



BROCK
UNIVERSITY

CALENDAR 1964 - 1965

APPLICATION AND REGISTRATION PROCEDURE

1. A form of "Application for Admission" is available from the Administrative Office. Applications should be submitted now.
2. Certificates of former schooling at (or above) the senior level, i.e. equivalent to Grades XII and XIII in Ontario, must be sent to the University direct from the issuing office or school.
3. A student wishing to enter from high school must arrange for a Principal's Report to be sent to the University direct from the school.
4. Candidates for admission will be informed by August 22, 1964 whether they have been admitted. Successful candidates will be sent details of the registration procedure, which includes a health examination and tuberculin test.
5. Registration will start on the Glenridge Campus on Monday, September 14, 1964, at 9:00 a.m. Only candidates who have completed the full admission procedure and who arrive promptly will be registered at that time. Additional fees will be required of late registrants if they are accepted.
6. On registration, each student will be required to state the main subject for his degree. This will decide his "Department".

BROCK UNIVERSITY

FIRST ANNUAL CALENDAR

The Academic Year 1964-65

390 Glenridge Avenue

St. Catharines

Ontario

Telephone (416)—684-7201

The Academic Year 1964-65 is the first year of operation of Brock University. As this Calendar is published several weeks before the opening of the session, there will naturally be considerable changes in the curriculum. Degree programmes, typical course patterns, and courses in years II to IV indicate the intentions of the University for the guidance of readers of the Calendar, but the University reserves the right to make whatever changes circumstances may require, including the cancellation of courses.

A CALENDAR OF THE ACADEMIC YEAR

FOUNDERS' COMMITTEE

1964

Wednesday,	July 15	Last date for applications
Monday,	Sept. 14	} Registration
Tuesday,	Sept. 15	
Wednesday,	Sept. 16	Classes begin, fall term
Monday,	Oct. 12	Thanksgiving Day, University closed
Friday,	Dec. 11	Last date for handing in term assignments
Saturday,	Dec. 12	Classes finish, fall term
Monday,	Dec. 14	} Examinations
to Friday,	Dec. 18	
Friday,	Dec. 25	} Christmas, University closed
to Monday,	Dec. 28	

1965

Friday,	Jan. 1	New Year's, University closed
Monday,	Jan. 4	Classes begin, spring term
Friday,	April 2	Classes finish, spring term
Friday,	April 9	Last date for handing in term assignments
Monday,	April 12	} Examinations
to Friday,	April 23	
Friday,	April 16	Good Friday, University closed
Monday,	April 19	Easter Monday, University closed
Friday,	April 23	Last date for settlement of accounts
Monday,	May 3	University services start summer schedule

President and Vice-Chancellor

James Alexander Gibson, B.A., M.A., B.Litt., D.Phil., LL.D.

Chairman

D. G. Willmot St. Catharines

Vice-Chairmen

E. J. Barbeau St. Catharines

W. B. Gunning Chippawa

J. M. Trott Welland

Members

W. B. C. Burgoyne St. Catharines

M. A. Chown St. Catharines

E. R. Davey Niagara Falls

W. J. Freeman Port Colborne

R. L. Hearn Queenston

E. S. Howard Fort Erie

S. J. Leishman Thorold

W. S. Martin Queenston

C. W. Morehead Welland

B. P. R. Newman St. Catharines

A. C. Rae Fonthill

R. M. Schmon St. Catharines

C. B. Slemon Niagara Falls

M. L. Swart Thorold

Lynn R. Williams Welland

Secretary-Treasurer

Edward E. Mitchelson Niagara Falls

SENATE

Chairman
President James A. Gibson

Members
Professor John Hart
Professor Michael Hornyansky

PRINCIPAL OFFICERS

President
James Alexander Gibson, B.A., (British Columbia),
M.A., B.Litt., D.Phil. (Oxon.), LL.D. (Carleton)

Director of Science Studies
John Hart, B.Sc., Ph.D. (London), F. Inst. P.

Acting Registrar
Ernest E. Goldsmith, Dipl. Ing. (Berlin),
D.I.C. (London), A.M.I.E.E.

Administrative Officers
P. Ray Woodfield, B.Sc. (E.E.), (Manitoba), P.Eng.

Library Officers
Elizabeth M. Lockett, B.Sc. (Bristol), B.L.S. (McGill),
Senior Librarian, Cataloguing and Special Services
Diana Kertland, B.A. (Bishop's), B.L.S. (McGill),
Junior Librarian, Circulation

OFFICERS OF INSTRUCTION

Guy Gilles Gauthier, B.A. (Sir George Williams University),
Instructor in French

James Alexander Gibson, B.A. (British Columbia),
M.A., B.Litt., D.Phil. (Oxon), LL.D. (Carleton),
Instructor in History and Politics

John Hart, B.Sc., Ph.D. (London), F. Inst. P.,
Professor of Physics

Michael Hornyansky, B.A. (Toronto), M.A. (Oxon.),
Professor of English

Ernest E. Goldsmith, Dipl. Ing. (Berlin), D.I.C. (London),
A.M.I.E.E.,
Instructor in Mathematics, Associate Professor

W. G. Ormsby, B.A. (Toronto), M.A. (Carleton),
Associate Professor of History

FEES

The annual fee for full-time students taking the equivalent of five full courses or more is \$515.

The fee for a student taking less than five courses is \$150 per course.

In addition, fees will be payable for extra-curricular activities, parking, lockers, and breakages.

No student who has an outstanding account with the University after the settlement date will be awarded standing in any course.

SCHOLARSHIPS AND BURSARIES

Several entrance scholarships and bursaries will be awarded to entering students. Details may be obtained from the Registrar. Formal application is not necessary as all registrants will automatically be considered for these awards.

GENERAL ACADEMIC REGULATIONS

Ontario Grade XIII or equivalent required

Candidates for admission to Year I, the only Year offered in 1964-65, are required to hold Ontario Secondary School Honours Diploma (Senior Matriculation), with five full subjects (normally a minimum of eight papers) or equivalent standing.

The following examinations in appropriate subjects will be accepted for admission:—

Equivalent Entrance Standards

British Columbia and
New Brunswick

Grade XIII Senior Matriculation

Alberta, Manitoba, Nova Scotia
and Saskatchewan

Grade XII Senior Matriculation

Quebec

Senior High School Leaving
Certificate
Collège Classique Belles-Lettres et
Rhétorique
McGill Senior Matriculation

Great Britain

The General Certificate of Educa-
tion with two Advanced Level
and four Ordinary Level sub-
jects.

New York State

Four complete high school years
with standing in English in
each of four years together with
standing in appropriate subjects.

GENERAL ACADEMIC REGULATIONS (continued)

*Grade XIII
Subjects
required*

*Arts
Degree
Entrance*

Standing in the following subjects is desirable.

For an Arts Degree:—

English: Composition and Literature

A language other than English: Composition and Literature
History

Two of the following:—

Geography

An additional language: Composition and Literature

Chemistry

Physics (Students who have standing in the PSSC course
will be given special consideration)

Mathematics: Algebra, Trigonometry, and Geometry

Music (as a school subject; not by exemption)

Art

*Science
Degree
Entrance*

For a Science Degree:—

Mathematics: Algebra, Trigonometry, and Geometry

English: Composition and Literature

History

Chemistry

Physics (Students who have standing in the PSSC course will
be given special consideration)

Admissions *for the year 1964-65 only* will be considered on the basis of *any* five Senior Matriculation subjects; candidates with fewer papers will also be considered.

*Part-time
students*

Part-time students who meet the admission requirements or who show high standing in university courses may apply to the Board of Admissions for registration in a degree programme. Such admissions may not be possible in 1964-65.

*Board of
Admissions*

Admissions will be on the basis of individual assessments by the Board of Admissions. Candidates are advised to present full relevant information on the Application Form, using an extra sheet of paper if necessary. Mature candidates may apply for special permission to enter without the formal educational documents listed above.

GENERAL ACADEMIC REGULATIONS (continued)

*Five-
Course
Load*

The normal load for a full-time student will consist of the equivalent of five full courses. His Department may require a student to take additional work.

*Two-
Course
Load*

A part-time student who is registered for a degree programme may take two courses a year. Such admissions may not be possible in 1964-65.

*One-
Course
Load*

Any person may take no more than one course a year for credit without meeting the formal admission standards. Such admissions may not be possible in 1964-65. Several such courses taken in succession may lead to full registration.

No person may take more than seven courses without registering for a degree programme.

*Three or
Four
Courses*

No person may take three or four courses a year. A full-time student may not reduce his load below five courses a year; a part-time student may not increase his load above two courses a year.

*Course
Selection*

Students are advised to choose their courses carefully in collaboration with their Department. No student will be permitted to withdraw from or change a course later than one calendar month after the beginning of the session.

Attendance

A student is expected to attend all lectures, discussion groups, seminars, and laboratory periods of the courses in which he is registered, whether such periods are formally or informally scheduled. Instructors will tell their students about the relationship between attendance and course grades early in each session.

Promotion Promotion will be recommended by a student's Department to the Board of Promotions.

Failure and Repetition To qualify for promotion from one year to the next, a student must:—
 obtain a grade point of at least 50 in each course
 obtain a grade point total for the year of 300 for the best five courses
 satisfy the requirements of his Department

A full-time student who is not promoted will be required to repeat a full year of five courses. No courses from the failed year may be counted for credit.

Promotion of Part-time students A part-time student will be eligible for promotion on the basis of the five best grade points obtained in the last seven courses taken. No part-time student may take more than seven courses without promotion. All students must attend full-time in the final year leading to a degree.

Loss of Status Recovery of Status A full-time student who twice fails to obtain promotion from the same year or a part-time student who fails to obtain promotion must apply to the Board of Admission for admission on a part-time basis. A readmitted student will be limited to one course only, in each calendar year for two years, after which he may apply for readmission on a full-time basis.

Standing Standing in the year's work in each course will be determined by a student's work over the whole year, including tests, attendance and examinations. Each instructor has discretion to award grades on the basis that he considers to be most suitable and will tell his students about his practice early in each session.

Examinations Examinations will be held at the end of the year in most courses; in Year I there will also be mid-year examinations. Comprehensive and other special examinations may also be set. Failure to appear at any final examination without a medical certificate or previously approved exemption on compassionate grounds will result in the forfeiture of all courses taken that year.

Proctoring The Proctor's Regulations are published separately.

Grading Standing in each course or special or comprehensive examination will be graded by a number from 0 to 100 points. These numbers are called "Grade Points" and are not to be interpreted as a percentage of the possible marks.

Graduation A graduand must have:—
 met the year-to-year requirements
 attended full-time during the final degree year
 satisfied the Graduation Board that he is worthy, and has no outstanding commitments to the University

Distinction A student who has during his final two years a grade point average of at least 75 on all courses for credit and is recommended by his Department and the Graduation Board will be designated as graduating "with Distinction".

Honours A student who has completed four academic years may graduate with Honours upon recommendation of his Department and the Graduation Board. Each Department may have requirements in addition to those tabulated below.

Minimal requirements are as follows:—
 for First-Class Honours a grade point average of 85 in the main subject
 for Second-Class Honours, Class I, a grade point average of 75 in the main subject
 for Second-Class Honours, Class II, a grade point average of 65 in the main subject

DETAILS OF COURSES

Year I Year I consists of the following courses:—

English 100
History 100
Science 100

Two of:—

Physical Geography 100
French 100
Mathematics 100
Special Tutorials (e.g. Spanish)

Years II-IV Years II, III and IV will each consist of the equivalent of at least five courses a year chosen in consultation with the Department and approved by the Board of Curriculum.

Senior Courses During the academic years 1965-1967, senior courses (for which the prerequisites will be met by the Year I programme in 1964-65) will be offered in the following Departments:—

Biology	Geography
Chemistry	History/Politics
English	Mathematics
French	Spanish

Other courses will be added as the University grows.

Prerequisites A student wishing to take a degree in English, French, or History must take French 100 in Year I.

A student wishing to take a degree in geography must take Physical Geography 100 in Year I.

A student wishing to take a degree in science must take Mathematics 100 and 101 in Year I.

FIRST-YEAR COURSES

English 100

A study of selected works in English from the fourteenth century to the twentieth, to illustrate the principles of critical reading and literary judgment.

Annually—Lectures and Seminars, at least three hours a week.

Professor Hornyansky

French 100

Survey of modern French Literature with encouragement to students to read extensively in the works of authors and poets in which they may be especially interested. Review of grammar and appropriate style in French, together with vocabulary study and oral practice in the language laboratory.

Extensive and regular written work will be required.

Annually—Lectures and Seminars, at least three hours a week.

Mr. Gauthier

Geography 100

The evolution of the continents; rocks and minerals; mountain building and deformation; the cycle and agents of erosion; climatology; soils; oceanography; the genetic study of land forms.

Annually—Lectures, two hours a week.

Laboratory, two hours a week.

History 100

This course will provide for a review of the principal political, social, economic and cultural developments on the world scene over the past 100 years, and will give attention to Canada's relationship to these developments. It will also provide for some critical study of the evolution of political movement and political parties, economic organization, international co-operation for social welfare benefits, and the emerging of new nations. Special topics will be assigned for detailed reading, and extensive and regular written work will be required.

Annually—Lectures and Seminars, at least three hours a week.

Professor Ormsby

FIRST-YEAR COURSES (continued)

Mathematics 100

Rational, real and complex number systems; sets, relations and functions; permutations, combinations and probabilities; equations and inequalities; polynomial, rational, exponential, and logarithmic functions; trigonometric and transcendental functions; analytic geometry; determinants, polar coordinates, complex numbers, vectors, tensors and matrices.

Annually—

Mathematics 101

Differential and integral calculus as far as linear second-order differential equations.

Annually—

Mathematics 100 and 101 will be offered as integrated courses.

Lectures, three hours a week.

Problem seminar, three hours a week.

Science 100

This course is designed to acquaint all first-year students with what science really is. Beginning with a general discussion of the aims, objectives, and methods of the physical sciences, the course will consist of an examination in detail of the evolution and development of one major train of scientific research and its effect upon subsequent thought. In doing so it will be necessary not only to trace the experimental progress, using the original scientific papers, but to show how it is dependent upon the development of ancillary technology. In the year 1964-65 the main topic will be the great discoveries in electricity and magnetism in the 19th century. Students will be required to repeat classical experiments of their own choice in the laboratories, using the kind of equipment available to the original experimenters.

Annually—Lectures, one hour a week.

Seminar, one hour a week.

Laboratory, three hours a week.

Professor Hart

DETAILS OF SUBJECTS

BIOLOGY

B.A. (Honours) Course

Typical Pattern (Minimal Departmental Requirements)

Year I	English 100 History 100 Science 100	Mathematics 100 Mathematics 101
Year II	Mathematics 200 Physics 200 Chemistry 200	Chemistry 201 Chemistry 202
Year III	Biology 300 Biology 301 Biology 302	Biology 303 Biology 304
Year IV	Biology 400 Biology 401 Biology 402	Biology 403 Biology 404

B.A. (Pass) Course

Typical Pattern

Years I to III of the Honours Course

Biology 300.	Animal Morphology
Biology 301.	Plant Morphology
Biology 302.	Genetics
Biology 303.	Physiology I
Biology 304.	Microbiology
Biology 400.	Invertebrate Zoology
Biology 401.	Chordate Zoology
Biology 402.	Physiology II
Biology 403.	Entomology
Biology 404.	Project and Comprehensive Examination

DETAILS OF SUBJECTS (continued)

CHEMISTRY

B.A. (Honours) Course

Typical Pattern (Minimal Departmental Requirements)

Year I	English 100 History 100 Science 100	Mathematics 100 Mathematics 101
Year II	Mathematics 200 Physics 200 Chemistry 200	Chemistry 201 Chemistry 202
Year III	Physics 201 Chemistry 300 Chemistry 301	Chemistry 302 Chemistry 303
Year IV	Chemistry 401 Chemistry 402 Chemistry 403	Chemistry 404 Chemistry 405

B.A. (Pass) Course

Typical Pattern

Years I to III of the Honours Course

Chemistry 200.	Inorganic Chemistry I
Chemistry 201.	Organic Chemistry I
Chemistry 202.	Biochemistry I
Chemistry 300.	Physical Chemistry
Chemistry 301.	Inorganic Chemistry II
Chemistry 302.	Organic Chemistry II
Chemistry 303.	Chemical Statistics and Kinetics
Chemistry 401.	Inorganic Chemistry III
Chemistry 402.	Organic Chemistry III
Chemistry 403.	Biochemistry II
Chemistry 404.	Radio Chemistry
Chemistry 405.	Project and Comprehensive Examination

DETAILS OF SUBJECTS (continued)

ENGLISH

B.A. (Honours) Course

Typical Pattern (Minimal Departmental Requirements)

Year I	English 100 French 100 History 100	Science 100 One other 100-level course
Years II and III	Six 200- or 300-level courses in English Four other courses chosen in consultation with and approved by the Department.	
Year IV	Five 400-level courses in English	

B.A. (Pass) Course

Years I to III of the Honours Course

B.A. (Combined Honours) Courses

Course patterns may be arranged in consultation with the Departments concerned.

FRENCH

B.A. (Honours) Course

Year I	English 100 French 100 History 100	Science 100 One other 100-level course
Years II and III	Six 200- or 300-level courses in French Four other courses chosen in consultation with and approved by the Department.	
Year IV	Five 400-level courses in French	

B.A. (Pass) Course

Typical Pattern

Years I to III of the Honours Course

B.A. (Combined Honours) Courses

Course patterns may be arranged in consultation with the Departments concerned.

DETAILS OF SUBJECTS (continued)

GEOGRAPHY

B.A. (Pass) Course

Typical Pattern

Year I	English 100 Physical Geography 100 History 100	Science 100 One other 100-level course
Years II and III	Six 200- or 300-level courses in Geography Four other courses chosen in consultation with and approved by the Department.	

B.A. (Combined Honours) Courses

Course patterns may be arranged in consultation with the Departments concerned.

HISTORY

B.A. (Honours) Course

Typical Pattern (Minimal Departmental Requirements)

Year I	English 100 History 100 Science 100	French 100 or Physical Geography 100 One other 100-level course
Years II and III	Six 200- or 300-level courses in History Four other courses chosen in consultation with and approved by the Department.	
Year IV	Five 400-level courses in History	

B.A. (Pass) Course

Typical Pattern

Years I to III of the Honours Course

B.A. (Combined Honours) Courses

Course patterns may be arranged in consultation with the Departments concerned.

DETAILS OF SUBJECTS (continued)

MATHEMATICS

B.A. (Honours) Course

Typical Pattern (Minimal Departmental Requirements)

Year I	English 100 History 100 Science 100	Mathematics 100 Mathematics 101
Year II	Mathematics 200 Mathematics 201 Mathematics 202	Physics 200 Chemistry 200
Year III	Mathematics 301 Mathematics 302 Mathematics 303	Mathematics 304 Physics 201
Year IV	Mathematics 401 Mathematics 402 Mathematics 403	Mathematics 404 Physics 301

B.A. (Pass) Course

Typical Pattern

Years I to III of the Honours Course.

Mathematics 200.	Calculus and Differential Equations
Mathematics 201.	Linear Algebra
Mathematics 202.	Numerical Methods
Mathematics 301.	Advanced Calculus
Mathematics 302.	Abstract Algebra
Mathematics 303.	Applied Mathematics
Mathematics 304.	Statistics
Mathematics 401.	Functions of a Complex Variable
Mathematics 402.	Functions of a Real Variable
Mathematics 403.	Abstract Algebra
Mathematics 404.	Advanced Problems and

B.A. (Combined Honours) Course

Course patterns may be arranged in consultation with the Departments concerned.

DETAILS OF SUBJECTS (continued)

PHYSICS

- Physics 200. Electromagnetism (including Optics and Electron Physics)
Physics 201. Properties of Matter (including Atomic and Nuclear Physics)
Physics 301. Mathematical Physics I
Physics 302. Laboratory Techniques
Physics 303. Atomic and Nuclear Physics
Physics 401. Mathematical Physics II
Physics 402. Thermodynamics; Quantum and Statistical Mechanics
Physics 403. Electromagnetic Radiation (including the interaction of charged particles and radiation with matter)
Physics 404. Project and Comprehensive Examination

SPANISH

B.A. (Pass) Course

- Year I English 100 Special tutorial in Spanish
 History 100 One other 100-level course
 Science 100
- Years II and III Six 200- or 300-level courses in Spanish
 Four other courses chosen in consultation with and approved by the Department.

B.A. (Combined Honours) Courses

Course patterns may be arranged in consultation with the Departments concerned.