songs. German diction applied to singing. Study of German Lieder. Modern repertoire in original languages. Study of at least one full opera part. Participation in the University Choir. ½ hour twice a week.

Music 41e. Individual organ lessons. General repertoire with emphasis on church music accompaniment. Extended improvisation. 40 minutes a week.

Music 44. Repertoire. Continuation of Music 24 and 34. 1 hour a week.

Music 45. Theoretical studies. Music appreciation. The contemporary schools. Keyboard transposition and improvisation. Free accompaniment of melodies. "Free" Counterpoint. 2 hours a week.

Music 46. History of Music. Wagner. Nationalism in music. The musical Impressionists. The Twentieth Century. 1 hour a week.

Music 47. Music education. Continuation of Music 27 and 37. 2 hours a week.

Music 48. Performance. Continuation of Music 28 and 38. Regular sessions.

Music 49. Composition. Continuation of Music 29 and 39. 1 hour a week.

The Affiliated Colleges Faculties and Courses

THE PRELIMINARY YEAR

The Preliminary Year in the affiliated colleges is designed for those who have completed Grade XII (Ontario) or equivalent standing, including Latin or Mathematics or Music and one language besides English. Students who have not passed in six papers of Grade XIII, including at least three complete subjects, must take the entire Preliminary Year, with advance credit only for Grade XIII subjects in which the papers average at least 66%.

Adult Special Students over 21 years of age and out of school for a least two years will be admitted to the Preliminary Year if they have creditable results in a college aptitude test. They will be required to take in the Preliminary Year: English 10, another language and at least one other subject.

There is no Preliminary Year program available in any college of this University to qualify a student for admission to Pre-Medicine or Engineering Science or Honors Science programs.

The Preliminary Year will consist of the following programs:

(i) For admission to First Year, General Program 2, Secretarial Science, Honors Philosophy:
English 10
Another language
Latin 10 or two Mathematics or Music (Grade II Theory and Grade VIII Practical)
Three of:
History 14
Geography 20
Biological Science 21 or Physical Science 21
A third Mathematics
Music 10 (if Music is not selected above)
Religious Knowledge 10x
Another language 1, or 10, or 1-10
Physical Education and Health

(ii) For admission to Nursing and to the General Program: Home Economics Options:
English 10
Another language
Latin 10 or two Mathematics or Music (Grade II Theory and Grade VIII Practical)
Zoology 21
Physical Science 21 (Chemistry section)
Religious Knowledge 10x (for Ursuline College students)
Physical Education and Health

(iii) For admission to the General Program: Music Options:
English 10
French 10
Latin 10 or two Mathematics
History 14
Music
Physical Education and Health

(iv) For admission to the General Program: Pre-Theological Options:
English 10
Another language (Greek I acceptable)
History 14

Two of:

Mathematics (two courses)
Biological Science 21 or Physical Science 21
Another language
Religious Knowledge 10x
Physical Education and Health

SPECIAL COURSES

The following courses, equivalent to Grade XIII subjects, are not offered in the Colleges of the University but may be offered by the affiliated colleges as part of the Preliminary Year.

English 10: Literature and Composition. 3 hours a week.

French 10: Intermediate French.

Prerequisite: Grade XII French. 3 hours a week.

History 14: History of the Americas. 3 hours a week.

Mathematics 10: College Algebra. 2 hours a week.

Mathematics 12: Analytic Plane Geometry. 2 hours a week.

1/2 **Mathematics 18: Plane Trigonometry.**
3 hours a week, one term; half course.

The Affiliated Colleges

THE FACULTIES

Unless otherwise indicated, the degress have been granted by this University. "H" designates Huron College, "P" St. Peter's and Christ the King Colleges, "U" Ursuline College.

BUSINESS ADMINISTRATION

Lecturers:

Hugh Blaikie Rooney (H), B.A., M.B.A.
Alton Westwood Joseph Craig (P), B.Comm. St. Dunstan's; M.B.A.

CLASSICS

Professors:

J. J. Carrigan (P), B.A., S.T.D.
G. F. Childs (P), B.A., J.C.D.
F. J. Laverty (P), B.A.

Assistant Professor:

Frank Hartley Allen (H), M.A., B.D. Oxon.

Lecturers:

Mother M. St. Catherine (U), B.A., M.A. Detroit
Elizabeth Revell (H), M.A., Toronto; B.Litt. Oxon.

Instructors:

Peter Derbyshire, (P) B.A., Ph.B.
Sean Finbarr Gallagher (P), B.A. National U. of Ireland

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., Ph.D. Laval

Assistant Professors:

Ignatius John Adel-Czlowiekowski (P), LL.M. Lemberg; LL.D. Fribourg
Mother M. Rosanna (U), A.T.C.M.; B.A., M.A. Catholic U. of America

Lecturers:

Laurier LaPierre (P), B.A., M.A., Toronto
Reverend T. L. McManus (U), B.A.; J.C.L.
Hugh Blaikie Rooney (H), B.A., M.B.A.
Eleanor Graves Torrens (Mrs. R. W.) (U), A.B., M.A. North Carolina

ENGLISH

Professors:

William Blissett (H), B.A., U.B.C.; M.A., Ph.D. Toronto
Anthony Joseph Durand (P), B.A., M.A.; Ph.L., Ph.D. Laval
Eleanor Croysdale Jared (H), B.A.; M.A. Toronto; Ph.D. Radcliffe
William Francis Simpson (P), B.A., M.A.

Associate Professor:

Mother M. Agnes (U), B.A.; M.A. Toronto

Lecturers:

Christopher Mead Armitage (H), M.A. Oxon
Diane Elizabeth Lane (H), B.A.; M.A. London
Stanley Edward McGuire (P), B.A.; M.A. Toronto
Elizabeth Revell (H), B.A. Toronto; M.A., B.Litt. Oxon
Mother M. St. Catherine (U), B.A.; M.A. Detroit
David George Taylor (H), M.A. Toronto

Instructors:

Thomas Joseph Collins (P), B.A. (part-time)
Gregory Donegan (P), M.A.
Sean Finbarr Gallagher (P), B.A. National U. of Ireland
John Mulder (P), B.A. (on leave)
Fritz Maximilian Gerhard Wieden (P), B.A., M.A. (on leave)

GERMAN

Lecturer:

Mother M. Agnes (U), B.A., M.A. Toronto

Instructor:

Kristina Svokaite (U), B.A.

HEALTH

Instructors:

Mother M. Audrey (U), R.N.
John Stevenson Winder (H), M.D.

HEBREW

Professor:

Roland Kenneth Harrison (H), B.A.; M.Th., Ph.D. London

HISTORY

Professors:

John Lancely Hodge Henderson (H), B.A., L.Th., B.D., D.D.
Mother M. Mercedes (U), B.A., M.A.
John Gordon Rowe (H), A.B., B.D. *Harvard;* M.A., Ph.D. *Toronto*

Assstant Professor:

John Kevin Anthony Farrell (P), B.A., M.A.; Ph.D. Ottawa

Lecturers:

Rev. Paul Eugene Crunican (P), B.A., M.A. Toronto
Laurier LaPierre (P), B.A., M.A. Toronto

Instructors:

Joan Marie Girvin (U), B.A. Notre Dame of Staten Island; M.A. Hunter
Donald Francis Harris (H), M.A. Cantab.

HOME ECONOMICS

Professor:
Mother M. Dominica (U), B.A., M.A. Toronto

Associate Professor:
Mother M. St. Dominic (U), B.Sc. Marywood

Lecturers:
Mother M. Victoria (U), B.Sc. Chestnut Hill; M.Ed. St. Louis
Isabel Hodgkinson (Mrs. G. J.) (U), B.A., M.A. Toronto

LIBRARY SCIENCE

Lecturers:
John Lancely Hodge Henderson (H), B.A., L.Th., B.D., D.D.
Peter Mitchell (P), B.A.; B.L.S., McGill, Librarian of the College of Christ the King

Instructor:
Eleanor C. Donnelly (U), B.A., B.L.S. Toronto

MATHEMATICS

Lecturer:
Rev. John Joseph Bensette (P), B.A., M.A. Detroit

Instructors:
William Herbert Adamson (H), B.A., M.A. Queen's
Alexander Blair Gray (H), B.A. Queen's
Mother M. Perpetua (U), B.A.

PHILOSOPHY

Professors:
Anthony Joseph Durand (P), B.A., M.A.; Ph.L., Ph.D. Laval
R. A. Graveline (P), B.A., Ph.L., S.T.L.
Arnold Francis Loebach (P), B.A., J.C.L. Catholic U. of America
William Sparks Morris (H), B.A. Bristol; Ph.D. Chicago
William Joseph Ring (P), B.A.; Ph.L. Laval
Rev. Lester Albert Wemple (P), B.A., Ph.L. Angelicum (Rome); Dean of the College of Christ the King

Associate Professor:
Mother M. St. Michael (U), A.T.C.M.; B.A., M.A. Catholic University of America; Ph.L., Ph.D. Laval

Assistant Professor:
John Malcolm (H), M.A. Queen's

Lecturers:
Rev. Joseph Peter Finn (P), B.A., Ph.D. Catholic U. of America
Leo James Flynn (U), B.A.; S.T.D. Angelicum (Rome); S.S.L. Biblical Institute

PHYSICAL EDUCATION

Instructor:
Helen Vieno Kunkel (Mrs. A.) (U), B.A.

PSYCHOLOGY

Associate Professor:
Mother M. St. Michael (U), A.T.C.M.; B.A., M.A. Catholic U. of America; Ph.L., Ph.D. Laval

Lecturers:
Rev. Joseph Peter Finn (P), B.A., Ph.D. Catholic U. of America
Thomas Harris (H), B.A. Toronto; L.Th. Wycliffe; B.D., Union Theological Seminary; M.A. Columbia

Instructor:
Mother M. Perpetua (U), B.A.

RELIGIOUS KNOWLEDGE

Professors:
James Joseph Carrigan (U), B.A., S.T.L., S.T.D. Montreal
William Robert Coleman (H), M.A. Toronto; B.D., D.D. Wycliffe; S.T.M. Union Theological Seminary

Associate Professor:
Mother M. St. Michael (U), A.T.C.M.; B.A., M.A. Catholic U. of America, Ph.L., Ph.D. Laval

Assistant Professors:
Frank Hartley Allen (H), M.A., B.D. Oxon.
John Grant Morden (H), B.A. Toronto; L.Th., B.D., Wycliffe; S.T.M. Union Theological Seminary

Lecturers:
Rev. Paul Eugene Crunican (P), B.A., M.A. Toronto
Rev. Eugene Philip LaRocque (P), B.A., M.A. Laval

Instructors:
Donald J. McMaster (U), B.A.
Mother Marie (U), B.A., M.A.; Ph.D. Toronto

ROMANCE LANGUAGES

Professor:
Mother Marie (U), B.A., M.A.; Ph.D. Toronto
William Francis Simpson (P), B.A., M.A.

Associate Professor:
Mother M. Rosanna (U), A.T.C.M.; B.A., M.A. Catholic U. of America

Assistant Professors:

George Alexander Black (H), M.A. Toronto
Giuseppe Giorgini (P), D.E.F. Grenoble; D.Litt. Catholic U. of the Sacred Heart (Milan)
Dante Anthony Lenardon (P), B.A., B.Ed. Alberta; M.A., Ph.D. Toronto
Jean-Jacques Mambourg (H), Ph.D. Fribourg

Lecturer:

Rev. Eugene Philip LaRocque, B.A., M.A. Laval

Instructor:

Jack Warwick (H), B.A. Oxon.

Huron College

(London, Ontario)

(Founded in 1863)

Principal — The Reverend W. R. Coleman, M.A., D.D.

Registrar — The Reverend J. Grant Morden, B.A., L.Th., B.D., S.T.M.

GENERAL PROGRAM: PRE-THEOLOGICAL OPTIONS

Requirements for Admission: The Secondary School Graduation Diploma (Grade XII) and Grade XIII standing in English, History and three others, including a language, from the following: Latin, French, German, Spanish, Mathematics (any two) and Science. The Pre-Theological Preliminary Year may be taken in lieu of the Grade XIII requirements by those students who qualify to take these special one-year courses.

This program leads to the degree of Bachelor of Arts and is the normal requirement for admission to the three-year program leading to the title of L.Th. or B.Th. from Huron College. If, however, a student wishes to take another program leading to a General or Honors degree, Huron College will give its consent.

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

First Year

English 20
Greek 5x
History 20
Mathematics 20 or a Natural Science at the 21-29 level
Philosophy 20
Psychology 20
Health, Library Science and Physical Education

Second Year

Economics 20
English 32
Greek 15x
Philosophy 30
Religious Knowledge 30x
One of: History 31, 36, 44, Psychology 36, 46, 48, 49

Third Year

English 38
Greek 25x
Religious Knowledge 40x
One of: Philosophy 31, 36, 42, 47
Two of: Hebrew 1-10x, History 31, 36, 44, Psychology 36, 46, 48, 49

The following courses are offered at Huron College only.

GREEK COURSES

5x. New Testament Greek for Beginners. 3 hours a week.

15x. Readings in Hellenistic Greek. 3 hours a week.

25x. Select Passages: in the New Testament, to be read: and studies in the Greek Text. 2 hours a week.

RELIGIOUS KNOWLEDGE COURSES

10x. Christian Faith and Ethics: Introduction to the basic principles. 2 hours a week.

30x. The Religious Ideas of the Bible: This study will be divided equally between the Old and New Testaments and will aim at a deepened understanding of the fundamental principles of Biblical religion. 2 hours a week.

40x. An Introduction to the Philosophy of Religion: A study of the history of the major living religions, as studied in their basic literature. General problems of philosophy of religion. The problem of revelation and of a philosophy of the Christian religion. 2 hours a week.

Ursuline College

(London, Ontario)

(Affiliated in 1919)

Dean — Mother Marie, M.A., Ph.D.

Registrar — Mother Marina, B.A.

The General Programs and some of the Honors Programs are available in Ursuline College. All laboratory courses in the Natural Sciences are taught entirely in University College.

For the outline of the program in Home Economics offered jointly by Ursuline and University Colleges, see the General Programs section.

Courses

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.

½ **24x. Family Hygiene:** Problems in caring for physical, emotional and and mental health of the family. Lectures and practical demonstrations in caring for minor and chronic illnesses in the home.

1 hour a week: half course

½ **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.

½ **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.
Prerequisite: 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.

½ **33x. Interior Decoration:** Elements of interior decoration and design.
Prerequisite: Home Economics 23x. 1 hour a week: half course.

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.

½ **45bx. Family Economics:** Marketing and consumer problems; family finance management; budgeting. 2 hours a week: half course.

½ **46x. Demonstration Techniques:** Meal service.

One afternoon a week in second term: half course.

½ **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.

PHILOSOPHY

Philosophy 20 or 30 or 36 is a prerequisite for all General Courses in Philosophy; and 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. 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 methods of philosophy; the principles of natural philosophy, metaphysics, epistemology and moral philosophy. 3 hours a week.

30x. Basic Philosophical Literature: As in the colleges of the University. 3 hours a week.

31x. Logic: The three operations of the intellect: conception, judgment, reasoning. 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 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. 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; functions, 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

Honors Courses

The following 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).

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 specific 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-Thomistic 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 conflicting approaches to ethical problems found in the classics of ethical literature from Aristotle to the present, including Thomistic ond neo-Thomistic texts. 2 hours a week.

466x. Seminar in Post-Aristotelian and Mediaeval Philosophy.
Prerequisite: Philosophy 336. 2 hours a week.

PSYCHOLOGY

Psychology 20 is ordinarily prerequisite to all other courses in psychology.

20x. Introduction to Psychology: As in the Colleges of the University. 3 hours a week.

36x. Child Psychology: As in the Colleges of the University. 2 hours a week.

46x. Applied Psychology: The application of psychological principles to problems in education and industry. 2 hours a week.

48x. Abnormal Psychology: As in the Colleges of the University. 2 hours a week.

49x. Social Psychology: As in the Colleges of the University. 2 hours a week.

RELIGIOUS KNOWLEDGE

10x. Review Survey: The essentials of Catholic Doctrine and of the Catholic way of life; the essentials of the Bible narrative.
2 hours a week.

20x. Orientation Course for the Catholic Student: Christian Apologetics as a rational basis for belief; the nature, role and divisions of theology; theoogy and the curriculum; the Mass and the Sacraments of Penance and the Eucharist; the liturgical year; readings and research. 2 hours a week.

31x. History of Liturgy: Survey of expression of social consciousness in worship from apostolic to modern times. Lectures, readings, seminars on the Encyclicals. 1 hour a week: half course.

32x. Moral Theology. 2 hours a week.

40x. Dogmatic Theology: Study of revealed truths. 2 hours a week.

½ **41x. Scripture:** Introduction to the Old and New Testaments.
1 hour a week: half course.

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.
2 hours a week.

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.

Dean of Arts — The Reverend L. A. Wemple, B.A., Ph.L.

Registrars: The Reverend E. P. LaRocque, M.A. and
The Reverend A. F. Loebach, B.A., J.C.L.

St. Peter's College consists of 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 program in Honors Philosophy shown below, taught mainly in St. Peter's College, the General program and some Honors programs are available at the College of Christ the King. All laboratory courses in Science are taught entirely in University College.

HONORS PROGRAM IN PHILOSOPHY

Requirements for Admission: The Secondary School Graduation Diploma and Grade XIII standing with an average of 60% in English, another language, Latin or two Mathematics, and three other papers; or the Preliminary Year.

This program leads to the degree of Bachelor of Arts. It is accepted by the Department of Education of Ontario as academic qualification for the High School Assistant's Certificate, Type B.

First Year

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
Library Science and Physical Education

Second 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

Third 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

LATIN

25x. Introduction to Mediaeval Latin: Cicero, De Amicitia; St. Ambrose, Hymns and Homilies; St. Augustine, Confession; 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.

PHILOSOPHY

20x. An Introduction to Philosophical Problems: Along with an historical approach, the solutions to various philosophers are assessed at their true value. 3 hours a week.

30x. A Critical Reading of some of St. Thomas' Writings: concerning Metaphysics, Ethics and Rational Psychology. 3 hours a week.

31x. Logic: Ancient and Modern. 2 hours a week.

32x. An Introduction to Ethics. 2 hours a week.

42x. The Philosophy of Marriage. 2 hours a week.

44x. The Philosophy of Education. 2 hours a week.

45x. Medical Ethics. 2 hours a week.

250x. Psychology: Dynamology: Vegetative powers; sensation and perception; internal senses, feeling and emotional; reflex behaviour, intellectual operations; the unconscious; abnormal phenomena; the faculty theory and modern psychological research. 3 hours a week.

251x. Formal Logic: The operations of intellect. Conception; Judgment; Reasoning. 2 hours a week.

257x. The History of Pre-Christian Philosophy: A survey of philosophy in the Orient and in the Graeco-Roman world from its beginnings to the neo-Platonism of the early Christian period. 2 hours a week.

260x. Natural Philosophy: An introduction to Aristotelian philosophy by a close study of the De Principis Naturae of St. Thomas. 2 hours a week.

351x. Metaphysics: An introduction to metaphysics as the science of the first causes of all being. 3 hours a week.

352x. General Ethics: The last end of man. The norm of morality; law; reason and conscience. Habits and virtues; the role of passion. Right and duty. 3 hours a week.

357x. History of Philosophy from the time of Christ to 1600 A.D. 2 hours a week.

358x. Social Philosophy: Capitalism, individualism, collectivism; authoritarian and corporative state: civil organization and administration; social functioning of modern economic society. 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. 3 hours a week.

451x. Metaphysics: God, the First Cause: The demonstration by reason of the existence of an uncaused cause of all being; an examination of atheism, agnosticism and pantheism. 3 hours a week.

452x. Politics: A study of the political philosophy of Aristotle and St. Thomas, together with a survey of the dominant political theories of our own day. 2 hours a week.

457x. Modern Philosophy: The history of philosophy from the Renaissance to the present day. 3 hours a week.

PSYCHOLOGY

20x. The faculties and functions of man: Sensation, perception, intellection, volition. Personality and individual differences. 3 hours a week.

RELIGIOUS KNOWLEDGE

10x. The Life of Christ: as found in the Gospels. 2 hours a week.

30x. Theology: Rational defence of Christian revelation; the existence of God; the fact of revelation; the Church of Christ; the sources of revelation.

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.

SUMMARY OF REGISTRATION IN THE FACULTY OF ARTS AND SCIENCE, 1959-60

Year in Course		University College	Huron College	Ursuline College	Waterloo College	College of Christ the King	St. Peter's College	Music Teachers' College	Totals	
Full-time Students:										
Preliminary (without Senior Matriculation)			34	17	27	17	8		103	
First		753	179	39	260	85	38	7	1361	
Second		588	100	31	128	55	23	8	933	
Third		459	50	24	93	25	19	9	679	
Fourth		163	8	3	11	6			191	
Graduate		119							119	
										3386
Part-time Students:										
Undergraduate		52	16	14	92	27	8	1	210	
Graduate		20							20	230
										3616
Correspondence		561							561	
Summer School		1272							1272	
Extension		961							961	2794
TOTALS		2794	2154	387	128	611	215	96	25	6410
Duplicates										810
										5600

SUMMARY OF REGISTRATION IN THE WHOLE UNIVERSITY, 1959-60

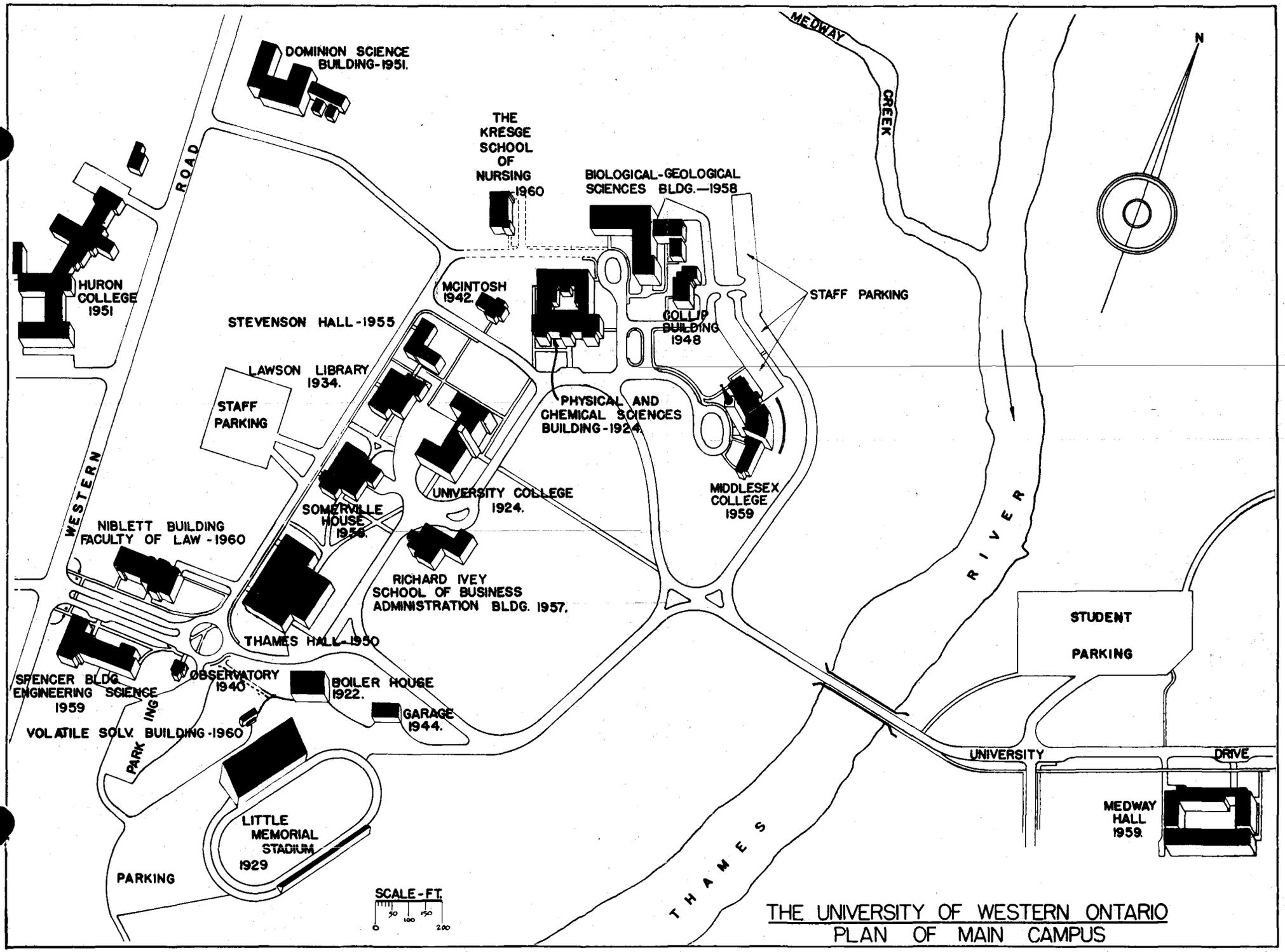
		Totals	
Faculty of Graduate Studies:			
Arts and Science	119 full-time and 20 part-time students	139	
Business Administration	166 full-time students	166	
Medicine	18 full-time students	18	
Nursing	2 full-time students	2	325
Undergraduates:			
Faculty of Arts and Science	University College and Music Teachers' College intramural students	2040	
	Summer School, Correspondence and Extension students, less duplicates	1984	
	Affiliated colleges	1437	5461
School of Business Administration	Third Year Honors full-time students	62	
	Fourth Year Honors full-time students	63	125
Faculty of Law	34 full-time and one part-time student		35
Faculty of Medicine	234 full-time students		234
School of Nursing	146 full-time students		146
UNIVERSITY TOTAL ENROLMENT	4889 in the constituent University, 1437 in the affiliated colleges		
	4433 men and 1893 women		6326

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THE UNIVERSITY OF WESTERN ONTARIO
PLAN OF MAIN CAMPUS

	Program	Course Descriptions
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German	56, 66	96
Greek	53	78, 136
Health		98
Hebrew	98	98
History	56, 62	99
Home Economics	43	136
Italian	66	118
Journalism	63	100
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Music	44	126
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