

# SAINT MARY'S UNIVERSITY

Halifax - Nova Scotia - Canada



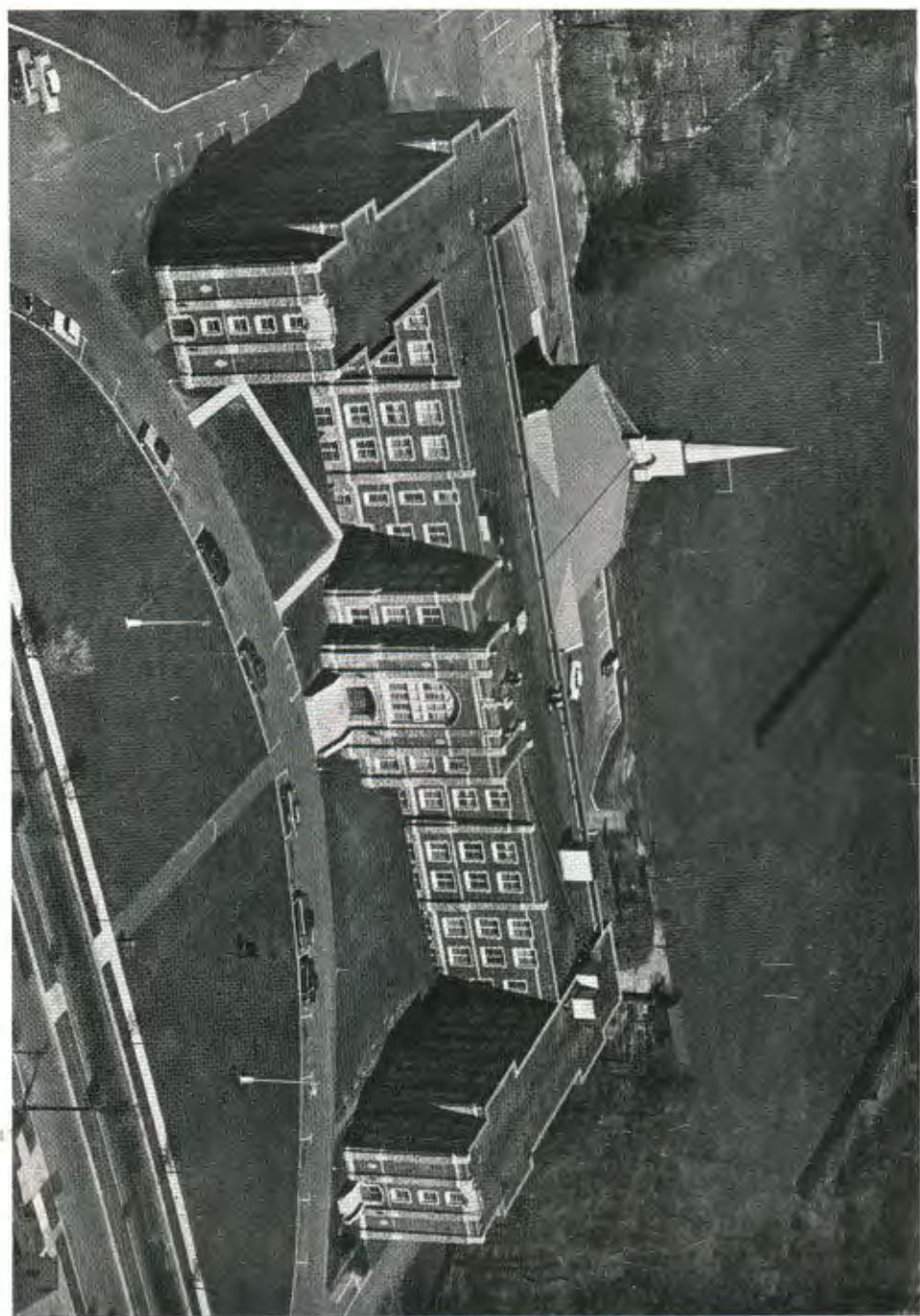
## CALENDAR

1968 - 69

**General Calendar of  
SAINT MARY'S UNIVERSITY  
for the academic year 1968-69**

*Under the Direction of  
the Jesuit Fathers*

**May 1968  
Halifax - Nova Scotia - Canada**



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# ACADEMIC CALENDAR YEAR

1968-69

## JULY

11 Thursday.....Last day for receiving applications for supplemental examinations.

## AUGUST

16 Friday.....Last day for receiving applications for entrance examinations.

## SEPTEMBER

4 Wednesday.....Entrance and supplemental examinations begin at 9:00 a.m.

10-13 Tues.-Fri.....Registration for Evening Division students  
7:00 p.m. - 8:30 p.m.

11 Wednesday.....Registration for all new students.  
9:00 a.m. - 12:00; 2:00 p.m. - 5:00 p.m.

12 Thursday.....Registration for all second year students.  
9:00 a.m. - 12:00; 2:00 p.m. - 5:00 p.m.

13 Friday.....Registration for all third year students.  
9:00 a.m. - 12:00 noon

Registration for fourth year students.  
2:00 p.m. - 5:00 p.m.

14 Saturday.....Registration for returning resident students.  
9:00 a.m. - 12:00 noon.

16 Monday.....Instruction begins for all classes.  
Late registration fee of \$10.00, with an additional fee of \$3.00 for each day after this date.

18 Wednesday.....College Mission begins at 9:00 a.m. Mass of the Holy Spirit in the University Chapel at 3:40 p.m.

19 Thursday.....General meeting of the Faculty.

25 Wednesday.....Final date for late registration. Inauguration of extracurricular activities.

27 Friday.....Last day for change of registration. General Assembly.

## OCTOBER

- 4 Friday.....Fall Convocation.  
14 Monday.....Thanksgiving Day. No classes.

## NOVEMBER

- 4-7 Mon. - Thurs....Test week.  
11 Monday.....Remembrance Day. No classes.  
18 Monday.....Solemn Requiem Mass for Most Reverend John  
T. McNally and deceased professors and  
alumni in the University Chapel at 12:00  
noon.

## DECEMBER

- 4 Wednesday.....Lectures cease after last class.  
8 Sunday.....Feast of the Immaculate Conception. Patronal  
Feast of the University. Solemn High  
Mass in the University Chapel at 3:00 p. m.  
7-19 Sat.-.Thurs.....First term examinations. Christmas recess  
begins after the last examination.

## JANUARY

- 6 Monday .....Classes resume at 8:30 a.m.  
6-13 Mon.-Mon .....Re-Registration of all students for second sem-  
ester.  
17 Thursday .....General meeting of the Faculty.

## FEBRUARY

- 7-9 Fri.-Sun.....Senior Weekend.  
7 Friday.....Student Council elections, non-executive posts.  
14 Friday.....Student Council elections, executive posts.  
17-21 Mon.-Fri.....Test week.

## MARCH

- 1 Sat.....Open House  
1-30 Pre-registration of all students for next academic year.  
7 Friday .....Feast of St. Thomas Aquinas, Patron of Schools.  
7 Friday .....Public Speaking Contest in the Debating Theatre  
at 8:15 p.m.  
15 Saturday.....Extracurricular activities cease.

## APRIL

- 2 Wednesday.....Easter recess begins after the last class.  
14 Monday.....Final examinations begin at 9:00 a.m.  
30 Wednesday.....Survey Camp begins.

## MAY

- 11 Sunday.....Baccalaureate Ceremony in the University  
Chapel at 3:30 p.m.  
12 Monday.....Spring Convocation in the University Auditor-  
ium.  
13 Tuesday.....Registration for first Summer Session.  
14 Wednesday .....First Summer Session begins.

## JUNE

- 20 Friday.....First Summer Session examinations.

## JULY

- 1 Tuesday .....Registration for second Summer Session.  
2 Wednesday .....Second Summer Session begins.

## AUGUST

- 15 Friday.....Second Summer Session examinations begin at  
9:00 a.m.

# SAINT MARY'S UNIVERSITY

## CHANCELLOR

MOST REVEREND JAMES M HAYES, J.C.D., D.D.  
Archbishop, Archdiocese of Halifax

## BOARD OF GOVERNORS

### Members Ex Officio

The Chancellor, *Chairman of the Board*

Right Reverend William H. Smith, D.P., V.G., P.P., Vice-Chancellor

Dr. Henry J. Labelle, S.J., President of the University

Dr. M. W. Burke-Gaffney, S.J., *Secretary*

### Members Appointed

*Retiring*

Harold G. Beazley, B.Comm., R.I.A.....	1968
Keith C. Bishop, B.E.....	1970
William A. Bridgeo, B.Sc., Ph.D.....	1970
Richard A. Donahoe, Q.C., B.A., LL.B.....	1970
Luke B. Feetham, B.Sc., *.....	1970
Ernest I. Glenister, B.A., M.D., C.M.....	1968
Edward T. Granville, M.D., C.M., *.....	1969
Right Reverend James B. Granville, D.P., P.P.....	1970
Austin E. Hayes, B.Comm.....	1969
Malachi C. Jones, LL.B., *.....	1969
Maurice E. Keating, B.A., M.A., LL.B., LL.D.....	1970
John E. Lynch, B.A., M.A.....	1970
R. Lorne MacDougall, Q.C., LL.B., K.S.G.....	1968
Gordon D. Mader, B.Sc., B.E., *.....	1970
A. C. Milner, Q.C., LL.B.....	1970
Alban M. Murphy.....	1970
Right Reverend Gerald B. Murphy, D.P., P.P.....	1969
Very Reverend A. M. O'Driscoll, B.A.....	1969
Judge Peter J. O'Hearn, Q.C., B.A., LL.B., *.....	1968
Colonel Sidney C. Oland, V.D., LL.D.....	1968
Mr. Justice V. J. Pottier, Q.C., LL.B., D.C.L., LL.D.....	1970
James L. Ryan, E.D., B.Sc., B.E.....	1969
G. Graham Simms, B.A., M.D., C.M., D.P.H., *.....	1968
Norman Stanbury.....	1968
Allen Stockall.....	1970
John A. Walker, Q.C., M.A., LL.B., K.S.G.....	1969

\**Alumni Representative*

## ACADEMIC SENATE

1967-1968

### Members Ex Officio

H. J. Labelle, S.J., B.A., M.A., Ph.D., *Chairman*

K. J. Cleary, B.A., B.Ed., M.A., *Secretary*

H. G. Beazley, B.Comm., R.I.A.

W. A. Bridgeo, B.Sc., Ph.D.

G. B. Hallet, B.A., M.A.

J. J. Hennessey, S.J., B.A., M.A.

M. I. Kelley, A.B., M.S., (in L.S.)

J. L. Ryan, E.D., B.Sc., B.E.

D. J. Weeren, B.A., M.S., Ph.D.

### Members Elected

S. Bobr-Tylingo, Les.L., Des. L.

M. W. Burke-Gaffney, S.J., B.A., B.E., Ph.D., D.Eng.

O. P. Cormier, B.Comm., M.B.A., C.A.

R. Crowther, B.A., B.Ed., M.A.

W. J. Dalton, B.A., M.A., Ph.D.

E. Flynn, B.A., M.A.

J. Loewenstein, Ph.D., F.R.A.I.

A. T. Sabean, B.A., B.Sc., M.Sc.

W. A. Stewart, S.J., B.A., S.T.L., Ph.L.



# 1968

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

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

# 1969

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

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

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

# OFFICERS OF ADMINISTRATION

1967-1968

Reverend Henry J. Labelle, S.J., B.A., M.A., Ph.D.....	<i>President</i>
Reverend C. S. Bathurst, S.J.....	<i>Treasurer</i>
R. G. Deegan, B.A., B.Comm., C.A.....	<i>Business Manager</i>
K. J. Cleary, B.A., B.Ed., M.A.....	<i>Registrar</i>
G. B. Hallett, B.A., M.A.....	<i>Dean of Arts</i>
W. A. Bridgeo, B.Sc., Ph.D.....	<i>Dean of Science</i>
H. G. Beazley, B.Comm., R.I.A.....	<i>Dean, Commerce</i>
D. J. Weeren, B.A., M.S., Ph.D.....	<i>Acting Dean, Education</i>
J. L. Ryan, B.Sc., B.E.....	<i>Dean, Engineering</i>
Reverend J. J. Hennessey, S.J.....	<i>Dean of Men</i>
L. W. Smith, B.A., M.A.....	<i>Director of Student Affairs</i>
Reverend R. L. MacDougall, S.J.....	<i>Assistant to the President</i>
K. P. Bendelier, B.Comm., M.S.W. Director, Admissions and Scholarships	
Reverend M. J. Belair, S.J.....	<i>Director of Adult Studies</i>
C. McGuire, B.A.....	<i>Assistant-Director, Adult Studies</i>
E. Morris, B.A.....	<i>Development Officer, Assistant to President</i>
J. B. Ternan, B.E., P.Eng.....	<i>Director, Evening and Summer School</i>
Reverend M. J. O'Donnell, S.J.....	<i>Alumni Director</i>
G. H. Somers, Dip.Eng.....	<i>Superintendent of Buildings and Grounds</i>
D. J. Markley.....	<i>Bursar</i>

## COMMITTEE ON ADMISSIONS

K. Bendelier, *Chairman*; K. J. Cleary; Reverend W. A. Stewart, S.J., Dr. D. A. Murty; and the appropriate Faculty Dean.

## LIBRARY

Reverend Gibson Hallam, S.J., M.Sc., in L.S., *University Librarian*; (On Leave of Absence); Miss M. I. Kelley, *Assistant Librarian*; (Mrs. C.) Joan Browne, *Administrative Assistant*; Ellen Fagan, B.L.S., *Reference Librarian*; Lloyd Melanson, M.L.S., *Catalogue Librarian*.

## STUDENT AFFAIRS

Mr. L. Smith, B.A., M.A., *Student Affairs*; Reverend J. Houston, S. J., *Student Christian Movement*; Paul A. Poirier, *Canada Manpower Centre Student Placement Officer*; William Gerrior, B.A., *Director of Residence*; J. T. Walsh, *Bookstore Manager*.

## ATHLETICS

Reverend J. J. Hennessey, S. J., *Faculty Advisor*; Robert Hayes, *Director of Athletics, Football Coach*; Leslie Goodwin, B. Ed., M. Ed., *Assistant Director of Athletics, Basketball Coach*; Robert Boucher, *Arena Manager and Hockey Coach*.

## UNIVERSITY RESERVE TRAINING PROGRAMMES

Captain G. Meagher, R.H.R. (Resident Staff Officer)

# OFFICERS OF INSTRUCTION

- Robert N. Ansell**.....*Assistant Professor, Philosophy*  
 B.A., University of Cambridge
- Janet Baker**.....*Lecturer, English*  
 B.A. (Honors), M. A., Queens University, Kingston
- Harold G. Beazley**.....*Dean, Commerce; Associate Professor, Accounting*  
 B.Comm., Saint Mary's University; R.I.A. (Society of Industrial and  
 Cost Accountants of Nova Scotia)
- Richard Bels**.....*Professor, Philosophy*  
 B.A., University of Western Ontario; M.A., Ph.D., University of Notre  
 Dame
- Reverend M. J. Belair, S. J.**.....*Director, Adult Studies*  
 B.A., University of Montreal; M.A., University of Chicago
- K. P. Bendeller**.....*Director of Admissions & Scholarships*  
 B.Comm., M.S.W., Saint Mary's University
- Halina Bobr-Tylingo**.....*Assistant Professor, Biology*  
 M.Sc., Agriculture, S.G.G.W., Warsaw; Diplôme d'ingénieur diplômé  
 E.S.A.A.T. Paris; Diplôme, Centre de Pathologie Végétale de l'Office  
 de la Recherche Scientifique, Paris
- Stanislaw Bobr-Tylingo**.....*Associate Professor, History*  
 LesL., DesL., University of Paris; Dr. Habil. in History
- Robert J. Bollini**.....*Assistant Professor, History*  
 B.A., Cornell University; M.S., Georgetown University
- Harold G. Bowes, C.D.**.....*Instructor, Graphics*  
 B.Eng. (Mechanical), Nova Scotia Technical College; P.Eng.
- Robert G. Boyd**.....*Associate Professor, Political Science*  
 B.A. (Hons.), Melbourne
- William Bridgeo**.....*Dean, Science; Associate Professor, Chemistry*  
 B.Sc., St. Francis Xavier University; Ph.D., University of Ottawa
- Reverend M. W. Burke-Gaffney, S.J.**.....*Professor Emeritus, Astronomy*  
 B.A., University of Montreal; B.E., National University of Ireland;  
 Ph.D., Georgetown University; D.Eng., Nova Scotia Technical College
- Michael Campbell**.....*Instructor, Education*  
 B.Sc., B.Ed., Saint Francis Xavier University; M.A., Saint Mary's  
 University
- Elizabeth A. Chard**.....*Assistant Professor, History*  
 B.A., B.Ed., M.A., Dalhousie University
- Barbara H. Chasin**.....*Assistant Professor, Sociology*  
 B.A., City College of New York
- John Y. H. Chau**.....*Assistant Professor, Chemistry*  
 B.Sc., M.Sc., University of Sydney; Ph.D., University of Wales
- Guy Chauvin**.....*Lecturer, Political Science*  
 B.Comm., (Honours), McGill University; M.A., Dalhousie University
- Theodore B. Ciuctura**.....*Associate Professor, Political Science*  
 Certif. in Law, University of Lviv (Lwow); Dr. Jur., Habil. University  
 of Munich and Ukrainian Free University; M.A.
- Donald Clairmont (On Leave of Absence)**.....*Lecturer, Sociology*  
 B.A., M.A., McMaster University

- Hugh D. Cochrane**..... *Assistant Professor, Mathematics*  
B.A., University of Toronto; B.A., M.A., Cambridge University
- Arthur Conrad**..... *Instructor, Education*  
B.A., B.Ed., M.A., Saint Mary's University
- O. Paul Cormier**..... *Associate Professor,*  
*Accounting and Business Administration*  
B.Comm., Saint Mary's University; M.B.A., Harvard Graduate School  
of Business Administration; C.A.
- Roger Crowther**..... *Assistant Professor, English*  
B.A., Cantab; B.Ed., London; M.A., Cantab
- Reverend Ambrosius Czako**..... *Professor Emeritus, History of Art*  
Ph.D., University of Budapest
- Juan Carlos D'Alessio**..... *Assistant Professor, Philosophy*  
Lic. Fil., Buenos Aires University; D.Phil., Oxford University
- William J. Dalton**..... *Professor, Political Science*  
B.A., Saint Mary's University; M.A., University of Toronto; Ph.D.,  
University of Ottawa
- Darrell C. Davis**..... *Instructor, Education*  
B.A., B.Ed., Saint Mary's University
- Reverend F. J. Devine, S.J.**..... *Associate Professor, French*  
M.A., McGill University; Ph.D., Université Laval; Diplome de l'Ecole  
Supérieure des Professeurs de Français à l'Etranger (Sorbonne)
- Lawrence Dewan**..... *Assistant Professor, Philosophy*  
B.A., M.A., Ph.D., University of Toronto
- Charles A. Dixon**..... *Lecturer, Accounting*  
B.A. Comm., Saint Mary's University; C.A.
- Frederick Doekrill**..... *Assistant Professor, Education*  
B.A., B.Ed., M.A., Saint Mary's University
- Diane Dwyer**..... (On Leave of Absence)..... *Assistant Professor, Theology*  
B.A., Newton College of the Sacred Heart; M.A., The Catholic Univer-  
sity of America
- Mr. P. Even**..... *Lecturer, Mathematics*  
B.Sc., M.S. (Cape Town)
- Lillian Falk**..... *Lecturer, English*  
B.A., M.A., Teachers Diploma, Hebrew University, Jerusalem, Ph.D.,  
Harvard University, Cambridge
- Eugene B. Finch**..... *Assistant Professor, Economics*  
M.A., University of Allahabad, India; Ph.D., University of Syracuse,  
New York
- Brian Flemming**..... *Instructor, Commercial Law*  
B.Sc., Saint Mary's University; LL.B., Dalhousie University; LL.M.,  
University of London; Diploma of International Law, Hague Academy
- Sarah Goddard**..... *Instructor, Sociology*  
B.A., University of Puerto Rico; M.A., University of Chicago
- Gerald Gordon**..... *Assistant Professor, Psychology*  
B.Sc. (Special); Ph.D., University of London
- David A. Grantham**..... *Lecturer, Engineering*  
B.Eng. (Mechanical), Nova Scotia Technical College; P.Eng.
- Rolf Gruner**..... *Associate Professor, Philosophy*  
Ph.D., Berlin; Ph.D., Durham

- George Hallett**.....*Dean, Arts, Associate Professor, English*  
B.A., M.A., Dalhousie University
- Betty Lenore Hanrahan**.....*Instructor, Education*  
B.A., B.Ed., M.A., Saint Mary's University
- Mildred B. Harrington**.....*Instructor, French*  
B.A., B.Ed., Saint Mary's University
- Paul Harris**.....*Assistant Professor, Physics*  
B.S., City College of New York; M.S., Rutgers University; Ph.D.,  
University of Maryland
- Ernest R. Hayes**.....*Associate Professor, Chemistry*  
B.Sc., Acadia University; M.Sc., Dalhousie University; Ph.D., McMaster  
University
- Joan B. Hayes**.....*Instructor, Chemistry*  
B.Sc., M.A., University of Toronto
- David A. Hope**.....*Lecturer, Accounting and Business Administration*  
B.Comm., Saint Mary's University; C.A.
- David Hope-Simpson**.....*Associate Professor, Geology*  
B.Sc., M.Sc., Ph.D., McGill University
- Jennie M. Hornosty**.....*Associate Professor, Sociology*  
B.A., University of California, Berkeley
- Mahbub-ul Hosain**.....*Instructor, Engineering*  
M.A.
- Frank Jackson**.....*Associate Professor, Mathematics*  
B.Sc., M.Sc., University of London
- Reverend Stanley Kamath S. J.**.....*Lecturer, English*  
B.A., M.A., University of Madras; Ph.L., Shembaganur; S.T.L., Pon-  
tiffical Athenaeum, Poona
- Maurice E. Keating**.....*Instructor, Education*  
B.A., M.A., LL.B., Dalhousie University; LL.D., Saint Mary's Univer-  
sity
- Reverend Patrick Kerans, S.J.**.....*Assistant Professor, Theology*  
B.A., University of Montreal; M. A. (Econ.), St. Louis University; S.T.-  
L., University of Innsbruck; D. es Sc. Rel., University of Strasbourg
- Mo-Tak Kiang**.....*Lecturer, Mathematics*  
B.Sc. (Hons.), M.A., Dalhousie University
- Wai Ping Lam**.....*Assistant Professor*  
B.Comm., Saint Mary's University; C.A.
- John D. Lammin**.....*Lecturer, Mathematics*  
B.Sc., (Hons.), University College, London; Diploma in Education,  
University College of North Wales
- Guy LePierres**.....*Assistant Professor, French*  
B.A., LesL., Universite de Rennes; C.A.P.E.S., Diplome d'Etudes  
Superieures, Universite de Montpellier
- H. E. Lin**.....*Assistant Professor, Physics*  
B.Sci., National Taiwan University, M.Sc., Ph.D., State University of  
Iowa
- John Loewenstein**.....*Associate Professor, Anthropology*  
Ph.D., University of Vienna; F.R.A.I.
- Allan MacBeth**.....*Associate Professor, French*  
B.A. (Hons), Mount Allison University; M.A., University of New Brun-  
swick, Middlebury College

- Edward J. McBride**..... *Assistant Professor, Political Science*  
B.S. (Social Science), LeMoyné College; M.A. (Politics), The Catholic University
- John R. MacCormack**..... *Associate Professor, History*  
B.A., M.A., Dalhousie University; Ph.D., University of Toronto
- Reverend D. J. MacDonald**..... *Instructor, Theology*  
B.A., St. Francis Xavier University
- Roger Alfred MacDonald**..... *Lecturer, English*  
B.A., St. Dunstons University; M.A., Dalhousie University
- Reverend T. Macho, S.J.**..... *Associate Professor, Philosophy*  
B.A., Valladolid; Ph.D., Fordham University
- Rowland C. Marshall, C.D.**..... *Associate Professor, Philosophy*  
B.A., M.A., University of Western Ontario
- Urban S. Merdsoy**..... *Assistant Professor, Physics*  
VORPRUFUNG, Technische Universität, Berlin, Germany; B.Sc., M.Sc., University of Rochester
- Izhar Mirza**..... *Assistant Professor, Economics*  
B.A., Forman Christian College, Pakistan; M.A., University of Punjab, Pakistan
- Arthur P. Monahan**..... *Associate Professor, Philosophy*  
M.A., Ph.D., University of Toronto; M.S.L., Pontifical Institute of Mediaeval Studies, Toronto
- Reverend James W. Murphy, S.J.**..... *Associate Professor, Chemistry*  
B.A., Saint Joseph's University; M.A., Ph.D., University of Toronto
- Dangety S. Murty**..... *Associate Professor, Physics*  
B.Sc., M.Sc., Andhra University; M.A., University of Madras; D.Sc., Andhra University; C. Eng.; M.I.E.E., A.M. Brit. I.R.E.
- Roman Nahrebecky**..... *Assistant Professor, German*  
M.A., McGill University; LL.D., University of Prague
- Alexander Nakol**..... *Assistant Professor, Theology*  
B.A., Ph.D., University of Vienna
- Reverend M. J. O'Donnell, S.J.**..... *Professor, Latin*  
B.A., University of Montreal; S.T.L., Immaculate Conception
- J. Patrick O'Neil**..... *Lecturer, Accounting*  
B.Comm., Saint Mary's University; C.A.
- Shripad Pendse**..... *Lecturer, Business Administration*  
(On leave of absence)..... B.A., Knox College; M.S., Massachusetts Institute of Technology
- Francis B. Phillips**..... *Assistant Professor, Education*  
B.A., University of New Brunswick; Dip. Eng. Educ., Ac. Dip Educ., M.A., University of London
- David C. Pigot**..... *Assistant Professor, English*  
B.A., M.A., Dalhousie University; P.G.C.E (London)
- Reverend John E. Power, S.J.**..... *Assistant Professor, English*  
B.A., Loyola College; M.A., University of Toronto
- Zahoorul Haq Qureshi**..... *Assistant Professor, Business Administration*  
M.A., University of Bombay; M.B.A., U.C.L.A.
- Reverend Albert Roach**..... *Instructor, Education*  
B.A., Saint Mary's University; Bachelor of Theology, Holy Heart Seminary; Diploma, Lumen Vitae International Institute

- Vintha R. Reddy**..... *Lecturer, Engineering*  
B.Sc., University of Madras; B.E., (Mechanical), University of Mysore
- Alfonso Rojo**..... *Associate Professor, Biology*  
B.Sc., Valladolid; M.Sc., Ph.D., University of Madrid
- Enriqueta Rojo**..... *Assistant Professor, Biology*  
B.Sc., M.Sc., University of Madrid
- S. V. Rountree**..... *Instructor, French*  
B.A., M.A., Dalhousie University; B.L.S., McGill University
- Reverend Daniel Rourke, S.J.**..... *Associate Professor, Sociology*  
B.A., St. Francis Xavier University; M.A., Gonzaga University
- J. L. Ryan, E.D.**..... *Dean, Professor Engineering*  
B.Sc., Saint Mary's University; B.E. (Mechanical), Nova Scotia Technical College
- Allan T. Sabean**..... *Professor, Chemistry*  
B.A., B.Sc., Saint Mary's University; M.Sc., McGill University
- Adolfo Sarabia**..... *Assistant Professor, Spanish*  
B.A., Valladolid; M.A., University of Madrid
- Herbert P. Schoch**..... *Lecturer, Business Administration/Accounting*  
B.Comm., University of Melbourne; M.B.A., MacMaster University; A.A.S.A. (Sen.), Australia
- Lawrence Scobbie**..... *Associate Professor, Education*  
M.A., Dip. Ed., M.Ed., University of Edinburg
- Andrew T. Seaman**..... *Lecturer, English*  
B.A., Mount Allison University; M.A., Dalhousie University
- Leslie Seplaki (On Leave of Absence)**..... *Assistant Professor, Economics*  
B.Comm., Sir George Williams University; M.A., McGill University
- Kirtan Singh**..... *Assistant Professor, Mathematics*  
B.A., M.A., Panjab University, Lahore, Pakistan; M.Sc., Indian Institute of Science, India; Ph.D., Pennsylvania State University
- Yash Pal Singh**..... *Assistant Professor, Mathematics*  
M.Sc., University of Rajasthan; Ph.D., Case Institute of Technology & Science
- William P. Skerrett**..... *Instructor, Sociology*  
B.S.A., University of British Columbia; M.S.A., University of Toronto
- Reverend W. A. Stewart, S.J.**..... *Associate Professor, Philosophy*  
B.A., University of Montreal; S.T.L., Ph.L., Immaculate Conception
- Michael G. Strobel**..... *Assistant Professor, Psychology*  
Member, Faculty of Graduate Studies, Dalhousie University; Diploma (Staatsexamen), Munich M.A., Ph.D., University of Toronto
- Keith A. Sutherland**..... *Assistant Professor, History*  
B.S. Ed., M.A., University of Maine; Ph.D., Cornell University
- Stanislas Swianiewicz**..... *Professor, Economics*  
Dr. Jur., University of Vilna; LL.B., University of Vilna, Dr. Habil. in Political Economy *ibid.*
- Vincent Tobin**..... *Lecturer, Classics*  
B.A., M.A., Dalhousie University

<b>Frank Tomscha</b> .....	<i>Assistant Professor, Physics</i>
B.A., B.Sc., M.Sc., Diplom Physiker, Johnn-Wolfgang-Goethe Univer- sitat	
<b>Joseph Vorstermans</b> .....	<i>Associate Professor, Economics</i>
Ec. Drs., Econ. Dr., Catholic University, Tilburg	
<b>Graham Walker</b> .....	<i>Instructor, Commercial Law</i>
B.A., St. Mary's University; LL.B., Dalhousie University; M.C.L., S. Methodist University	
<b>Jagannath K. Wani</b> .....	<i>Assistant Professor, Mathematics</i>
B.Sc., (Gen.), B.Sc., (Hons.), M.Sc., University of Poona; Ph.D., McGill University	
<b>Donald Warner</b> (On Leave of Absence).....	<i>Assistant Professor, Engineering</i>
B.E., (Mechanical), Nova Scotia Technical College; M.S.M.E., Purdue University	
<b>Donald J. Weeren</b> .....	<i>Associate Professor, Education</i>
B.A., University of Montreal; M.S. (Education), Fordham University; Ph.D., Columbia University	
<b>Michael Wiles</b> .....	<i>Assistant Professor, Biology</i>
B.Sc., (Hons.), University of Leeds (Zoology); Ph.D., University of Leeds	
<b>Kenneth Wilson</b> .....	<i>Instructor, Accounting</i>
C.A.	
<b>Rudolf A. Zimmer</b> .....	<i>Lecturer, Mathematics</i>
B.A., (Hons.), M.A., University of Western Ontario	

## AFFILIATE INSTITUTIONS

### IGNATIUS COLLEGE

GUELPH, ONTARIO

#### OFFICERS OF ADMINISTRATION

Very Reverend Robert C. Chase, S.J.....	<i>President</i>
Reverend Frederick C. Elliott, S.J.....	<i>Vice-President</i>
Reverend Michael G. Shields, S.J.....	<i>Dean of Studies, Acting Librarian</i>
Reverend William D. Connor, S.J.....	<i>Bursar, Registrar</i>
Reverend John J. English, S.J.....	<i>Student Counsellor</i>

#### OFFICERS OF INSTRUCTION

<b>Reverend Henry B. Bedard, S.J</b> .....	<i>French, Greek, Latin</i>
B.A., M.A.	
<b>Reverend John J. English, S.J</b> .....	<i>Theology</i>
B.A., B.Sc., S.T.L.	
<b>Reverend Joseph B. Gavin, S.J</b> .....	<i>History</i>
B.A., M.A.	
<b>Reverend Walter Kelly, S.J</b> .....	<i>English</i>
B.A., M.A.	
<b>Reverend Jean-Marc Laporte, S.J</b> .....	<i>Philosophy</i>
B.A., M.A.	



- Reverend Sean E. McEvenue, S.J.**.....*Sacred Scripture (O.T.)*  
 B.A., S.T.L., SS.L.
- Reverend Michael G. Shields, S.J.**.....*Greek, Humanities*  
 B.A., M.A., S.T.L.
- Reverend C. Eric Smith, S.J.**.....*Latin, Greek, Patristic Greek*  
 B.A., Hist. Eccl. L., Ph.D.
- Reverend David M. Stanley, S.J.** *Sacred Scripture (N.T.), Biblical Greek*  
 S.T.L., SS.D.
- Reverend John F. Wickham, S.J.**.....*English Speech*  
 B.A., M.A., S.T.L., Ph.D.

## REGIS COLLEGE

3425 BAYVIEW AVENUE  
 WILLOWDALE, ONTARIO

## OFFICERS OF ADMINISTRATION

- Very Reverend Lionel J. Stanford, S.J. .... *Rector*
- Reverend Ross W. Feeley, S.J. .... *Vice-Rector*
- Reverend Colin J. Maloney, S.J. .... *Dean of Studies*
- Reverend Carl J. Matthews, S.J. .... *Registrar*
- Reverend D. T. Asselin, S.J. .... *Student Counsellor*
- Reverend V. J. MacKenzie, S.J. .... *Librarian*
- Reverend Paul B. Brennan, S.J. .... *Bursar*

## OFFICERS OF INSTRUCTION

- Rev. S. Borbély, S.J.**.....*Dogmatic Theology*  
 S.T.D., University of Budapest
- Rev. W. J. Browne, S.J.**.....*Liturgical Theology*  
 B.A., University of Montreal; L.Ph., S.T.L., Immaculate Conception;  
 S.T.D., Gregorian University
- Rev. F. Buck, S.J.**.....*Hebrew, Old Testament Exegesis*  
 B.A., University of Montreal; S.T.L., Immaculate Conception;  
 SS.D., Pontifical Biblical Institute
- Rev. F. E. Crowe, S.J.**.....*Fundamental, Dogmatic Theology*  
 B.A., University of Montreal; B.Sc., University of New Brunswick;  
 S.T.D., Gregorian University
- Rev. L. O. Gibbons, S.J.**.....*Fundamental, Dogmatic Theology*  
 B.A., University of Montreal; L.Ph., S.T.L., Immaculate Conception
- Rev. T. Horvath, S.J.**.....*Fundamental Theology*  
 S.T.D., Gregorian University
- Rev. M. J. Lapierre, S.J.**.....*Dogmatic Theology*  
 B.A., University of Montreal; S.T.L., St. Louis University;  
 Ph.D., University of Toronto
- Rev. H. P. Lyons, S.J.**.....*Dogmatic Theology*  
 S.T.D., University of Louvain
- Rev. Sean McEvenue, S.J.**.....*Biblical Theology, Old Testament Exegesis*  
 B.A., University of Montreal; S.T.L., Immaculate Conception;  
 SS.L., Pontifical Biblical Institute

- Rev. J. E. MacGuigan, S.J.**..... *Canon Law, Pastoral Theology*  
 B.A., M.A., Boston College; S.T.L., Milltown Park; J.C.D., University  
 of Ottawa
- Rev. C. J. Maloney, S. J.**..... *Dogmatic Theology*  
 B.A., University of Montreal; M.A., University of Toronto;  
 S.T.D., Gregorian University
- Rev. P. A. Riffel, S.J.**..... *Pastoral Psychology*  
 B.A., University of Montreal; M.A., Ph.D., Fordham University
- Rev. E. F. Sheridan, S.J.**..... *Moral Theology*  
 B.A., University of Montreal; S.T.L., Immaculate Conception;  
 S.T.D., Gregorian University
- Rev. D. M. Stanley, S.J.**..... *Biblical Greek, New Testament Exegesis*  
 B.A., University of Montreal; S.T.L., St. Louis University;  
 SS.D., Pontifical Biblical Institute
- Rev. T. Zuydwijk, S.J.**..... *Rites, Moral Theology*  
 B.A., University of Montreal; M.A., University of Toronto;  
 S.T.D., Gregorian University

# **GENERAL INFORMATION**

**HISTORY**

**ASSOCIATIONS**

**STATEMENT OF OBJECTIVES**

**STUDENT ORGANIZATIONS**

**SERVICES TRAINING**

## HISTORY

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

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

In 1881, Saint Mary's received a handsome bequest from the will of Mr. Patrick Power, a prominent Halifax business man. This generosity came at a critical period in the history of Saint Mary's, since without it the institution might not have survived.

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

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

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

## ASSOCIATIONS

Saint Mary's University is a member of the Association of Commonwealth Universities, of the Association of Universities and Colleges of Canada, of the Association of Atlantic Universities and of the Jesuit Educational Association.

Saint Mary's has been associated with the Nova Scotia Technical College since 1916 providing the first three years of courses leading to the Degree of Bachelor of Engineering in Civil, Electrical, Mechanical, Mining, Metallurgical, Chemical, Industrial and Geological Engineering. Since 1953, Saint Mary's has been one of the institutions sponsoring the Atlantic

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

## STATEMENT OF OBJECTIVES

This University believes that amid the hectic pace, the material pressures, amass influences, and dehumanizing complications of the modern world, it exists to provide a focus of humane consciousness, a centre of Christian humanism, where active critical intelligence, forming a mature sense of values, should apply itself to the problems and challenge the assumptions of our present civilizations.

### DISCIPLINE

It is assumed that students come to the University for a serious purpose and will conform to duly established customs, policies, and rules. The University authorities reserve the right to censure or penalize students who are guilty of breaches of school discipline. The registration of the student is considered an acceptance of regulations.

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

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

## STUDENT ORGANIZATIONS

The extracurricular organizations listed below are officially recognized by the University. Students who represent the University in any public activity, dramatics, debating, oratorical contests, or athletic competition, or hold office in any student organization, must be in good standing at the time of their election or appointment.

**Students' Council.** It aims at promoting the best interests of the students by sharing with the Faculty the responsibilities of University govern-

ment in all non-academic matters and in accordance with the powers conferred by the President.

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

**World University Service of Canada.** Through this national organization Saint Mary's participates in an international programme of material assistance, student exchange, and interchange of ideas throughout the world university community.

**Canadian University Students.** This organization strives to encourage better understanding among students across Canada, and to promote effectively student needs and represent their interests here and abroad. Membership is open to all students.

**Alpha Sigma Nu.** International Jesuit Honour Society. Membership is based equally on high academic achievement and outstanding contribution to the co-curricular activities of the University.

The Society functions as a catalyst for the promotion of serious discussion within the University community and thus comprises that segment of the University that most closely approaches the ideal of true education.

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

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

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

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

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

**The Philosophers' Academy** has for its purpose the promotion of philosophical study and of the investigation of philosophical problems by the presentation and discussion of philosophic topics at its regular meetings.

**The History Society** provides a forum for the discussion of significant themes and problems in History, with emphasis on Modern History. Members should have at least one university History course as background.

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

**The Journal** is the newspaper published by the students.

**The Athletic Association** promotes sports activities and co-operates with the Director of Athletics in organizing external and intramural contests, conferring athletic awards, etc.

**The Young Liberals' Club and The Young Progressive-Conservative Club** strive to arouse on the campus an informed interest in civic and government affairs through a programme of Model Parliaments, guest speakers, meetings, etc.

**The Alumni Association.** All former Saint Mary's students are eligible for membership. The Association, in addition to an annual social programme, has established an Annual Fund for university support. The Association nominates six members for appointment to the University's Board of Governors.

## SERVICES TRAINING

### Regular Officer Training Plan (ROTP)

Under the Regular Officer Training Plan successful applicants who are Canadian Citizens and who have completed Junior or Senior Matriculation are enrolled in the Canadian Forces and are provided University Training. Tuition fees, book allowance, and medical care is provided together with a monthly salary. Students who successfully complete the program are commissioned in the Canadian Armed Forces upon graduation.

Details may be obtained from Professor R. C. Marshall, Philosophy Department or from the Canadian Forces Recruiting Centre, Sir John Thompson Building, Barrington Street, (Telephone 423-6945).

**Reserve Components (Reserve Force University Officers Training Plan)**

Inquires may be directed to LCDR R. C. Marshall, Philosophy Department, or Major G. H. Somers, Superintendent of Buildings and Grounds.



# **FINANCIAL INFORMATION**

**FEEES**

**PAYMENT OF FEES**

**WITHDRAWAL AND REFUNDS**

**SCHOLARSHIPS AND BURSARIES**

# FEES

## TUITION FEES:

### FULL-TIME STUDENTS (Students Registered for Three or More Courses)

These fees include all regular charges of the University for registration, tuition, laboratories and library.....\$560.00

Other Fees: (Student Council, Athletics, Sickness and Accident Insurance)..... 45.00

**TOTAL**     \$605.00

A student taking a course over the normal load will be charged an additional \$112.00.

**PART TIME and EVENING DIVISION:** Per course.....\$112.00

## SPECIAL FEES

Late registration: \$10.00, and an additional \$3.00 per day after September 18th.

Graduation: with Degree.....	\$ 15.00
with Diploma.....	10.00
in absentia (additional fee).....	15.00
Supplemental or Special examination.....	15.00
at an outside centre (additional fee).....	5.00
Re-reading.....	5.00
Official transcript (after first copy).....	1.00

## STUDENTS' COUNCIL FEE

At the request of the student body, all full-time students are required to pay \$18.00 in support of student projects. This fee is administered by the Students' Council and is included in full-time Tuition fees noted above under the heading of other fees.

## RESIDENCE FEES

The residence fee covers room rent and board for the academic year from the day before the registration day for returning residence students to the day after the final examinations, but excluding the Christmas recess.

## Room and board

Single accommodation.....	\$850.00
Double accommodation.....	800.00

(No reduction of this rate is made for meals not taken at the University)  
Personal laundry, per term.....\$ 30.00

Students who enter residence before the beginning of the academic year or who remain in residence after the end of the academic year or during the Christmas recess will be charged a room rental of \$2.00 per day. Meals will be obtainable at the University cafeteria at the rates currently in effect.

All residence students are required to make a deposit of \$50.00 on or before Fall registration against loss or damage other than normal wear and tear. The deposit or any remaining balance will be returned to the student's home address by mail within one week of his departure.

**The University reserves the right to make changes without notice in its published schedule of tuition, residence, and other fees.**

## PAYMENT OF FEES

As first term fees, full-time students are required to make an initial payment of \$350.00 (resident students \$700.00) on or before the date of Fall registration.

Second term fees payable on the dates of re-registration, January 3rd to 10th, are the balance of the student's account.

Accounts which are not paid in full by January 31st will be subject to a penalty of \$10.00.

Students who have been awarded scholarships and bursaries by the University may deduct one-half their value from first term fees.

Students who plan to finance their education with funds from a Canada Student Loan should complete the arrangements before registration. Application forms for a Certificate of Eligibility may be obtained from the designated Provincial authority (In Nova Scotia, the Canada Student Loans Committee, Department of Education). If these forms are filed with the designated Provincial authority during the summer months the

student should be able to obtain his Certificate of Eligibility and Confirmation of Enrolment form before registration. Signature of the appropriate University official on the Confirmation of Enrolment form will enable the student to obtain his loan without delay.

Students wishing residence accommodation must remit a deposit of \$25.00 with their application for residence. This deposit is credited to the student's residence account; it is not transferable to tuition and is not refundable unless the reservation is cancelled before August 1st.

Students will be charged for damage to University property.

No student will be admitted to a semester examination or be promoted from one year to another or receive any report, degree, diploma, certificate, transcript, or testimonial whatsoever, until his financial accounts have been satisfactorily settled.

Drafts, cheques, money orders, etc., should be made payable at par to Saint Mary's University and addressed to the Treasurer, Saint Mary's University, Robie Street, Halifax, Nova Scotia.

#### **SICKNESS AND ACCIDENT INSURANCE**

The tuition fees paid by full-time students include the premium for a sickness and accident insurance policy. This policy provides coverage during the academic year.

For residents of Nova Scotia, the University's insurance plan supplements the coverage provided by the Province's Hospitalization Plan.

Students from outside Nova Scotia, not covered by hospitalization, will have to provide for it personally.

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

#### **WITHDRAWAL AND REFUNDS**

When a student withdraws from the University he will at once notify the Registrar. In all cases this notification will be taken as the official date of withdrawal from the University.

A proportionate refund of tuition and residence fees may be granted to a student who withdraws from the University for a reason approved by the proper authorities if application is made in writing to the Treasurer. Students withdrawing at the beginning of a month or at any time within

the month are charged for the whole month. First-term withdrawals are subject to a minimum charge of \$25.00 for tuition and \$25.00 for residence.

A student is accepted for residence on the understanding that he will remain in residence for the full academic year. A refund is not granted to a student who withdraws from residence unless or until an acceptable substitute has assumed the balance of the residence fees for the session.

No refund of any fee will be granted to a student who withdraws after November 15th for the first semester, or after February 28th for the second semester.

## SCHOLARSHIPS AND BURSARIES

In an effort to recognize outstanding academic achievement and to help needy and deserving students, Saint Mary's University annually awards many scholarships and bursaries. Entering students who wish to make application for scholarships must have an average of 75 per cent or over in their high school work. University students who apply for continuing scholarships must have a minimum average of 70 per cent. Bursaries are awarded on the basis of need for students of less than scholarship average but whose records give promise of solid and successful university work.

All scholarship applications must be made in writing to the Director of Scholarships before June 30. Each scholarship is awarded on a yearly basis; students who wish a renewal must reapply by this date.

### SCHOLARSHIPS OPEN TO ALL STUDENTS

**Ashwood Scholarship:** Valued at \$200.

**Flinn Scholarships:** Two, valued at \$250 each.

**Mary C. Daley Scholarship:** Valued at \$100 and awarded in alternate years.

**Duncan W. Lynch Memorial Scholarship:** Valued at \$400. Open annually to a Catholic student from Dartmouth.

**John Glenister Memorial Scholarship:** Valued at \$150. Open annually.

**University Scholarships:** 3 valued at \$500 each, 9 valued at \$300 each, and 8 valued at \$100 each.

## SCHOLARSHIPS OPEN TO ENTERING STUDENTS

**Saint Mary's University Ladies' Auxillary Scholarship:** Valued at \$350. Open to a student of Saint Patrick's High School, Halifax, Nova Scotia.

**Brother Stirling Scholarship:** Donated by Mr. John H. Dickey. Valued at \$300. Open annually.

**University Scholarship:** Valued at \$550. Awarded annually to a leading student of Saint Patrick's High School, Halifax, Nova Scotia.

**University Scholarship:** Valued at \$550. Awarded annually to a leading student in the graduating class of St. Peter's High School, Dartmouth, Nova Scotia.

**University Scholarship:** Valued at \$550. Awarded annually to a student of Saint Malachy's High School, Saint John, New Brunswick.

**University Scholarship:** Valued at \$200. Awarded annually to a Catholic student from Moncton, New Brunswick.

**University Scholarship:** Valued at \$550. Awarded annually to a student of the graduating class of Gonzaga High School, St. John's, Newfoundland.

**University Scholarship:** Valued at \$550. Awarded annually to a student of the graduating class of Brother Rice High School, St. John's, Newfoundland.

**University Scholarships:** 4 valued at \$500.

**University Scholarships:** 11 valued at a minimum of \$100 each. One of these scholarships may be awarded to a student from each of the following counties: Annapolis, Colchester, Cumberland, Digby, Halifax, Hants, Kings, Lunenburg, Queens, Shelburne and Yarmouth.

## SCHOLARSHIPS OPEN TO SOPHOMORE, JUNIOR, AND SENIOR STUDENTS

**Nova Scotia Light and Power Company Scholarship:** Valued at \$300. Open to a Science or Engineering student.

**James E. Donohue Memorial Scholarship:** Valued at \$100. Open to students in Engineering and awarded in alternate years.

**Nova Scotia Teachers' College:** 1 valued at \$300. Open annually to graduates of the Nova Scotia Teachers' College.

**University Scholarships:** 4 valued at \$500 each, 6 valued at \$300 each, and 12 valued at \$100 each.

**The Institute of Chartered Accountants of Nova Scotia Centennial Bursary.** A bursary to be held by a student of Saint Mary's

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

### **BURSARIES**

**Rebecca Cohn Memorial Bursary:** Valued at \$100. Open annually.

**University Residence Bursaries:** 15 valued at \$100 each. Open annually to residence students from parishes in the Archdiocese of Halifax.

**University Bursaries:** Nine additional university bursaries: 2 valued at \$400 each, 3 valued at \$200 each, and 4 valued at \$100 each.

### **SCHOOL OF EDUCATION SCHOLARSHIPS**

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

### **PARISH SCHOLARSHIPS**

Many parishes and parish organizations offer scholarships to deserving students. Students interested in such scholarships should make inquiries from their parish or the parish organization concerned.

**Saint Agnes Parish Holy Name Society Scholarship:** Valued at \$100.

**Saint Joseph's Parish Scholarships:** Two: one valued at \$100 and one at \$150.

**Saint Mary's Basilica Parish:** The Monsignor Carroll Memorial Scholarship valued at \$300.

**Saint Peter's Parish Holy Name Society Scholarships:** Varying in number and value.

**Saint Rose of Lima Parish Holy Name Society Scholarship:** Valued at \$100.

**Saint Stephen's Parish Scholarships:** 4 valued at \$100 each.

**Saint Stephen's Educational Association Scholarships:** 3 valued at \$100 each.

### **HOME AND SCHOOL SCHOLARSHIPS**

The Home and School Association of various schools offer scholarships to deserving students. Students needing scholarship assistance should seek further information from their respective Home and School Association.

**Bedford Home and School Association Scholarship:** Valued at \$100.

**Oxford Home and School Association Scholarship:** Valued at \$50.

**Saint Thomas Aquinas Home and School Association Scholarship:** Valued at \$100.

### **KNIGHTS OF COLUMBUS SCHOLARSHIPS**

Many councils of the Knights of Columbus offer scholarships to deserving students. Students interested in such scholarships are advised to direct inquiries to the council in their area.

**Knights of Columbus Council 1097 (Halifax) Scholarships:** 7 valued at \$150 each.

**Knights of Columbus Council 2181 (Yarmouth) Scholarships:** Valued at \$200.

### **COLOMBO PLAN SCHOLARSHIPS**

Each year the Colombo Plan offers a number of awards to deserving students from Colombo Plan countries.

### **READERS AND LABORATORY ASSISTANTS**

Each year a number of positions are open to Junior and Senior students to act as course readers and assistants in the various laboratories. Remuneration is based on hours of employment during the term.

### **OTHER SCHOLARSHIPS**

There are many other scholarships for which students are eligible to apply but which are not controlled by the University.

**Imperial Oil Limited** offers annually free tuition and other compulsory fees to all children or wards of employees and annuitants who pro-



ceed to higher education courses. The courses may be taken at any Canadian university or other approved institution of higher learning. Each award is tenable for a maximum of four years. To be eligible a student must attain an average mark of 70% in the appropriate secondary school examinations in the subjects required for admittance to the approved institution. Further information and application forms may be obtained from the Secretary, Committee on Higher Education, Imperial Oil Limited 111 St. Clair Avenue West, Toronto 7, Ontario.

**Joe Gannon Memorial Scholarship:** Value \$500. Awarded to the son, daughter or legal ward of a trade unionist who is a member of a union affiliated to the Nova Scotia Federation of Labour. Applications should be addressed to Selection Committee, c/o Nova Scotia Federation of Labour, 530 Roy Building, Halifax, Nova Scotia.

**Royal Canadian Legion Bursaries, Nova Scotia Command:** Value \$400, \$350. Provides four bursaries annually. Established to assist dependents of veterans to further their education. Applications available from L. M. Rhodenizer, Education Committee, New Glasgow, Nova Scotia.

**Canadian University Students' Scholarships:** Canadian University Students offers a scholarship whereby specially selected students may take one year of their course at a university in a different part of Canada.

**Children of War Dead (Education Assistance) Act** provides fees and monthly allowances for children of veterans whose death was attributable to military service. Inquiries should be directed to the nearest District Office of the Department of Veterans Affairs.

**Municipal School Board, Halifax County:** Four scholarships of \$100 are awarded annually to students who have been accepted by the Education Faculty of a Maritime university. Restricted to residents of Halifax County. Further information from Municipal School Board, P.O. Box 90, Armdale, Nova Scotia.

**I. O. D. E. Second War Memorial Entrance Bursaries,** one for each Province, \$400 a year for four years. Awarded to children of deceased or permanently and seriously disabled Canadian men and women of the services who served in World War II. Further information: I. O. D. E. Educational Secretary, 301 Spring Garden Road, Halifax, Nova Scotia.

**Provincial Chapter of Nova Scotia, I. O. D. E.:** A number of bursaries are awarded to university students in need of financial assistance.

Preference is given to first-year students. Further information: Provincial Educational Secretary, I. O. D. E., 301 Spring Garden Road, Halifax, Nova Scotia.

## **LOANS**

For those wishing to apply for government guaranteed financial assistance, the University cooperates fully with the Canada Student Loans Plan. Enquiries should be directed to the Registrar and/or the applicant's own banker.

The Alumni Association may extend occasional tuition loans to qualified applicants.

# **ADMISSION INFORMATION**

**APPLICATION**

**ADMISSION REQUIREMENTS**

**ADMISSION TO ADVANCED STANDING**

**REGISTRATION**

**For information on admission to Graduate Studies see  
p. 54.**

# APPLICATION

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

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

1. A testimonial of good character.
2. Official certificates received from the Department of Education or other source. Students who have attended another university should request that institution to forward a transcript of their marks to the Director of Admissions.
3. A recent photograph. This must be a head and shoulders photograph preferably in jacket and necktie, the photograph of good quality and suitable for possible newspaper reproduction.
4. A \$5.00 application fee if the applicant is not a resident of Canada.
5. Candidates whose native tongue is other than English must arrange to take a test of proficiency in English under the auspices of

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

A student wishing to apply for on-campus residence accommodation will receive upon acceptance an application for residence. This together with a deposit of \$25.00 must be forwarded to the Dean of Men. This amount is a deposit on first term residence fees. It will be returned if the University is unable to provide accommodation or if the reservation is cancelled before August 15; otherwise it is not refundable or transferable to tuition.

# ADMISSION REQUIREMENTS

To be admitted to Saint Mary's as an undergraduate a candidate must offer Junior Matriculation credit (50%) (Nova Scotia Grade XI or equi-

valent) in English, Mathematics, a language other than English and any other two from History, Economics, Physics, Chemistry, Biology, Latin or another language, Geology, Geography. An average of 60% is required.

Candidates for Science and Engineering should offer Chemistry, Physics, and/or Trigonometry and marks in Science and Mathematics should be above average.

### ACCEPTABLE CERTIFICATES

Satisfactory marks in any of the subjects listed above will be accepted as credit toward the entrance requirements if such marks are granted by any of the following examining bodies.

- (a) Certificates of the Common Examining Board of the Atlantic Provinces.  
The pass mark on Grade XI is 50%. Marks of 40% or over on Grade XII subjects may be counted as equivalent to passes in corresponding Grade XI subjects.
- (b) High School or accredited High School Certificates of the Province of New Brunswick.
- (c) Equivalent Certificates issued by Education Departments of other Provinces.
- (d) Second Year Certificates issued by Prince of Wales College, Charlottetown, Prince Edward Island.
- (e) Equivalent Certificates of Matriculation examinations taken at universities.
- (f) Certificates similar to the above issued by university or other official examining bodies, when found adequate.

### ADMISSION TO ADVANCED STANDING

#### 1. ARTS

A full year's credit (five courses) will be granted a student registering in Arts, who presents a Senior Matriculation Certificate (Nova Scotia Grade XII) or equivalent with a pass standing (50%) in each of the following subjects, and a general average of 10% above pass (60%).

- i English
- ii Four from Mathematics,
- iii Physics, Chemistry, Biology
- iv Geology, Geography, History, Ancient and Modern
- v Languages

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

## **2. SCIENCE AND COMMERCE**

A full year's credit (five courses) will be granted a student registering in Science and Commerce, who presents a Senior Matriculation Certificate (Nova Scotia Grade XII) or equivalent with a pass standing (50%) in each of the following subjects, and a general average of 10% above pass (60%)

- i English
- ii Mathematics
- iii Three from Physics, Chemistry, Biology
- iv Geology, Geography, History Ancient and Modern
- v Languages

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

## **3. ENGINEERING**

A student registering in Engineering who presents a Senior Matriculation Certificate (Nova Scotia Grade XII) or equivalent, with a pass standing (50%) in each of the following subjects, and a general average of (65%) will be able to complete the Engineering Programme at Saint Mary's University in two years, and thus be able to receive his Bachelor of Engineering in four years after matriculation.

The subjects required are:

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

## **4. PARTIAL CREDIT (FEWER THAN FIVE COURSES):**

### **ALL FACULTIES**

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

- (i) These credits must be obtained before courses at the University are begun.
- (ii) The student must have a mark of 60% in each subject for which he is seeking advanced standing. A student wishing to take further courses in a Science subject must have a mark of 75% in that subject.
- (iii) Courses taken at other institutions or by Senior Matriculation after first registration at Saint Mary's University will not be credited by the University unless the student has obtained prior, written approval of the Dean of Faculty.

5. The University reserves the right to admit any student who gives promise of success in University studies even though he does not possess all the normal entrance requirements.

## **REGISTRATION**

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

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

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

### **PROVISIONAL AND LATE REGISTRATION**

If official documents are not received by the Registrar and approved by the Committee on Admissions two weeks before registration dates, provisional registration may be permitted. In case of such provisional registration the student is responsible for having all official entrance documents filed with the Registrar not later than two weeks after the regular registration date. A student is not officially registered in the University until provisional registration has been confirmed.

Students registering on any other date than that designated in the Academic Calendar are required to pay a late registration fee (see 'Special Fees').

### **CHANGE IN REGISTRATION AND DROPPING COURSES**

Any change after the initial registration is permitted only with the written consent of the Dean of the Faculty concerned. For each course

added, dropped, or changed, even with the consent of the Dean, a fee of \$2.00 is charged. In the case of a change initiated by University authorities no fee is charged.

No change in registration is permitted after the second week of instruction in a semester. Students who drop a course without authorization will be given a grade of 'WF' (Withdrawal Failure) on the University records. A note of 'W' signifies authorized withdrawal. This will not be granted within two weeks preceding semester examinations. No term tuition refund will be granted on individual courses dropped after the second week in a semester. Should registration prove insufficient, the University reserves the right to cancel any listed course.



# **ACADEMIC INFORMATION**

**EXAMINATIONS AND GRADES**

**EVENING DIVISION**

**ADULT STUDY SERIES**

**THE ATLANTIC SUMMER SCHOOL FOR  
ADVANCED BUSINESS ADMINISTRATION**

# EXAMINATIONS AND GRADES

In full courses there will be a final examination, a mid-year examination, and two tests, at assigned times (v. Academic Calendar for times). The first-term examination and test, together with assignments, etc., will be worth 40% of the total mark in each subject. In either first or second term, however, assignments, etc., will not exceed 20% of this total. A student whose record of assignments in a course is considered unsatisfactory may be debarred from writing the examinations in that course.

The pass mark in each subject is 50%.

## SUPPLEMENTAL AND SPECIAL EXAMINATIONS

Supplemental examinations cover the same work and texts as the immediately preceding regular examinations, and normally are of three hours duration.

300-level courses and above, and honours courses will not carry supplemental privileges.

A student who receives a mark between 40% and 50% is eligible to write a supplemental examination under the following conditions:

- (1) The supplemental is written at the prescribed time the following September.
- (2) No more than two subject marks between 40% and 50%.
- (3) No subject mark is below 40%, or recorded as WF (Withdrawal Failure).

Supplemental examinations are not graded but recorded as pass (50%) or failure.

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

Only one supplemental examination is permitted in any course. No course may be taken more than twice, except with the permission of the Committee on Academic Standing.

A special examination is an examination written outside the times assigned for regular and supplemental examinations. Permission to write a special examination is granted rarely and only for extraordinary reasons. Not more than two special examinations may be written in any one subject.

Applications for supplemental, special, or entrance examinations must be made no later than August 15th.

## FAILURES

A student who defaults a final examination is considered to have failed the course and a WF will be entered on his record. To obtain credit he will have to repeat the course.

If the student defaults an examination for medical reasons, a medical certificate covering the precise period of absence must be filed with the Registrar's Office before the end of the period of examinations.

A student who fails in more than 40% of his year's work at the regular examinations fails his year, and is not eligible for supplemental examinations.

A student who obtains a mark of 20% or less in any mid-year examination shall be required to withdraw from the course, unless he has the permission of the Dean to continue on in that course and will receive a WF on his record for his year's work. A student who withdraws from a course in the second semester after a first semester mark of less than 40% in that course, receives a WF entry on his record for the year's work.

If a student fails a course which involves both lectures and laboratory work, he must repeat both parts of the course, or an approved equivalent to be determined by the department concerned.

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

### **ACADEMIC PROBATION**

Any student who fails more than 40% of his work at either the mid-year session or the end of the year is placed on academic probation. Any student who fails in two years of his work is automatically subject to dismissal.

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

A person who is on academic probation is subject to dismissal at any time at the discretion of the Dean of Faculty.

### **APPEALS**

Appeals pertaining to decisions taken on academic regulations may be made, in writing, to the committee on Academic Standing.

# **SPECIAL PROGRAMMES**

## **EVENING DIVISION AND SUMMER SESSIONS**

Credit courses in Arts, Science and Commerce, and in the Master's degree program in Education, are offered at the University in Evening and Summer Sessions. These courses are open to men and women. Normally students enrolling in these courses must have fulfilled the usual requirements for University entrance, however, under certain circumstances, with the permission of the Director, a student will be allowed to attend classes in the Evening Division or Summer Sessions without complete Junior Matriculation. Students must follow, as closely as possible, the normal sequence of courses as required for students in the Day Division. They must maintain the same standards in their studies, as students in the Day Division.

Evening Division courses begin in September, at the time the Day Division commences classes, and end with the May examinations. Two Summer Sessions of six weeks each are held, the First Session beginning in mid-May and the Second Session early in July. Students registered for degrees at Saint Mary's may take two credit courses each year in the Evening Division and one credit course per Summer Session. Students wishing to take courses at Saint Mary's for credit at another university must submit written permission from the appropriate authority at his or her university along with the application for a course or courses.

All enquires with respect to the Evening Division and Summer Sessions should be addressed to the Director. Students planning to take summer courses in 1969 should contact the Director well in advance of April 1, 1969.

## **ADULT STUDIES SERIES**

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

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

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

## **THE ATLANTIC SUMMER SCHOOL FOR ADVANCED BUSINESS ADMINISTRATION**

This summer school, sponsored by the Association of Atlantic Universities, offers a five weeks' course for executives from mid-June to mid-July. The course is designed to benefit both university and non-university men. It is desirable, however, that students have from five to ten years of experience in the management of men or in the conduct of technical or staff functions at a fairly responsible level.

Information and application forms may be obtained from Dean H. E. Dysart, Director, Atlantic Summer School for Advanced Business Administration, University of King's College, Halifax, N. S.

# **FACULTIES AND COURSES**

**ARTS**

**SCIENCE**

**COMMERCE**

**ENGINEERING**

**PRE-PROFESSIONAL COURSES**

**HONOURS COURSES**

**EDUCATION**

## **COURSE NUMBERING SYSTEM**

The new system of course numbering appearing in this Calendar takes effect in September, 1967, and replaces the numbering system adopted in 1962. In the new system, courses numbered from 100 to 119 are Freshman level courses, normally taken by students entering from Nova Scotia Grade XI or equivalent. Courses numbered from 120 to 199 are introductory level courses normally taken by students entering from Nova Scotia Grade XII or equivalent, and are Sophomore level courses. All 100 level courses are normally prerequisite for admission to further courses in the subject. 200 and 300 level courses are advanced courses normally taken in the Junior and Senior years. Courses numbered in the 250 +, 350 + series are normally open only to students in the Honours Program, but may be taken by students in the General Program with the permission of the department concerned. 400 level courses are honours courses normally taken in the fifth year beyond Grade XI. 500 level courses are graduate courses.

# ARTS

## DEGREE OF BACHELOR OF ARTS—The General Program

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

1. Subject to the regulations set forth in this calendar, the student must complete a total of 20 full courses following junior matriculation, or 15 full courses following senior matriculation.
2. During the regular academic year, the student will normally take five full courses. The department of the student's major concentration will normally govern his registration beyond the Freshman Year.
3. Major concentrations for the Arts degree may be taken in Economics, English, French, History, Latin, Mathematics, Philosophy, Political Science, Psychology, Sociology, Spanish, Theology.

### 4. The Freshman Year:

The student must complete five courses from those numbered 100-119 as follows:

- (a) Two required courses: one each from English, History or Economic History.
- (b) Two elective courses to be chosen from the courses open to Freshmen in the following subjects: Theology, Biology, Physics, Mathematics, French, German, Latin, Spanish.

### 5. The Sophomore Year:

The student must choose his subject of concentration and seek registration advice from the department of that subject. He will take those courses numbered 120 and above.

- (a) The student must complete:
  - (i) One course in Philosophy.
  - (ii) One course from the Social Sciences (Economics, Political Science, Psychology, and Sociology).
  - (iii) One course from the Natural Sciences (Biology, Chemistry, Geology, Mathematics, Physics).This last requirement may be waived if the student has com-

pleted a course in Mathematics and a course in a Natural Science in his Freshman Year or its equivalent.

- (b) The student must also complete one course in English. Most departments recommend that this course in English be taken in the Sophomore Year.
- (c) A student who elects a university beginning course in a language other than English must take another course in that language in a subsequent year.
- (d) In addition to the required courses in Philosophy and English mentioned above (5 a) (i), (b), the student must complete at least one course from the following: Classics in Translation, English, History, Philosophy, Theology.

#### **6. The Junior and Senior Years:**

- (a) A student must complete a major, concentration of no fewer than five courses in one subject. Courses numbered below 120 will not count as part of this concentration.
  - (b) The remaining courses required under Section 1 will be chosen by the student in consultation with his department.
7. Arts and Commerce course: Students who wish to obtain the Bachelor of Commerce degree in one year following the Arts degree will consult the Dean of Commerce regarding their program.
8. An Arts student who intends to do graduate work in Business Administration may with the permission of the dean of Arts take courses in Accounting and Business Administration in his undergraduate Arts program.

#### **OLD PROGRAM**

Students who have completed ten or more courses prior to September, 1967, will normally follow the program in effect at the time of their registration with the exception that two courses each (and not three) are required in Philosophy and Theology. Students who have completed ten but less than sixteen credits may be eligible to enter the new general or honours program. All students who have completed their Freshman Year must have their registration approved by the department of their major concentration.



# SCIENCE

The curriculum in Science is designed to give the student a solid grasp of basic scientific principles and methods as well as required technological knowledge, without at the same time sacrificing his liberal and cultural education. The student is therefore encouraged to include courses in philosophy, theology, and the humanities as a broadening complement to his science program.

## **DEGREE OF BACHELOR OF SCIENCE—The General Program**

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

1. Subject to the regulations set forth in this calendar, the student must complete a total of 20 full courses following junior matriculation, or 15 full courses following senior matriculation.
2. During the regular academic year, the student will normally take five full courses. The department of concentration will normally govern registration for the Sophomore and subsequent years.
3. Major concentrations for the science degree may be taken in Biology, Chemistry, Geology, Mathematics, Physics, Psychology.

### **4. The Freshman Year:**

The student must complete five courses from those numbered 100-119 as follows:

- (a) Three required courses: one each from English, Mathematics, History, or Economic History.
- (b) Two elective courses to be chosen from the courses open to Freshmen in the following subjects: Theology, Biology, Physics, French, German, Latin, Spanish.

### **5. The Sophomore Year:**

- (a) The student must choose his subject of concentration and seek registration advice from the department of that subject.
- (b) The student must complete:
  - (i) one course in Philosophy.

- (ii) one course each (at the 120 level and above) in **two** of the following: Biology, Chemistry, Geology, Mathematics, Physics.
- (c) In addition to the above, the student must complete one course in English and one course in Mathematics.

### **5. The Junior and Senior Years:**

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

- (a) five or six courses beyond the sophomore level in two subjects from the natural sciences (Biology, Chemistry, Geology, Mathematics, Physics), Psychology, or Engineering. Students who wish to offer a subject begun only in the junior year may, by exception, offer the introductory course in that subject as one of the four courses required in (b).
- (b) four or five courses in subjects other than the two offered to satisfy (a) above. At least one of the four or five course must be beyond sophomore level.
- (c) One course from the Social Sciences (Economics, Political Science, Psychology, Sociology).

### **ENGINEERING AND SCIENCE COURSE**

Students who have obtained the Diploma of Engineering under Schedule "B" may proceed to the degree of Bachelor of Science on successful completion of a further year of study.

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

All programs must have the approval of the Dean of Science.

\* This must be a course in Philosophy unless the student has already a credit in Philosophy.

### **COMMERCE**

The course leading to a degree of Bachelor of Commerce is offered to students who desire the advantage of higher education and wish, at the same time, to prepare themselves for a place in the business community,

the public service, and professional life. The aim of the faculty is to combine the cultural aspects of education with the general principles of business.

Exemption from three years of in-service training and the primary, economics, and intermediate examinations of the Institute of Chartered Accountants of Nova Scotia is available to Commerce graduates who intend to become Chartered Accountants. To gain the exemption a mark of at least 50% must be made in each of the courses, Accounting 303, 304, and 305; in addition a minimum average of 60% for the same courses is required.

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

### **DEGREE OF BACHELOR OF COMMERCE**

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

1. Subject to the regulations set forth in this calendar, the student must complete a total of 20 full courses following junior matriculation, or 15 full courses following senior matriculation.
2. During the regular academic year, the student will normally take five (5) full courses. The department concerned will normally govern the student's registration beyond Freshman Year.
3. **The Freshman Year:**

The student must complete 5 courses (numbered 100 to 119) as follows:

- (a) Two required courses; one each from English and Mathematics.
- (b) Three elective courses to be chosen from the courses open to Freshmen in the following subjects: Theology, Biology, Physics, French, German, Latin, Spanish, Economic History, History, Political Science 121.

- (e) A student who intends to take a major concentration in Accounting is advised to take the introductory course in Accounting in his Freshman Year.

#### **4. The Sophomore, Junior and Senior Years:**

- (a) The student will take 15 courses numbered 120 and above. He must seek registration advice from his department of concentration. Major concentrations may be taken in Accounting, Business Administration, and Economics.
- (b) The student must complete 7 required courses as follows:
  - (1) one course in English.
  - (2) one course in Philosophy.
  - (3 & 4) two courses in Accounting
  - (5) one course in Business Administration
  - (6) one course in Commercial Law
  - (7) one course in Economics
- (c) in addition to the courses listed under (b) above, the student must complete two approved courses to be chosen from the subject areas of the languages, humanities, social and natural sciences, and from Accounting and Business Administration.
- (d) A student who elects a beginning course in a language other than English must take another course in that language in a subsequent year.
- (e) The student must complete a major concentration in one of the following subjects as listed:
  - (i) Accounting—four courses. Five courses will be required of students who wish to gain the exemption granted by the Institute of Chartered Accountants of Nova Scotia.
  - (ii) Business Administration—four courses.
  - (iii) Economics— five courses.
- (f) The remaining courses required under section (a) will be chosen by the student in consultation with his department.

## **ENGINEERING**

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

With a Diploma in Engineering a student may enter without examination any of the departments of Engineering at the Nova Scotia Technical

College, Laval University or McGill University, and obtain the degree of Bachelor of Engineering (Civil, Electrical, Mechanical, Chemical, Metallurgical, Mining, Industrial or Geological) on the successful completion of the last two years of a five-year course.

### **DIPLOMA IN ENGINEERING**

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

Students entering with Junior Matriculation or equivalent, as defined in this calendar on pages 37/38 will follow the curriculum given below and designated as Schedule "B". On successful completion of this program the students will be awarded the Diploma in Engineering.

### **SENIOR MATRICULATION REQUIREMENTS**

Students possessing the following qualifications on entrance will follow Schedule "A" and may not, in fact, follow Schedule "B":

A Matriculation Certificate (Nova Scotia Grade XII, or equivalent) with a pass standing of 50% in each of the following and a general average of 60%:

- (i) English
- (ii) Mathematics (2 subjects)
- (iii) A language other than English
- (iv) Chemistry
- (v) Physics

### **Schedule "A"**

<b>First Year</b>	<b>Second Year</b>	<b>Third Year</b>
Mathematics 122	Mathematics 222	Mathematics 303
Physics 121	Physics 222	Engineering 302
Chemistry 121	Chemistry 202	Engineering 304
English 121	Engineering 203*	Engineering 305
Engineering 104	Engineering 204*	Engineering 303*
Engineering 102	Elective	Engineering 306*
or elective	Elective	Engineering 301*
		Philosophy/Theology

## Schedule "B"

First Year	Second Year	Third Year
Mathematics 111	Mathematics 122	Mathematics 202
Physics 111	Physics 121	Engineering 302
Chemistry 121	Chemistry 202	Engineering 304
English 101	Engineering 203*	Engineering 305
Engineering 104	Engineering 204*	Engineering 303*
Engineering 102 or elective	Elective	Engineering 306*
	Elective (Geol. etc.)	Engineering 301*
		Philosophy/Theology

### Notes:

1. \*indicates one semester courses. For details see 'Courses of Instruction'.

2. Students who plan to enter Chemical Engineering at the Nova Scotia Technical College must substitute a course in organic chemistry (Chemistry 304) for the second year elective.

3. Students who plan to enter Civil, Mining, Metallurgical or Geological Engineering at the Nova Scotia Technical College must substitute Geology 121 for the second year elective.

4. Engineering 102 (surveying) is required only of students proceeding to the Nova Scotia Technical College in Civil, Mining or Geological Engineering. However, students are advised to select this course to give themselves the widest selection of faculties at the Nova Scotia Technical College.

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

6. Where it is deemed advisable, students with partial Grade XII certificates may be given credits in certain subjects depending on the mark in the course and the general average. This will be at the discretion of the Dean of Engineering.

7. "Students who intend to complete their Bachelor of Science under Schedule "B" are encouraged to take English 121 in the second year.

## ARCHITECTURE

Saint Mary's University, in association with the Nova Scotia Technical College, offers the first two years of a six-year course in Architecture leading to a Bachelor of Architecture degree. Students who complete these

two years and who have been recommended by the Dean of Engineering are admitted without further examination to the Third Year in the School of Architecture, Nova Scotia Technical College, Halifax, where they complete the four-year professional phase of the curriculum. For the present, the course work for the two years in Architecture at Saint Mary's University is the same as that of the first two years in the Engineering Diploma Course.

## **ENGINEERING AND SCIENCE**

Students who have obtained the Diploma of Engineering under Schedule "B" may proceed to the degree of Bachelor of Science if they fulfill the requirements noted on **page 51**.

## **PRE-PROFESSIONAL COURSES**

Students who plan to enter the professions of theology, law, medicine, dentistry, etc., should see that their plan of studies includes courses prerequisite to entrance into the professional school of their choice. Calendars of professional schools may be consulted in the Office of the Registrar.

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

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

**Pre-Law.** Students planning to enter Law should do major concentration work in Philosophy or Social Science. Their programme should include at least two courses in History, Economics, or Political Science.

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

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

Credits in the sciences must include Biology 111 (120), 302; Chemistry 121, 202, 304; Mathematics 111 or 121; Physics 111 or 121. Of the remaining eight courses (of a required minimum of fifteen courses), at least seven must be taken in the Humanities; a Freshman English, Sophomore English and Philosophy 201, are required courses. At least two advanced courses must be included in the remaining four courses of the minimum program.

**Pre-Dentistry.** Pre-dental students must complete a minimum of ten required courses which include the seven science courses listed above, along with Freshman English and two electives from Sophomore English and French 102 or 120, German 100 (120), History 111 (120), Philosophy 201.



# HONOURS DEGREES

## ARTS AND SCIENCE

The new general requirements for Honours Degrees are as follows:

1. Students of above-average ability are urged to make application to follow an Honours Program before the end of their Sophomore Year to the department concerned and thus have their plan of studies controlled by that department. Formal application for admission of a student to an Honours Program must be made by the Chairman of the department concerned to the Committee on Honours on a form available in the Registrar's Office.
2. All Honours Programs must consist of twenty courses beyond the Freshman Year, and must satisfy the requirements for the General Bachelor's degree. To transfer from an Honours Program to the General Program, a student must have the approval of the Committee on Academic Standing.
3. An Honours Degree may be obtained in four years from senior matriculation.
4. A student must obtain a mark of not less than 65% in every Honours course in his program. A student receiving a mark of less than 65% in any Honours course must receive the approval of the Committee on Honours before he will be permitted to continue.
5. In a **major** Honours program, the fifteen courses taken beyond the sophomore level must include:
  - (a) nine courses beyond the introductory level in one subject;
  - (b) two supporting courses to be determined by the department of the major;
  - (c) four courses not in the major field.
6. In a **combined** Honours program, the fifteen courses taken beyond the sophomore level must include:
  - (a) eleven courses beyond the introductory level in **two** allied subjects, not more than seven courses being in either of them.
  - (b) four courses in subjects other than the two in (a).

## **DEGREE OF BACHELOR OF EDUCATION**

Application for admission to the Bachelor of Education program should be made on a form obtainable from the Director of Admissions.

The general requirements for the degree of Bachelor of Education are as follows:

1. Normally the entrance requirements for the Bachelor of Education degree will be a Bachelor's degree from Saint Mary's University or equivalent.
2. Candidates must successfully complete an approved program of six courses, including Philosophy of Education, Psychology of Education, General Methods of Teaching, and Practice Teaching. Qualified candidates who have completed a program of professional teacher training at the Nova Scotia Teachers College or an equivalent program may obtain the B.Ed. by taking two courses, Philosophy of Education and Psychology of Education.

**Note:** Holders of the Bachelor of Education degree may apply to the Department of Education of the Province of Nova Scotia for a professional Teacher's Certificate, Class V, which entitles them to teach in the public schools of Nova Scotia. The Provincial Department of Education undertakes to pay the Bachelor of Education candidate's tuition fees if he agrees to teach in the public schools of Nova Scotia for two years following graduation. Further details and information on other forms of financial assistance, such as the provincial teacher-training scholarships, may be obtained from the Director of Admissions.

# **GRADUATE STUDIES**

**DEGREE OF MASTER OF ARTS**

**DEGREE OF MASTER OF SOCIAL WORK**

## General Requirements for Admission

1. Candidates for admission to the Master's program must

- (a) hold a Bachelor's degree from a University of reconized standing, and have completed an undergraduate program in the subject area chosen for graduate study comparable to an Honours degree from Saint Mary's University in that subject area.

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

- (b) Candidates whose native tongue is other than English must arrange to take a test of proficiency in English under the auspices of

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

- (c) have the approval of the Committee on Graduate Studies, and of the department concerned.

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

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

4. Application for admission must be made on a form obtainable from Director of Admissions. The application form calls for an official transcript of the student's academic record, and also for letters of recommendation from two persons in a position to judge the applicant's personal and intellectual capacities for graduate study. The form and all supporting documents must ordinarily be on hand at least three weeks before the beginning of the academic session. (For students beginning their program in a Summer Session, the date will be two weeks prior to the beginning of that Session.)

## **General Requirements for the Master's Degree**

1. Candidates normally must spend at least one academic year in residence. This period is additional to any time needed to meet the normal admission requirements. At the discretion of the Committee on Graduate Studies a student may be admitted to a program entailing part-time and summer study.
2. Candidates must complete a program of four full courses and submit an acceptable thesis. On the recommendation of the department concerned, a three course or a two course program is permissible for a candidate undertaking a proportionately more demanding thesis. In departments authorized by the Committee on Graduate Studies, a five course program, without thesis, is also acceptable for the degree. Courses in all programs must be at the 400 level or the 500 level, but, where advisable, courses at the 300 level may be included in a program, provided that the requirements applying to graduate students in such courses be of a graduate standard.
3. Up to two advanced courses in the chosen subject area completed at other universities may be accepted as part of the requirements, provided they have not been applied previously towards another degree.
4. A passing mark of second class honours standing (65%) is required in all courses.
5. Two failures will require withdrawal from the program. There will be no supplemental examinations.
6. A complete outline of the proposed program of study must be approved by the Committee on Graduate Studies. This outline, bearing the approval of the department concerned, must normally be submitted to the Committee within one month of first registration in the program, but in no event later than six months before the Master's degree is expected.
7. Candidates must complete all degree requirements within five calendar years of being accepted as Master's degree candidates. The Committee on Graduate Studies will have the power to waive this regulation, but only in exceptional circumstances will this be done.
8. Candidates must satisfy all the particular requirements of the department in which the Master's program is being done.

## **FEES, FINANCIAL AID**

The schedule of fees found on p. 27 of this Calendar applies to the graduate studies program.

A number of fellowships and assistantships up to a maximum of \$2,500 for the calendar year are available for full-time students. Further information on these may be obtained from the Chairman of the department concerned.

## DEPARTMENTS OF INSTRUCTION

### EDUCATION

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

1. The candidate for admission is normally asked to appear for a personal interview with the Dean of Education and/or a faculty member designated by him. The interview usually occurs after the candidate's application form and supporting documents are on hand.
2. The candidate is encouraged to have completed at least one year of successful teaching before embarking on the M.A. (in Education) program.
3. Courses are generally scheduled in the late afternoon, evening, and Saturday morning during the regular academic session. A summer course is also available, but a candidate is not permitted to take more than two of his four courses through summer study.
4. Course offerings include courses in the following fields: philosophy of education, psychology of education, comparative education, and educational administration/supervision. The complete repertory of courses is found on p. 66 ff. In the spring an announcement of courses for the coming summer session and regular academic session is made available.
5. In conjunction with the writing of his thesis a candidate must enroll in Education 510 (Graduate Research Seminar). This course does not count as one of the four normally required for the degree.

### HISTORY

Stanislaw Bobr-Tylingo, LesL., DesL., Dr. Habil. in History

Robert J. Bollini, B.A., M.S.

Elizabeth A. Chard, B.A., M.A., B.Ed.

Burkhard Kiesekamp, B.A., M.A.

Wallace G. Mills, B.A., M.A.

John R. MacCormack, B.A., M.A., Ph.D.

Keith A. Sutherland, B.S. Ed., M.A., Ph.D.

## Requirements For Admission

The general requirement for admission to Graduate Studies which requires the applicant to hold a Bachelor's degree equivalent to an Honours degree in History from Saint Mary's University.

## PHILOSOPHY

Robert N. Ansell, B.A.  
Richard H. Beis, B.A., M.A., Ph.D.  
Rolf Gruner, Ph.D.  
Henry J. Labelle, S.J., B.A., M.A., S.T.L., Ph.L., Ph.D.  
Rowland C. Marshall, B.A., M.A.  
Arthur P. Monahan, B.A., M.A., Ph.D., M.S.L.  
Charles M. Myers, B.S., M.A., Ph.D.  
William A. Stewart, S.J., B.A., S.T.L., Ph.L.

## Requirements For Admission

The general requirement for admission to Graduate Studies which requires the applicant to hold a Bachelor's degree equivalent to an Honours degree in Philosophy from Saint Mary's University is specified by the following details: some acquaintance with modern logic, and with the various sections of the history of philosophy: ancient, mediaeval modern, contemporary.

## Requirements For The Master of Arts Degree

Each student's program is arranged individually in consultation with the Department in relation to the student's preparation and interests, and keeping in mind the value of a general familiarity with the history of philosophy.

## Courses

Philosophy 500: Modern Logic	
Philosophy 501: Plato and Aristotle	
Philosophy 502: Mediaeval Philosophy	A. P. Monahan
Philosophy 503: British Empiricism	
Philosophy 504: Continental Idealism, Descartes to Hegel	R.C. Marshall
Philosophy 505: Continental Existential Thought	A. P. Monahan
Philosophy 506: Contemporary Analytic Thought	R. H. Beis
Philosophy 507: Phenomenology	R. C. Marshall
Philosophy 508: Augustine and Aquinas on the nature of Philosophy	A. P. Monahan

Philosophy 509: Epistemology of Lonergan	W. A. Stewart, S.J.
Philosophy 510: Philosophy of History	R. C. Marshall
Philosophy 511: Advanced Ethical Theory	R. H. Beis
Philosophy 512: Philosophy of Language	M. Myers
Philosophy 513:	
Philosophy 550: Staff Seminar	
Philosophy 600: Research and Thesis	

## **SOCIAL WORK**

The Maritime School of Social Work was incorporated in 1941 to meet an urgent need for trained social workers in the Maritime Provinces. The school is recognized by the Canadian Association of Social Workers and its graduates are accepted for membership.

Saint Mary's University, along with the Universities of Acadia, Mount Allison, Saint Francis Xavier, and University of King's College, grants the Master of Social Work degree to students who meet the requirements of the University and who are recommended for the degree by the Maritime School of Social Work.

## **DEGREE OF MASTER OF SOCIAL WORK**

The academic requirement for admission to candidacy for the degree of Master of Social Work is a Bachelor of Arts degree with high standing, or equivalent university training.

Students planning graduate work in Social work should, where possible, emphasize Psychology or Sociology in their undergraduate courses. It would be desirable to complete a major and minor in these disciplines. Courses should be also taken in Political Science (Government of Canada), Economics, Philosophy and Biology.

In the descretion of the Admissions Committee of the Maritime School of Social Work, applicants may be required to undertake work in these fields as a prerequisite to admission.

Further information regarding courses, requirements for admission, living costs and other matters, may be obtained by addressing: The Maritime School of Social Work, 6414 Coburg Road, Halifax, N. S.



## **COURSES OF INSTRUCTION**

**ACCOUNTING**

**ANTHROPOLOGY**

**BIOLOGY**

**BUSINESS  
ADMINISTRATION**

**CHEMISTRY**

**CLASSICS  
IN TRANSLATION**

**COMMERCIAL LAW**

**ECONOMICS**

**EDUCATION**

**ENGINEERING**

**ENGLISH**

**FRENCH**

**GEOLOGY**

**GERMAN**

**HISTORY**

**HISTORY OF ART**

**LATIN**

**MATHEMATICS**

**PHILOSOPHY**

**PHYSICS**

**POLITICAL SCIENCE**

**PSYCHOLOGY**

**SOCIOLOGY**

**SPANISH**

**THEOLOGY**

Unless otherwise designated all courses listed are full courses.

**NOTE: See explanation of Course Number System on page 47**

## **ACCOUNTING**

### **201: Introductory Financial Accounting**

A study of basic accounting concepts, and their application to business transactions and financial statements. An introductory consideration of asset and liability accounts, manufacturing operations, consolidated statements, and income tax matters.

**TEXT:** *Principles of Accounting—Introductory*—Finney & Miller (Canadian Edition) — (Prentice-Hall.)

*Lectures: Three hours a week, two semesters.*

*Laboratory: Two hours a week, two semesters.*

### **302: Intermediate Financial Accounting**

**Prerequisite:** Accounting 201.

A further study of the basic concepts of Accounting 201 with special reference to equity and asset accounts. Areas of attention include: the analysis and interpretation of financial statements, an introduction to cost accounting, profit planning, and accounting aids to management.

**TEXT:** *Principles of Accounting—Intermediate*—Finney & Miller (Canadian Edition) — (Prentice-Hall.)

*Lectures: Three hours a week, two semesters.*

*Laboratory: Two hours a week, two semesters.*

### **303: Advanced Financial Accounting**

**Prerequisite:** Accounting 201, 302.

Study of partnerships, consolidations, estates and other advanced areas. Further work in analysis of financial statements and accounting theory.

**TEXT:** *Principles of Accounting—Advanced*—Finney & Miller—(Prentice-Hall)

*Lectures: Three hours a week, two semesters.*

### **304: Cost and Managerial Accounting**

**Prerequisite:** Accounting 201, 302.

The study of cost accounting principles and procedures with emphasis upon managerial uses in the planning and control of operations and for special decisions.

**TEXT:** *Cost Accounting* — Horngren — (Prentice-Hall.)

*Lectures: Three hours a week, two semesters.*

### **305: Auditing and Taxation**

**Prerequisite:** Accounting 201, 302.

Auditing principles and procedures including verification and statement presentation of assets, liabilities, equity and profit and loss accounts. A study of the Income Tax Act and its application to corporate and individual taxpayers.

**TEXT:** *Auditing: Principles & Procedures* — Holmes — (Irwin)

*Lectures: Three hours a week, two semesters.*

### **306: Data Processing and Systems Analysis**

Prerequisite: Accounting 201, 302

An introduction to punched card and electronic data processing including computer applications to business and programming. Further study in computer science for business to include systems and models, simulation, and probability concepts.

TEXTS: *Business Information Processing Systems*—Elliott and Wasley—(Irwin)  
*Systems Analysis*—McMillan and Gonzalez—(Irwin.)

Lectures: *Three hours a week, two semesters.*

### **307: Accounting Seminar**

Prerequisite: Accounting 201, 302.

An intensive study of problems of income determination and asset valuation and current developments in accounting research and theory. Topics will be selected from financial and managerial accounting, taxation, auditing and other fields related to accounting.

TEXT: *Accounting Theory*—Hendriksen—(Irwin.)

REFERENCES: Various other books and journals.

Lectures: *Two hours a week, two semesters (two hour sessions).*

## **ANTHROPOLOGY**

### **305: Anthropology and Sociology**

Prerequisite: One course in Biology, Geology, or Sociology.

The aim of the course is to acquaint the student with the major branches of "The Science of Man", i.e. physical and cultural anthropology. Illustrated with slides and filmstrips.

TEXT: *What Happened in History*—V. G. Childe  
*Adam's Ancestors*—L. Leakey  
*The Science of Man*—A. Montagu.

Selected References: To be announced.

Lectures: *Two periods of 75 minutes a week, two semesters.*

### **319: Pre-classical Ancient History**

Prerequisite: One University History course.

This course deals with the Birth of Civilization in the Mediterranean East. It surveys the history of Egypt and ancient Mesopotamia, starting with the invention of writing shortly before 3000 B.C., and ending with Alexander's victory over the Persians in 330 B.C. Illustrated with slides and filmstrips.

TEXT and READINGS: To be announced.

Lectures: *Two hours a week, two semesters.*

# BIOLOGY

## **200: Principles of General Biology (Arts)**

Class designed for arts students, who do not intend to take any other courses in Biology.

TEXTS: To be announced.

Lectures: *Three hours a week, two semesters.*

Laboratory: *Three hours a week, two semesters.*

## **111 (120): Principles of General Biology.**

Class designed for Science students, or Arts students planning to enter the Schools of Medicine or Dentistry. A study of the chemical, physical and biological principles governing the different forms of life.

TEXT: To be announced.

Lectures: *Three hours a week, two semesters.*

Laboratory: *Three hours a week, two semesters.*

## **204: Botany**

Prerequisite: Biology 111 (120)

A study of different plant groups (Viruses, Bacteria, Fungi, Algae, Bryophytes, Ferns, Gymnosperms, and Angiosperms). Introduction to physiological processes in plants, including photosynthesis, transpiration, absorption, nutrition, enzymes and hormonal action and growth.

TEXT: To be announced.

Lectures: *Three hours a week, two semesters.*

Laboratory: *Three hours a week, two semesters.*

## **205: Zoology**

Prerequisite: Biology 111 (120)

Systematic study of invertebrate animals and the Chordate Classes with emphasis on phylogenetic relationships, structure and function. Consideration of principles of Zoology as revealed by the systematic treatment, including the uses of taxonomy, morphology, embryology and the theory of evolution.

TEXT: to be announced.

Lectures: *Three hours a week, two semesters.*

Laboratory: *Three hours a week, two semesters.*

## **301: Invertebrates**

Prerequisite: Biology 111 (120) and 205.

The study of the structure, life history, parasitic relations to man and ecology of the main groups of land, freshwater and marine invertebrates (with emphasis on the latter).

TEXT: To be announced.

Lectures: *Two hours a week, two semesters.*

Laboratory: *Three hours a week, two semesters.*

## **302: Cytology**

Prerequisite: Biology 111 (120), 204 and 205.

Study of the microanatomy of plant and animal cells and tissues.

TEXT: To be announced.

Lectures: *Two hours a week, two semesters.*

Laboratory: *Three hours a week, two semesters.*

### **303: Biology of Fishes**

Prerequisite: Biology 111 (120), 205 and 320.

A study of the embryology, anatomy, physiology and classification of the class fishes, covering the integumentary, skeletal, muscular, nervous, digestive, respiratory, circulatory, endocrine, excretory and reproductive systems. In classification and geographical distribution, emphasis will be given to the marine fauna of the North Atlantic area and freshwater species of Nova Scotia.

TEXT: To be announced.

Lectures: *Two hours a week, two semesters.*

Laboratory: *Three hours a week, two semesters.*

### **305: General Physiology**

Prerequisite: Biology 111 (120), 204 and 205.

An introduction to the biological processes in living organisms from a chemical and physical point of view.

TEXT: To be announced.

Lectures: *Three hours a week, two semesters.*

Laboratory: *Three hours a week, two semesters.*

### **306: Microbiology**

Prerequisite: Biology 111 (120) and Chemistry 121.

Morphology, biochemical activity and classification of microorganisms (viruses, bacteria, molds, yeasts and other microorganisms.)

TEXT: To be announced.

Lectures: *Two hours a week, two semesters.*

Laboratory: *Three hours a week, two semesters.*

### **307: General Genetics**

Prerequisite: Biology 111 (120), 204, 205 and Chemistry 121.

Introduction to the study of inheritance in animals and plants.

TEXT: *Principles of Genetics*—Sinnot, Dunn, Dobzhansky (McGraw-Hill).

Lectures: *Two hours a week, two semesters.*

Laboratory: *Three hours a week, two semesters.*

### **308: Embryology and Histology**

Prerequisite: Biology 111 (120), 205 and Chemistry 121.

Early developmental processes common to vertebrate embryos.

The establishing of the body and the laying down of the organ systems as exemplified by the chick and mammalian embryos.

TEXT: *Foundations of Embryology*—Patten (McGraw-Hill).

Lectures: *Two hours a week, two semesters.*

Laboratory: *Three hours a week, two semesters.*

### **309: Statistics applied to Biological problems**

See Mathematics 212.

### **229: General Ecology**

Prerequisite: Biology 111 (120), 204 and 205.

Biotic interrelations of animal and plants and the influence of the physico-chemical features of the environment.

Populations, communities, habitats and ecosystems. Applied ecology and natural selection. Field work in various habitats.

TEXT: *Ecology*—S. P. Odum (Saunders)

Lectures: *Two hours a week, two semesters.*

Laboratory: *Field Work:—Three hours a week, two semesters.*

### **230: Comparative Anatomy**

Prerequisite: Biology 111 (120) and 205.

A comparative study of the anatomy of the five classes of vertebrates (fishes, amphibians, reptiles, birds and mammals). The detailed study of anatomy covers the integumentary, skeletal, muscular, nervous, respiratory, circulatory, urogenital and endocrine systems.

TEXT: *The Vertebrate Body*—Romer (Saunders)

Lab Guide: *Atlas and Dissection Guide for Comparative Anatomy*—Saul Wischnitzer (Freeman)

Lectures: *Two hours a week, two semesters.*

Laboratory: *Three hours a week, two semesters.*

## **BUSINESS ADMINISTRATION**

### **301: Management Principles and Organization Theory**

A study of fundamental concepts of management; decision making; management planning, organizing, actuating and controlling; and the process of management in selected areas.

TEXT: *Principles of Management*—Terry—Irwin;  
*Management, a Book of Readings*—Koontz & O'Donnell—  
(McGraw-Hill)

Lectures: *Three hours a week, two semesters.*

### **302: Business Finance**

Prerequisite: Accounting 201, 302.

A study of the financial policies and structures of the principle forms of business organization. Matters relating to short, intermediate, and long-term financial decisions receive close attention.

TEXT: *Financial Management*—Johnson—Allyn and Bacon.

Lectures: *Three hours a week, two semesters.*

### **303: Cost and Managerial Accounting**

Prerequisite: Accounting 201, 302.

Study of cost accounting principles and procedures with emphasis upon managerial uses in the planning and control of operations and for special decisions.

TEXT: *Cost Accounting*—Horngren—(Prentice-Hall.)

Lectures: *Three hours a week, two semesters.*

### **305: Principles of Marketing**

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

TEXT: *Basic Marketing*—McCarthy—Irwin.

Lectures: *Three hours a week, two semesters.*

### **306: Human Relations**

Prerequisite: Business Administration 301.

An introductory study of organizational and administrative behavior with emphasis upon the patterns and theory of human behavior in industry.

TEXT: *Managerial Psychology*—Leavitt—(University of Chicago Press;)

*Readings in Managerial Psychology*—Leavitt and Pondz—(University of Chicago Press.)

Lectures: *Three hours a week, two semesters.*

### **307: Industrial Relations and Personnel Management**

Organization and management of personnel; procurement and placement of personnel; improvement of performance; motivation; communication; supervision; the work group; discipline; management and labor relations; remuneration; security.

TEXT: *Personnel Management*—Sherman and Chruden—(Southwestern).

*Readings in Personal Management*—Sherman and Chruden—(Southwestern).

Lectures: *Three hours a week, two semesters.*

### **310: Business Policy**

The perspective of top management; sizing up situations, formulating policies, discovering opportunities and planning programs of action; organizing administrative personnel and putting plans into action; control; follow up and appraisal; day to day administrative problems; the business leader and public responsibility.

TEXT: *Business Policy*—Text and Cases—Learned, Christensen, Andrews, and Guth-Irwin.

Lectures: *Three hours a week, two semesters.*

## **CHEMISTRY**

### **121: General Chemistry**

An introduction to fundamental principles, valence, molecular, ionic, molecular orbital theory, reaction rates, equilibrium, periodic table, radioactivity, introduction to organic chemistry and other basic phenomena.

TEXT: *General College Chemistry*—C. W. Keenan, J. H. Wood—(Harper and Row), 3rd Ed. 1966.

Lectures: *Three hours a week, two semesters.*

Laboratory: *Three hours a week, two semesters.*

### **202: Elementary Physical and Analytical Chemistry.**

Prerequisite: Chemistry 121.

Theory and techniques of qualitative and quantitative analysis, ionic equilibria, pH, phase equilibria.

TEXT: *Qualitative Elementary Analysis*, E. H. Swift, W. P. Schaeffer—(W. H. Freeman & Co.)

Lectures: *Two hours a week, two semesters.*

Laboratory: *Three hours a week, two semesters.*

### **303: Elementary Inorganic Chemistry**

Prerequisite: Chemistry 121.

Theory of inorganic elements, periodic classification of elements, introduction to instrumental chemistry.

TEXT: To be announced.

Lectures: *Three hours a week, two semesters.*

Laboratory: *Three hours a week, two semesters.*

### **304: Organic Chemistry**

Prerequisite: Chemistry 121.

A comprehensive course of organic chemistry with accent on the accepted modern theories related to aliphatic and aromatic compounds.

TEXT: *Organic Chemistry*, Brewster & McEwan (Prentice-Hall) Senior Edition 1961; Lab Manual—Lowy-Baldwin, 3rd Edition.

Lectures: *Three hours a week, two semesters.*

Laboratory: *Three hours a week, two semesters.*

### **306: Physical Chemistry**

Prerequisite: Mathematics 121, 2nd year Chemistry courses 203, 202.

Gas laws, perfect & imperfect, review of mechanics, first law of thermodynamics, thermo chemistry, second and third laws of thermo-dynamics, changes of states, phase rule, solution equilibria. Kinetic theory, molecular speeds, mean free path, effusion, molecular collisions, viscosity, velocity distributions, rotations & vibrations of molecules, equipartition of energy, orders of reactions, collision theory, chain reactions, transition-state theory, equilibrium constants.

TEXT: *Physical Chemistry*—Daniels & Alberty (Wiley)

Lectures: *Three hours a week, two semesters.*

Laboratory: *Three hours a week, two semesters.*

### **307: Advanced Quantitative Analysis**

Prerequisite: Chemistry 202.

A comprehensive extension of Chemistry 202 with particular emphasis on advanced laboratory procedures used in inorganic analysis.

TEXT: *Quantitative Chemistry*—G. H. Brown & E. M. Sallee (Prentice-Hall)

Laboratory and Conference: *Six hours a week, two semesters.*

### **308: Chemical Thermodynamics**

A comprehensive study of heat transfer in chemical reactions.

TEXT: To be announced.

Lectures: *Two hours a week, two semesters.*

Laboratory: *Three hours a week, two semesters.*

### **309: Electrochemistry**

A comprehensive study of electrochemicals.

TEXT: To be announced.

Lectures: *Three hours a week, two semesters.*

Laboratory: *Three hours a week, two semesters.*



#### 410: Organic Qualitative Analysis

Prerequisite: Chemistry 304, 306.

A course covering the methods of detection and identification of fundamental organic chemical groups and compounds.

TEXT: *The Characterization of Organic Compounds*, McElvain (Macmillan) Revised Edition

Laboratory and Conference: Six hours a week, two semesters.

#### 412: Quantum Mechanics, Molecular Structures

Prerequisite: Chemistry 306, 307, 304.

An advanced course dealing with the modern day concepts of chemical bonding.

TEXTS: *Structures of Molecules*—G. M. Barrow,  
*Atomic Spectra & Atomic Structure*—G. Herzberg,  
*Valence*—C. A. Coulson,  
*Molecular Structures*—Wheatley

Lectures: Three hours a week, two semesters.

Laboratory: by arrangement.

## CLASSICS IN TRANSLATION

#### 201:

The classical literature of Greece and Rome in translation. This course is recommended to all Arts students who are not taking Latin in their programme.

TEXT: *Hellas*—Robinson; *The Greeks*—Kitto; *A History of Greek Literature*—Hadas; *Illiad, Odyssey*—Homer; *Poetics*—Aristotle; *Ten Greek Plays*—Lind (ed.); *The Peloponnesian War*—Thucydides.

Lectures: Three hours a week (or equivalent), two semesters.

## COMMERCIAL LAW

#### 201:

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

TEXT: *The Law and Business Administration in Canada*—Smyth & Soberman.

Lectures: Three hours a week, two semesters.

## ECONOMICS

#### 101: Economic History of Europe

The economic history of Europe from the Roman Empire to the present day. Manor system of the middle ages, guilds and mercantilism, laissez-faire, capitalism and industrial revolution; background of the 20th century.

Lectures: Three hours a week, two semesters.

### **302: General Principles of Economics**

This Course is prerequisite to Economics 306, 307 and 308.

An introduction to economic analysis covering general price theory; the theory of the firm: production, cost, revenue and profit maximization; the theory of distribution; national income determination; national accounting money; chartered and central banking; international economic relations; economic policy: monetary, fiscal, commercial; a comparison of free-market economy with the centrally planned economy; highlights of Canada's postwar economic experience.

*Lectures: Three hours a week, two semesters.*

### **303: Business and Economic Statistics**

This course provides an introduction to the main statistical methods used in economics. The topics will include the collection, analysis and interpretation of statistical data; frequency distributions; measures of central tendency and dispersion; probability theory; estimations of parameters and hypotheses testing; analysis of variance; regression and correlation analysis; time series; index numbers; a brief survey of Canadian economic statistics.

*Lectures: Three hours a week, two semesters.*

### **304. Economic History of Canada and the United States**

Economic aspects of American history from the Revolution to the New Deal.

Canadian economic history; fisheries, fur trade, timber trade; railways and confederation; the St. Lawrence canals. The strategy of development; wheat economy; new industrialism; St. Lawrence Seaway.

*Lectures: Three hours a week, two semesters.*

### **307: Money, Banking, International Payment**

Prerequisite: Economics 202.

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

*Lectures: Three hours a week, two semesters.*

### **308: Business Cycle Theory**

Prerequisite: Economics 202.

The nature of economic fluctuations; description and measurement of the business cycle; the tools of theoretical analysis; monetary aspects; international spread of the cycle; the problem of full employment; stabilization policies; economic fluctuations and economic growth.

*Lectures: Three hours a week, two semesters.*

### **310: Theory of Economic Development**

The concept of economic dynamics; determinants of economic growth; consumption, savings and capital formation; capital-output ratio; the problem of balanced growth; a survey of recent experience in development planning.

*Lectures: Three hours a week, two semesters.*

### **311: Development of Economic Ideas**

The course traces the development of economic ideas from the Middle Ages to the present. Students will be introduced to the theories of the main economic schools, especially in the light of their contribution to contemporary economic thinking.

*Lectures: Three hours a week, two semesters.*

### **312: International Economics**

A credit in Economics 307 is no prerequisite but highly recommended.

The course offers students an analysis of theory, institutions, and policy pertaining to economic relations between nations. Foreign exchange markets, balance of payments, adjustment mechanism and international capital flows are discussed. The technique of the I.M.F. will be explained, together with the deficiencies of this world body. Proposals for world monetary reform will be scrutinized.

*Lectures: Three hours a week, two semesters.*

### **313: Micro-Economic Theory**

This course will deal with market price determination, theory of consumer demand, theory of the firm, and distribution theory.

*Lectures: Three hours a week, two semesters.*

### **314: Macro-Economic Theory**

Basic Macro-Economic concepts, classical economics, Keynesian economics and extensions.

*Lectures: Three hours a week, two semesters.*

### **315: Comparative Economic Systems**

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

TEXT: To be announced.

*Lectures: Three hours a week, two semesters.*

## **EDUCATION (B.Ed. Courses)**

### **401: Philosophy of Education**

A fundamental study of the nature and aims of education culminating in the formulation of a truly humanistic Philosophy of Education for modern times.

*Lectures: Three hours a week, two semesters.*

### **402: Psychology of Education**

A study of the nature, equipment, growth, development, evaluation, and adjustment of the learner. Psychology 120 or equivalent is the normal prerequisite or concurrent requirement but may be waived for students who have completed readings prescribed by the School of Education.

*Lectures: Three hours a week, two semesters.*

#### **403: General Methods of Teaching**

The application of the elementary principles of Philosophy and Psychology of Education to the organization and presentation of subject matter in the classroom.

*Lectures: Three hours a week, two semesters.*

#### **404: History of Education**

A survey of our educational heritage aimed at assisting in the formation of sound educational principles and practices.

*Lectures: Three hours a week, two semesters.*

#### **405: Practice Teaching**

One hundred hours of observation and practice teaching in the public school system.

#### **406: Contents and Methods of Specific High School Subjects**

The seminars comprising this course discuss the concepts and competencies which the junior and senior high school teacher of a given subject should be concerned with developing in his students, and the methods most conducive to that development.

*Sessions: Three hours a week, two semesters.*

#### **407: Sociology of Education**

The principles connecting the social, political and economic life of the community with the education of its young.

*Lectures: Three hours a week, two semesters.*

#### **408: Guidance**

The theory and practices of educational, vocational and personal guidance in relation to the aims of education.

*Lectures: Three hours a week, two semesters.*

## **EDUCATION (M.A. Courses)**

#### **Philosophy 511: The Metaphysics of Love**

A seminar and lecture course on the cultural significance of the metaphysics of love.

*Sessions: Three hours a week, two semesters.*

#### **Philosophy 521: Theory of Knowledge**

A lecture and seminar course based on Lonergan's *Insight* and directed towards developing an epistemology. (Supersedes Philosophy 521: Metaphysics of Thought.)

*Sessions: Three hours a week, two semesters.*

#### **Philosophy 531: Knowledge and Myth**

A seminar on the relationship of myth to human knowledge at various stages of history, including primitive cultures, Greek and Roman society, and contemporary society.

*TEXTS: Iliad, Odyssey—Homer; Selected Dialogues—Plato; Myth and Myth Making—Murray; Greek Myths and Christian Mystery—Rahner*

*Sessions: Three hours a week, two semesters.*

**English 514: British Literature for Teachers**

The cultural background and methodology for the teaching of high school English.

*Sessions: Three hours a week, two semesters.*

**English 524: Philosophy of Drama**

A seminar course in the source, nature and purpose of the modern drama.

*Sessions: Three hours a week, two semesters.*

**English 534T:**

A tutorial course to be adapted to the special requirements of candidates specializing in literary research.

**History 516: Historical Research**

A seminar and lecture course in the backgrounds required for the teaching of history. Course may be repeated if different historical periods are studied.

*Sessions: Three hours a week, two semesters.*

**Psychology 513: Psychology of Communication**

A seminar and lecture course in the psychological and epistemological obstacles to good communication.

*Sessions: Three hours a week, two semesters.*

**Psychology 532: Personality Development**

A lecture and seminar course dealing with the main theories of personality and of personality development. Emphasis will be laid on the Dynamic interpretation of development, with particular reference to the school situation at all ages.

*Sessions: Three hours a week, two semesters.*

**Psychology 542: Motivation and Learning**

**Prerequisite:** Education 402 (Psychology of Education) and Psychology 203 (Psychology of Learning and Motivation), or the permission of the professor.

A seminar course which discusses the tenets of modern learning theory as developed through the findings of experimental psychology. The following are examples of the type of topic dealt with: development of learning theory, conditioning, reinforcement, punishment, memory, concept learning. Application of learning theory to the classroom situation will be encouraged.

*Sessions: Three hours a week, two semesters.*

**Psychology 552: Educational and Emotional Failure**

A lecture and seminar course devoted to the study of the causes and possible remedy of failure in educational performance and in emotional adjustment, these being considered separately and also in their effects on each other.

*Sessions: Three hours a week, two semesters.*

### **Sociology 523: Advanced Sociology of Education**

This is a seminar and lecture course on various phases of the social context of education.

*Sessions: Three hours a week, two semesters.*

### **Education 510: Graduate Research Seminar**

A seminar in research techniques culminating in the presentation and defence of theses.

*Sessions: One hour a week, two semesters.*

### **Education 520: Educational Statistics**

The purpose of this course is to develop an understanding of common statistical ideas and proficiency in the use and interpretation of certain statistical procedures in the field of education.

*Sessions: Three hours a week, one semester.*

*Half course.*

### **Education 539: Curriculum Development**

A survey of the field of curriculum and instruction; principles and procedures of curriculum development.

*Sessions: Three hours a week, one semester.*

*Half course.*

### **Comparative Education 516: Anglo-American Education**

A lecture and seminar course on education in the United Kingdom, the United States of America, English-speaking Canada, and selected countries with related educational patterns, aimed at the identification and analysis of common and distinguishing properties, practices and problems.

*Sessions: Three hours a week, two semesters.*

### **Comparative Education 526: Continental Education**

A lecture and seminar course on education in selected Continental European countries, including France, and selected societies with related educational patterns, including French-speaking Canada, aimed at the identification and analysis of common and distinguishing properties, practices and problems.

*Sessions: Three hours a week, two semesters.*

### **Education 519: Educational Administration**

A seminar and lecture course analyzing the executive requirements for institutional direction.

*Sessions: Three hours a week, two semesters.*

### **Education 529: Educational Supervision**

A seminar and lecture course in the requirements for the direction of teachers, courses, and student development in the public school.

*Sessions: Three hours a week, two semesters.*

## **ENGINEERING**

### **102: Engineering Measurements**

Care and use of instruments; theory of measurements; surveying methods; measurement of distance, difference in elevation, direction angles. The elements of circular and vertical curves; area and earthwork

calculations; applications of astronomy to engineering. Credit in this course is contingent upon successful completion of Survey Camp.

TEXT: *Measurements for Engineering and other Surveys*—Smirnoff (Prentice-Hall)

Lectures: *Three hours a week, two semesters.*

### 103: Surveying Field Course

Prerequisite: Engineering 102.

Survey course applied to practical surveying problems; the orderly compilation and recording of survey data. Transit and tape surveys, curve layouts, plane table work, astronomical observations.

TEXT: To be announced.

### 104: Graphics

A course in drawing combining the basis of Engineering Drawing with the principles of Descriptive Geometry, the theory of projection, primary and secondary auxiliary views, sectional views, basic descriptive geometry including curved and warped surfaces, development and intersections, vector geometry, engineering graphics and charts and graphical inter-  
gration.

TEXT: *Basic Graphics*—Luzadder (Prentice-Hall); *Engineering Graphics and Design Problems*—Earle, Cleland, Oliver, Stark, Mason, Bardell and Guerard, (Addison-Wesley); *Design and Descriptive Geometry Problems*—Earle, Cleland, Oliver, Stark, Mason, Bardell and Guerard, (Addison-Wesley).

Lectures: *Two hours a week, two semesters.*

Laboratory: *Three hours a week, two semesters.*

### 203: Graphic Statics

Prerequisite: Engineering 104, Mathematics 222 (concurrently).

Equilibrium polygon and polygonal frames for all systems of loads; graphical representation of shear and moment for non-continuous beams; roof trusses, bents, including dead and live loads with fixed ends and ends on rollers; simple cantilevers.

TEXT: *Graphic Statics*—Volume 1 (Vector Edition)

Lectures: *Two hours a week, one semester.*

Laboratory: *Three hours a week, one semester.*

### 204: Computer

An introduction to computer methods and the analysis of Engineering Problems using the computer.

TEXT: To be announced.

Lectures: *Two hours a week, one semester.*

### 301: Kinematics

Prerequisite: Engineering 104, Mathematics 122.

Displacement diagrams for linkages, instant centers, layout and drawing of some common mechanisms. Velocity determinations for linkages using instant centres and velocity vectors.

Acceleration determination with the use of acceleration diagrams, coriolis acceleration. Solution of velocity problems by analytical methods.

TEXT: *Mechanism Problems*—Series A—Hall & Azpell, (Pitman Publishing Corporation); *Kinematics of Machines*—Hinkle (Prentice-Hall).

Lectures: *Two hours a week, one semester.*

Laboratory: *Three hours a week, one semester.*

### 302: Applied Mechanics

Prerequisite: Mathematics 122, Mathematics 303 (concurrently)

Force, friction, determination of centroids and moments of inertia.

Rectilinear, curvilinear and rotational motion of particles and solid bodies; work, energy and power, impulse and momentum.

TEXT: *Engineering Mechanics*, Higdon & Styles (Part II) (Prentice-Hall)

Lectures: *Three hours a week, two semesters.*

### 303: Fluid Mechanics

Prerequisite: Mathematics 122.

A study of fundamentals of fluid mechanics based on an engineering science approach to compressible and incompressible fluids. Fluid properties and characteristics; fluid statics; conservation of mass and energy; Euler's equation of motion and Bernoulli's equation; impulse momentum in steady flow; and an introduction to the boundary layer concept.

TEXT: *Principles of Fluid Mechanics*—Kenyon (Ronald)

Lectures: *Three hours a week, one semester.*

Laboratory: *Three hours a week, one semester.*

### 304: Strength of Materials

Prerequisite: Mathematics 303 (may be taken concurrently).

An analytical treatment of stress-strain relationships for tension, compression and shear; torsion in shafts; shear and moment and stresses in beams; and statically indeterminate problems.

Physical properties of common materials used in structures and machines; their manufacture and fabrication. Testing machines and standard tests.

TEXT: *Mechanics of Materials*—Olsen (Prentice-Hall)

Lectures: *Three hours a week, two semesters.*

### 305: Electric Circuits

Prerequisite: Mathematics 122.

Circuit elements; Ohm's Law, Kirchoff's Laws, equilibrium equations (mesh and node); the principle of duality; network theorems; energy and power; complex impedance and the use of phasors; steady state analysis of circuits; two-terminal networks; two-terminal-pair networks and basic measurements.

TEXT: *Electrical Engineering Circuits*—H. H. Skilling (Wiley)

Reference: *Networks, Lines and Fields*—J. D. Ryder.

Lectures: *Three hours a week, two semesters.*



### **306: Engineering Thermodynamics**

Prerequisite: Physics 202, Mathematics 122.

The development of the general energy equation and the First Law; the Carnet Cycle and the development of the entropy concepts, steam power plants, refrigeration and gas engine applications.

TEXT: *Thermodynamics*—Van Wylen (Wiley)

Lectures: *Three hours a week, one semester.*

Laboratory: *Three hours a week, one semester.*

### **307: Heat, Power and Steady Flow Applications**

Prerequisite: Engineering Thermodynamics 306: Fluid Mechanics

303.

Theoretical heat engine cycles, modification of theoretical cycles in practice. Principles of operations of internal combustion engines, efficiencies and balance sheet. *Principles of operation of steam engine*; steam nozzles and turbines; gas turbines and elementary jet propulsion. Reciprocating pumps, centrifugal pumps; water turbines; impulse and reaction turbines.

TEXT: To be announced.

Lectures: *Three hours a week, two semesters.*

## **ENGLISH**

**101:**

A course in contemporary language and literature. A program of reading and writing dealing with contemporary concerns, together with an introduction to logic with a view to developing an analytic approach to the structure of expression.

TEXTS: *Thinking Straight, The Norton Reader*: M. C. Beardsley.

Lectures: *Three hours a week, two semesters.*

### **123: Shakespeare**

A critical study of Shakespeare's major dramatic and non dramatic works.

### **124: Literature and Society**

To exploit the relationship between Literature and Society through the examination of advertising techniques, mass media, the problems of mass production, levelling down and the use of leisure.

TEXT: To be announced.

### **125: Practical Criticism**

Critical examination of a variety of short texts in prose and verse. The aim is to encourage proper awareness in reading and clear, accurate writing.

TEXT: To be announced.

### **126: The Novel**

The aim is to apply close and strict reading habits in the critical examination of a principal literary form.

TEXT: To be announced.

**227: North American Literature**

This is not a survey course, but rather an attempt to encourage the student into reevaluation of North American culture by means of a critical scrutiny of some of its representative literature.

**231: 17th Century Poetry: 1600 - 1660.**

A study of the major literature of the late English Renaissance. Authors will include Donne and the Metaphysicals, Marvell, the Cavaliers and Milton.

TEXT: To be announced.

Students are advised to see the instructor for summer reading.

Lectures: *Two hours a week, two semesters.*

**232: Neo-Classicism: 1660 - 1780**

Dryden to Johnson. A course in English neo-classicism. Attention will center on the works of Dryden, Swift, Pope and Johnson.

TEXT: To be announced.

Lectures: *Two hours a week, two semesters.*

**233: Romantics: 1780 - 1840**

TEXT: *English Romantic Poetry and Prose—Noyes.*

Lectures: *Three hours a week, two semesters.*

**234: Victorian Literature**

TEXT: To be announced.

Lectures: *Three hours a week, two semesters.*

**235: The Modern Novel: 1880 - 1930**

**231: Middle English**

English Language and Literature from 1100 to 1500, with emphasis on the poetry of Chaucer.

TEXT: *Chaucer—Robinson; The Age of Chaucer—Ford.*

Lectures: *Three hours a week, two semesters.*

**232: Elizabethan and Jacobean Drama**

A study of the major works of Marlowe, Shakespeare, Jonson, Beaumont and Fletcher, Webster and others.

TEXT: Complete Shakespeare and selected volumes Oxford's Worlds Classics.

Students are advised to see the instructor for summer reading.

Lectures: *Two hours a week, two semesters.*

**233: The Novel: Defoe to Austen**

The origin and development of the Modern Novel from the early 18th Century periodical essay to the later works of Jane Austen.

TEXT: To be announced.  
*Seminar: Two hours a week, two semesters.*

**324: Modern Poetry**

A study of the major poets: Hopkins, Eliot, Yeats, Pound, and Dylan Thomas, together with selected readings, in Auden, e.e. cummings, A. E. Housman, Wallace Stephens, Robert Frost, and many others.

TEXT: *A Pocket Book of Modern Verse*, ed. Oscar Williams.  
(Washington Square Press, Inc.). Others to be announced.

**325: Epic Poetry**

**326: Literary Criticism**

Prerequisite: Three university courses in English.  
A survey of the History of English criticism and instruction in the techniques of practical criticism.

TEXT: To be announced.  
*Lectures: Three hours a week, two semesters.*

**331: Chaucer and his Contemporaries**

**332: Elizabethan Poetry and Prose**

TEXT: To be announced.  
*Lectures: Three hours a week, two semesters.*

**333: The Novel: Dickens to Lawrence**

**334: Literature, Thought, and Art: 1880 - 1930**

**335: Origins and Development of the English Language**

A study of the development of English sounds, grammar and vocabulary from 449 to the present.

TEXT: *Origins and Development of the English Language*—Pyles  
*Problems in the Origins and Development of the English Language*—  
Algeo and Pyles.

*Lectures: Two hours a week, two semesters; working sessions one hour a week, two semesters.*

**401: Ultimate Concern**

**402: Special Period**

**403: Special Author**

**404: Inter-disciplinary Seminar**

# FRENCH

N.B. COURSES ABOVE THE 102 LEVEL ARE TAUGHT IN FRENCH

## 102: Introduction to University French

Prerequisite: Junior Matriculation French, or French 001.

Intensive study of the basic structures of the language. Oral practice. Written composition. Students are required to pass an oral and written examination at the end of each semester.

TEXT: *Oral and Written French*—Stack (Oxford)

Lectures: *Three hours a week, two semesters.*

Language Laboratory: *Three half hours a week, two semesters.*

## 120: Oral and Written French

Prerequisite: Senior Matriculation French, or French 102.

The purpose of this course is to enable the student to develop proficiency in the use of the spoken language. The course also includes the writing of free compositions in French on topics of current interest.

TEXTS: *Le Français Accélééré*—Mauger et Bruèzière (Hachette); *Pronunciation Française*—J. V. Pleasants; *French Reference Grammar*—Fraser, Squair and Parker (Copp Clark); Larousse French English Dictionary.

Lectures: *Three hours a week, two semesters.*

Language Laboratory: *Three half hours a week, two semesters.*

## 200: Introduction to French Literature

An introduction to some of the major works of French Literature.

TEXTS: *Lectures Classiques et Modernes*—Hall et Michaud (Odysey); *Le Bourgeois Gentilhomme*—Molière; *Columba*—Mérimée; Harrap French English Dictionary.

Lectures: *Three hours a week, two semesters.*

## 300: XVI Century French Literature

TEXTS: *XVIe Siècle*—Lagarde et Michard (Bordas); Rabelais—*Oeuvres (Extraits)* 2 vols. (Classiques Larousse); Montaigne—*Essais*. 3 vols. (Nouveaux Classiques Larousse).

Lectures: *Three hours a week, two semesters.*

## 301: XVII Century French Literature

TEXTS: *XVIIe Siècle*—Lagarde et Michard (Bordas); Cinna—Corneille; *Iphigénie*—Racine; *Les Précieuses Ridicules*—Molière.

Lectures: *Three hours a week, two semesters.*

**302: XVIII Century Literature**

TEXTS: *XVIIIe Siècle*—Lagarde et Michard (Bordas); *Candide*—Voltaire; *Discours sur l'origine et les fondements de l'inégalité parmi les hommes*—Rousseau; *Le Mariage de Figaro*—Beaumarchais.

Lectures: Three hours a week, two semesters.

**307: XIX Century Romanticism**

TEXTS: *XIXe Siècle*—Lagarde et Michard (Bordas); *Atala*—Chateaubriand; *Ruy Blas*—Hugo; *Poésies Choisies*—Musset.

Lectures: Three hours a week, two semesters.

**308: XIX Century: Realism: Stendhal and Flaubert**

TEXTS: *Le Rouge et le Noir*, *La Chartreuse de Parme*—Stendhal; *Madame Bovary*, *L'Education Sentimentale*—Flaubert.

Lectures: Three hours a week, two semesters.

**309: XX Century Literature from 1900 to 1950**

TEXTS: *XXe Siècle*—Lagarde et Michard (Bordas); *L'Otage*—Claudel; *La Condition Humaine*—Malraux; *Les Mains Sales*—Sartre; *Antigone*—Anouilh (Editions de la Table Ronde); *La Reine morte*—Montherlant (Gallimard). *L'Etranger*—Camus—Livres de Poche, Université; *Les Cahiers Marcel Proust*, No. 3 (Gallimard)

Lectures: Three hours a week, two semesters.

**310: Contemporary French Literature**

TEXT: *Anthologie vivante de la littérature d'aujourd'hui*—Pierre de Boisdeffre (Librairie Académique Perrin).

Lectures: Three hours a week, two semesters.

**311: French Poetry from Baudelaire to Claudel**

TEXT: *Anthology of Modern French Poetry*—C. A. Hackett (Blackwood).

Lectures: Three hours a week, two semesters.

**312: French Canadian Literature**

A general survey of French Canadian Literature with special emphasis on the novel from 1930 to the present day.

TEXT: *Littérature Canadienne Française*—Baillargeon (Fides).

Lectures: Three hours a week, two semesters.

**313: French Civilization**

A study of France and of the French people, history, political institutions, social economic and cultural life.

TEXT: *Guide France* (Hachette); *France de Nos Jours*—Carlut et Brée (Macmillan).

Lectures: Three hours a week, two semesters

## GEOLOGY

**121: Introduction to Geology**

The Earth as a planet; minerals and rocks; surface and deep-seated processes. Structural evolution of North America with special reference to the Maritime area.

Economic Geology.

TEXT: To be announced.

Lectures: *Two hours a week, two semesters.*

Laboratory: *Three hours a week, two semesters.*

Field work as specified.

### **201: Crystallography and Mineralogy**

Morphological Classification and atomic structure of crystals; chemical mineralogy and determinative mineralogy.

TEXT: "Mineralogy"—Kraus, Hunt and Ramsdell (McGraw-Hill).

References: "Crystallography"—Chalmers et alia (Appleton-Century-Crofts)

"Mineralogy"—Berry and Mason (Freeman)

Lectures: *Three hours a week, two semesters.*

Laboratory: *Three hours a week, two semesters.*

### **202: Stratigraphy and Sedimentation.**

TEXT: To be announced.

Lectures: *Three hours a week, two semesters.*

Laboratory: *Three hours a week, two semesters.*

### **301: Optical Mineralogy and Petrology**

Prerequisite: Physics 111, Chemistry 121: prerequisite or concurrent: Geology 201.

The Optical properties of minerals. The description and interpretation of igneous, sedimentary and metamorphic rocks.

TEXT: To be announced.

Lectures: *Three hours a week, two semesters.*

Laboratory: *Three hours a week, two semesters.*

### **302: Structural and Field Geology.**

TEXT: To be announced.

Lectures: *Three hours a week, two semesters.*

Laboratory: *Three hours a week, two semesters.*

## **GERMAN**

### **100 (120): Introductory German**

This is an introductory language course for those beginning the study of German. Basic linguistic structures will be studied with particular emphasis on the oral aspect.

TEXT: To be announced.

Lectures: *Four hours a week, two semesters.*

Laboratory: *Three periods of  $\frac{1}{2}$  hour a week, two semesters.*

### **200: Intermediate German**

Prerequisite: German 120.

This course presents an intensified study of grammar and syntax and the reading of German texts.

TEXT: To be announced.

Lectures: *Three hours a week, two semesters.*

Laboratory: *Three periods of ½ hour a week, two semesters.*

### **250: German Literary Prose**

Prerequisite: German 200.

The aim of this course is to familiarize the student with the artistic qualities of German literary prose. Advanced grammar will be studied and short essays written.

TEXT: To be announced.

Lectures: *Three hours a week, two semesters.*

### **300: Modern German Literature**

A study of trends in modern German literature (Naturalism, Impressionism, Expressionism), also the study of German contemporary literature.

TEXT: To be announced.

Lectures: *Three hours a week, two semesters.*

### **304: Modern German Literature**

Prerequisite: German 250.

A study of contemporary German Literature.

TEXT: To be announced.

Lectures: *Three hours a week, two semesters*

## **HISTORY**

### **111 (120): Civilization in the West**

A survey course designed to explore the origins and development of the characteristic political, legal and cultural institutions of western civilization and their impact on other cultures.

TEXT: *Civilization in the West*—Brinton, Christopher and Wolff.

Lectures: *Three hours a week, two semesters.*

### **202: History of Canada**

A survey from the earliest times to the present, with emphasis on the French regime, the rivalry with Great Britain for control of the continent, British colonial rule, Confederation and the development of Dominion status.

TEXT: To be announced.

Lectures: *Three hours a week, two semesters.*

### **203: The Twentieth Century**

An historical approach to the major problems of our time. Emphasis will be placed upon the backgrounds to World Wars I and II; the emer-

gence of the United States as a world power; the Communist Revolution and its impact, and the problems of an industrial society.

TEXT: *Twentieth Century Europe*—C. E. Black and E. C. Helmreich

Lectures: *Three hours a week, two semesters.*

#### **204: Europe, 1815—1954**

An introduction to nineteenth and twentieth century Europe with particular emphasis on the diplomatic background of the first and second World Wars.

Lectures: *Three hours a week, two semesters.*

#### **207: An Introduction to American History**

A course for Freshmen or Sophomores not majoring in History, or History Honours. Attention will be given to the central themes of American history from the Revolution to World War I. Emphasis will be on the Revolution, Civil War, Economic Imperialism and the development of the American economy.

TEXT: *A Short History of the United States*—Allan Nevins and Henry Commager

Lectures: *Two hours a week, two semesters.*

#### **300: Pre-classical Ancient History**

Prerequisite: One university History course.

This course deals with the Birth of Civilization in the 'Mediterranean East'. It surveys the history of Egypt and Mesopotamia, starting with the invention of writing shortly before 3000 B.C., and ending with Alexander's victory over the Persians in 330 B.C.

Illustrated with slides and filmstrips.

TEXT: To be announced.

Lectures: *Two hours a week, two semesters.*

#### **301: History of Canada to 1867**

French Canada with special reference to its culture, the personalities of the period, and the struggle with the British for possession of the region. The British attempts to incorporate British North America into the British colonial system.

TEXT: To be announced.

Lectures: *Two hours a week, two semesters.*

#### **302: History of Canada, 1867 to present**

Confederation, the development of Dominion status, Canada's role in the two World Wars and international affairs.

TEXT: To be announced.

Lectures: *Two hours a week, two semesters.*

#### **303: Tudor and Stuart England**

The history of England with special emphasis on the development of the English parliament.

TEXT: *The Tudors and Stuarts*—M. M. Reese

Lectures: *Two hours a week, two semesters.*



### **306: Monarchy, Revolution and Empire**

The attempts of European societies to create a valid polity after the shocks of the Renaissance and Reformation. The course examines the political, economic, social and intellectual history of Europe from the end of the Thirty Years War to Waterloo (1648—1815).

*Lectures: Two hours a week, two semesters.*

### **309: The Pre-Reformation Church**

A detailed study of the various problems, political, intellectual, and religious, which had their origin during the period of early medieval Christendom, reached their climax towards the late middle ages, and resulted in the Reformation.

**TEXTS:** *A History of the Church, Vol. III: The Revolt against the Church: Aquinas to Luther*—Hughes, Philip (Sheed and Ward, New York)  
*Lectures: Two hours a week, two semesters.*

### **311: Medieval England**

Emphasis will be placed on constitutional developments and church-state relations.

**TEXTS:** *From Alfred to Henry III*—Brooke, *The Later Middle Ages*—Holmes.  
*Lectures: Two hours a week, two semesters.*

### **312: Medieval Europe**

The main currents of medieval European history with special emphasis on the intellectual and cultural aspects.

**TEXTS and READINGS:** To be announced.  
*Lectures: Two hours a week, two semesters.*

### **313: Europe, 1815—1870**

In this course particular emphasis will be placed on the history of France; on the revolutions of 1848—1849 and on the unification of Germany and Italy.

**TEXT:** *A history of Europe 1815—1939*—J.A.R. Marriott  
*Lectures: Two hours a week, two semesters.*

### **314: Europe 1870—1945**

**TEXT:** *A History of Europe*—J.A.R. Marriott  
*Lectures: Two hours a week, two semesters.*

### **315: 19th Century England**

The course examines the relationship between social change and political structure in a major power of nineteenth century Europe with particular emphasis on the emergence of new values in a society at once insular and European.

*Lectures: Two hours a week, two semesters.*

**316: Foundations of American History: Colonial Period to 1815**

A course which is concerned with the foundations of the American nation. Attention will be given to colonization, the growth of the Thirteen Colonies, their relationship with Great Britain culminating in the Revolution and the Establishment of the United States of America.

TEXT: *The Roots of American Civilization*—Curtis Nettels  
Lectures: *Two hours a week, two semesters.*

**317: America in the Nineteenth Century**

A course which discusses the growth of the United States from an agrarian-importing nation to an industrial-exporting nation. Emphasis will be on the internal problems of developing the country, expanding into the West, waging a Civil War and the triumph of the industrialists.

TEXT: *A Short History of the United States*, plus selected articles—Allan Nevins and Henry Commager.  
Lectures: *Two hours a week, two semesters.*

**318: America in the Twentieth Century**

A course concerned with the rise of financial capitalism and the United States as a world power.

TEXT: *A Short History of the United States*, plus selected articles—Allan Nevins and Henry Commager.  
Lectures: *Two hours a week, two semesters.*

**401: The Puritan Revolution and the Cromwellian Protectorate**

A pro-seminar with particular emphasis on political and economic changes during the Puritan Revolution.  
Lectures: *Two hours a week, two semesters.*

**402: The Era of the French Revolution**

The background, course and impact of the French Revolution.  
Lectures: *Two hours a week, two semesters.*

**403: German Foreign Policy 1890—1945**

The history of Germany with special emphasis on German foreign policy.  
Lectures: *Two hours a week, two semesters.*

**404: British Foreign Policy, 1890—1945**

Particular emphasis will be placed on Anglo-American relations, the Anglo-French Entente before 1914, and Anglo-German relations 1930—1945. Students will be expected to do considerable research in the diplomatic documents of the period.  
Lectures: *Two hours a week, two semesters.*

**405: United States Foreign Policy, 1890—1945**

Emphasis will be placed on the emergence of the United States as a world power prior to World War I; the retreat into isolation after 1918 and American-Japanese relations up to 1941.

*Lectures: Two hours a week, two semesters.*

**406: The Politics of the Peace Settlement 1919—1921**

A seminar in which students will be expected to work closely in the documentary sources.

*Lectures: Two hours a week, two semesters.*

**408: Church and State through the Ages**

An inter-departmental seminar made possible by the co-operation of the following departments: History, Philosophy, Political Science, and Theology.

**409: The Era of the American Civil War**

A course concerned with the causes and impact of the American Civil War.

**TEXT:** Selected articles, and extensive outside reading.

*Lectures: Two hours a week, two semesters.*

**410: A Period in the History of Nova Scotia**

A course designed for Honours History students who will be afforded an opportunity to use the original material as found in the Public Archives of Nova Scotia. The course will be conducted as a seminar with presentation of papers on given topics as well as discussion of these papers and related topics.

*Lectures: Two hours a week, two semesters.*

## HISTORY OF ART

**301.**

Prehistoric art; the art of Ancient Egypt, Crete; Classical Greek and Roman art; Early Christian Art; the Romanesque and Gothic era; the Art of Northern Europe; the Italian Renaissance.

**TEXTS and READINGS:** *The Magic of Art*—A. Czako (Pageant Press, New York); *History of Art*—H. W. Janson (Prentice-Hall); *Histoire de l'art, Vol. I-II*—P. Lavendan (Presses Universitaires de France, Paris); *Geschichte der Kunst, Vol. I-II*—R. Hamann (Munchen).

*Lectures: Three hours a week, two semesters.*

**302:**

Mannerism; the Age of the Baroque and Rococo; Flemish and Dutch art; Neo-classicism; Romanticism; Impressionism; Neo-impressionism; Expressionism; the art of the 20th century.

**TEXTS and READINGS:** As for History of Art 301.

*Lectures: Three hours a week, two semesters.*

# LATIN

## 101:

A course in the essentials of Latin for students who have not completed Matriculation Latin. A credit will be given on completion of Latin 102.

TEXT: *Latin Course for Schools*, Part I and Part II, Ch. 1-27 Incl.—Wilding.

Lectures: *Four hours a week, two semesters.*

## 102: First Year College Latin

Prerequisite: Matriculation Latin.

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

Literature: Cicero's *Pro Archia*.

TEXT: *Latin Course for Schools*, Part II, Ch. 27 to end and Part III—Wilding.

Lectures: *Three hours a week, two semesters.*

## 120: Introduction to Latin Epic Poetry.

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

TEXT: *Outline of Latin Prose Composition*—Vincent and Mountford; *Aeneid*: II, VI—Vergil; *Aeneid* (complete - in translation)

Lectures: *Three classes a week, two semesters.*

## 200:

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

TEXT: *Odes, Satires, Ars Poetica*—Horace

Lectures: *Three periods a week (or equivalent), two semesters.*

## 300:

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

Lectures: *Three hours a week, two semesters.*

## 301: Cicero's Rhetoric

An intensive study of Cicero's Rhetoric. Prose composition.

TEXT: *Pro Lege Manilia, Pro Marcello, Pro Ligario*

Lectures: *Three hours a week, two semesters.*

## 302:

A tutorial course on Cicero (*De Amicitia, De Senectute*) and Lucretius (*De Rerum Natura*). Roman History from its beginnings to the end of the Republic.

## 400:

A tutorial course; directed readings and research; ecclesiastical Latin or Latin Philosophical sources.

# MATHEMATICS

## 111. Algebra and Trigonometry

Prerequisite: Grade XI Mathematics.  
Mathematical method. The real number system. Elementary algebra. Linear and quadratic equations. Elements of vector and matrix algebra. Inequalities. Functions, relations, and graphs. Exponential and trigonometrical functions. Analytic geometry; circle, parabola, ellipse, and hyperbola.

TEXT: To be announced.

Lectures: *Three hours a week, two semesters.*

Tutorial: *Two hours a week, two semesters.*

## 121: Calculus I

Prerequisite: Grade XII Mathematics or Mathematics III.

Inequalities, absolute values, functions and their graphs. Elements of analytic geometry: line, circle, ellipse, hyperbola, parametric equations, polar co-ordinates. Limits, derivatives, integrals and their applications to algebraic, rational, trigonometric, inverse trigonometric, logarithmic and exponential functions. Elementary application of calculus. Algebra of complex numbers.

TEXT: *Calculus in the First Three Dimensions*—S. K. Stein.

Lectures: *Three hours a week, two semesters.*

Tutorial: *One hour a week, two semesters.*

## 209: Mathematics for Management

Prerequisite: Grade XII Mathematics or Mathematics III.

Solution of algebraic equations, functions and their graphs, business applications. Compound interest and annuities. Linear inequalities and linear programming. Calculus: differentiation and integration of functions, business applications involving maxima and minima, etc. Sets, subsets and applications. Elements of symbolic logic. Probability and statistics, applications to consumer surveys.

TEXT: *Applied Mathematics: an Introduction*—S. D. Theodore.

Lectures: *Three hours a week, two semesters.*

Tutorial: *One hour a week, two semesters.*

## 212: Applied Statistics

Prerequisite: Mathematics 121, 209, or permission of the Department.

The syllabus of this course is similar to that of Mathematics 213 but the treatment will be less rigorous. The emphasis will be on applications.

TEXT: *Mathematical Statistics*—J. E. Freund.

Lectures: *Three hours a week, two semesters.*

Laboratory: *Three hours a week, two semesters.*

### 213: Statistics I

Prerequisite: Mathematics 121, with 222 concurrently.

Elements of set theory, probability, conditional probability, Bayes-Laplace rule, binomial, hypergeometric, poisson, multinomial, uniform, exponential, gamma, beta, and normal distributions, Mathematical expectation, moments, moment generating functions. Chebychev's theorem. Sums of random variables. Sampling distributions, chi-square, F and T distribution. Point and interval estimation. Tests of hypotheses. Linear regression and correlation. Bivariate normal distribution. The method of least squares.

TEXT: *Mathematical Statistics*—J. E. Freund

Lectures: Three hours a week, two semesters.

Laboratory: Three hours a week, two semesters.

### 222: Calculus II

Prerequisite: Mathematics 121.

Argand plane. Vectors, matrices and determinants. Vector algebra. Infinite sequences and series. Convergence. Taylor's series. Partial differentiation. Ordinary differential equations. Laplace transform. Arc lengths. Multiple integrals. Applications to simple numerical analysis.

TEXT: *Calculus in the First Three Dimensions*—S. K. Stein.

Lectures: Two hours a week, two semesters.

Tutorial: Two hours a week, two semesters.

### 250: Analysis I

Prerequisite: Mathematics 111, with 121 concurrently

Sets and functions. Limits and continuity. The real numbers. Dedekind cuts. Weierstrass' theorem. The Heine-Borel theorem. Integrals, derivatives and the theorems of calculus. The convergence of infinite series and infinite integrals.

TEXT: To be announced.

Lectures: Three hours a week, two semesters.

### 305: Theory of a Complex Variable

Prerequisite: Mathematics 222 with 333 concurrently.

The complex plane. Elementary transformations and mappings. Analytic functions. Branch points and cuts. Infinite series and uniform convergence. Conformal mapping. Complex integration. Cauchy's theorem. Residues. Liouville's theorem and the fundamental theorem of algebra. The gamma, Bessel and Legendre functions. Asymptotic expansions.

TEXT: To be announced.

Lectures: Three hours a week, two semesters.

**306: Fundamental Concepts of Mathematics**

Prerequisite: Mathematics 222.

An examination of the axioms of geometry from Euclid to Hilbert. Formal axiomatics. Algebraic structure. The real number system, set theory, and logic. Elements of the philosophy of mathematics. Problems will constitute an integral part of the course.

TEXT: *An introduction to the Foundations and Fundamental Concepts of Mathematics*—Eves and Newsom.

Lectures: Three hours a week, two semesters.

**312: Linear Algebra**

Prerequisite: Mathematics 121, with 222 concurrently.

Abstract systems. Fundamental properties of vector spaces. Linear transformations and matrices. Linear equations and determinants. The Hamilton-Cayley theorem. Canonical forms. Metric concepts. Functions of matrices.

TEXT: To be announced.

Lectures: Three hours a week, two semesters.

Tutorial: One hour a week, two semesters.

**314: Statistics II**

Prerequisite: Mathematics 213.

Non-parametric methods; simple tests and estimation of hypotheses. Elements of sampling theory. Analysis of variance and related design of experiments.

TEXT: To be announced.

Lectures: Three hours a week, two semesters.

Laboratory: Three hours a week, two semesters.

**325: Ordinary Differential Equations**

Prerequisite: Calculus 222.

Classical techniques of solving first and second order equations. Systems of equations. Series solutions. Transform methods. Non-linear equations. Isoclines, and phase plane analysis. Various applications will be discussed in detail.

TEXTS: *Elementary Differential Equations and Boundary Value Problems*—Boyce and da Prima.

*Non-Linear Differential Equations*—Davies and James.

Lectures: Three hours a week, two semesters.

**333: Calculus III**

Prerequisite: Mathematics 121.

Uniform convergence. Series and limits. Fourier series. Vector algebra and matrices. Ordinary and partial differential equations. Laplace transform. Multivariable calculus. Jacobians.

TEXT: To be announced.

Lectures: Three hours a week, two semesters.

Tutorial: Two hours a week, two semesters.

**350: Analysis II**

Prerequisites: Mathematics 250 and 222, with 333 concurrently.

Metric spaces. Baire's theorem. Topological spaces. Compactness, separation, and connectedness. Approximation. Operators. Algebraic systems. Banach spaces and Hilbert spaces. Finite dimensional spectral theory.

TEXT: To be announced.

Lectures: Three hours a week, two semesters.

**415: Theory of Statistics**

Prerequisite: Mathematics 222 and 312. (Mathematics 213 is desirable but not essential).

Fundamental concepts and theorems of probability; Distribution functions as probability models for the discrete and continuous cases; Moment generating functions; Sampling distributions; Point and interval estimation; Statistical inference and hypotheses testing; Correlation and regression analysis.

TEXT: To be announced.

Lectures: Three hours a week, one semester.

Half Course

**416: Stochastic Processes**

Prerequisite: Mathematics 333 and 312.

Probability models for physical situations; Branching processes; Random walk; Markov chains; The Poisson Processes; The pure birth and death process; Waiting line and serving problems.

TEXT: To be announced.

Lectures: Three hours a week, one semester.

Half Course

**417: Introduction to Statistical Decision Theory**

Prerequisite: Mathematics 222 and 312. (Mathematics 213 is desirable but not essential).

Statistical decision problems; Bayes decision rule; Linear programming and its applications to statistical decision problems; Minimax Wald sequential rule; Conventional statistical theory and decision theory.

TEXT: To be announced.

Lectures: Three hours a week, two semesters.

Full Course

**450: Analysis III**

Prerequisite: Mathematics 350 and 333.

The Riemann Stieltier integral. Sequences and series of functions. Fourier analysis and generalized functions. Measurable sets and func-



tions. The Lebesgue integral. Set functions. Absolute continuity. Generalization of the integral.

TEXT: To be announced.

Lectures: Three hours a week, two semesters.

#### 452: Partial Differential Equations

Prerequisites: Mathematics 305 and 333.

Derivation of standard second order equations. Method of characteristics. Greens functions. Separation of variables, Poisson's integral. Integral transforms with emphasts on Laplace methods. Special functions.

TEXT: *A First Course in Partial Differential Equations*—H. F. Weinberg.

Lectures: Three hours a week, two semesters.

#### 455: Applied Complex Variable

Prerequisites: Mathematics 305, 333, 250, 325.

Conformal mapping. Integral transforms. Sturm-Liouville theory. Special functions and their applications. Asymptotic methods. Special techniques. Applications.

TEXT: *Functions of a Complex Variable*—Carrier, Krook & Pearson.

Lectures: Three hours a week, two semesters.

#### 456: Topics in Applied Mathematics

Prerequisites: Mathematics 305, 333, 250, 325.

Theorems of Gauss, Stokes, and Green. Curvilinear co-ordinate systems. Fourier series and integrals. Transform methods. Tensor analysis. Perturbation techniques and asymptotic expansions. Eigen value problems. Calculus of variations. Integral equations. Numerical methods.

TEXT: To be announced.

Lectures: Three hours a week, two semesters.

#### 457: Fluid Mechanics I

Prerequisites: Mathematics 305, 333, 250, 325.

Elementary theory of perfect fluids. Internal forces, conservation laws, Eulerian and Lagrangian approaches. Complex potentials, sources and sinks. Blasius' theorem, Flows past plates and cylinders.

TEXT: To be announced.

Lectures: Three hours a week, two semesters.

# PHILOSOPHY

## **120: Introduction to Philosophy**

An introductory examination of Philosophy as an intellectual discipline and type of knowledge and of its method of treating such problems as the nature of reality, human knowing and human values.

TEXT: To be announced.

Lectures: *Two hours a week, two semesters.*

Seminar: *One hour every second week.*

## **150: Modern Logic**

An introduction to the methods and problems of modern logic, designed to introduce students to the theoretical structure of logic and develop facility in its techniques.

TEXT: To be announced.

Lectures: *Three hours a week, two semesters.*

## **200: Philosophy of Being**

Prerequisite: Philosophy 120

An introduction to basic problems in metaphysics and the philosophical investigation of God; and an introduction to basic problems in theory of knowledge in the context of modern and contemporary philosophy.

TEXT: *Insigh*—Bernard Lonergan.

Lectures: *Two hours a week, two semesters.*

Seminar: *One hour every second week.*

## **250: Greek Philosophy**

An history of Greek philosophy with particular emphasis on its major figures, Plato and Aristotle.

TEXT: To be announced.

Lectures: *Three hours a week, two semesters.*

## **300: Introduction to Ethics**

Prerequisite: Philosophy 120.

An introduction to moral philosophy designed to acquaint students with historical expressions of basic ethical problems and with contemporary analytic approaches to ethics.

TEXT: *Approaches to Ethics*—Jones, Sontag, Beckner, and Fogelin; *Moral Philosophy*—Garner and Rosen; various volumes from the *History of Philosophy*—Copleston.

Lectures and Seminar: *Three hours a week, two semesters.*

## **306: Epistemology**

Prerequisite: Philosophy 120

An investigation of the problem of knowledge through a study of the epistemological thought of Bernard Lonergan.

TEXT: *Insight*—Bernard Lonergan

Lectures: *Two hours a week, two semesters.*

Seminar: *One hour every second week.*

### 350: Mediaeval Philosophy

A history of the major philosophical doctrines and currents in western Europe from the period of Augustine to the 15th century.

TEXT: *History of Christian Philosophy in the Middle Ages*—E. Gilson

Lectures: Three hours a week, two semesters.

### 351: Philosophy of Science

Prerequisite: Philosophy 120

An introduction to the main problems of the philosophy of science designed to familiarise students with some of the contemporary analyses of scientific concepts and methods.

TEXT: *Introduction to the Philosophy of Science*: A. Pap

Lectures: Three hours a week, two semesters.

### 352: British Empiricism

Prerequisite: Philosophy 120

A history of the development of the empiricist school of British philosophy from Francis Bacon to John Stuart Mill.

TEXT: Readings in Bacon, Hobbes, Locke, Hume, Bentham and Mill.

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

### 353: Continental Idealism, Descartes to Hegel

Prerequisite: Philosophy 120

A lecture and seminar course to examine the development of rationalist and idealist thought from Descartes to Hegel.

TEXT: Readings in Descartes, Malebranche, Spinoza, Leibniz, Kant, Fichte, Schelling and Hegel.

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

### 354: Metaphysics as a Knowledge of God

Prerequisite: Philosophy 120.

What is the idea of metaphysics? Is it possible? Does it exist? This course studies these problems while introducing the student to three classical works, the *Metaphysics* of Aristotle, the *Summa Theologiae (prima pars)* of St. Thomas Aquinas, and the *Critique of Pure Reason* of Immanuel Kant.

Lectures: Three hours a week, two semesters.

### 452: Phenomenology

Prerequisite: Philosophy 120 and a second course in Philosophy.

The origins, development, concepts, method and influence of the phenomenological movement in contemporary Philosophy.

TEXTS: Selections from Husserl, Heidegger, Sartre, Merleau-Ponty. *The Phenomenological Movement*: H. Spiegelberg, 2 vol.

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

#### **453: The Philosophy of History**

Prerequisite: Philosophy 120 and a second course in Philosophy.

A critical study of major theories and conceptions of history, and consideration of the nature and value of history, and of its principles of explanation, selection and evidence.

TEXTS: Significant selections and works from Augustine to the present.

*Lectures and Seminar: Three hours a week, two semesters.*

#### **454: Contemporary Existentialist Thought**

Prerequisite: Philosophy 120 and a second course in Philosophy.

A lecture and seminar course to examine the origins, expressions and significance of nineteenth and twentieth century existentialism.

TEXTS: Readings in Kierkegaard, Nietzsche, Jaspers, Heidegger, Marcel, Sartre, Camus.

*Lectures and seminar: Three hours a week, two semesters.*

#### **455: Contemporary Analytic Philosophy**

Prerequisite: Philosophy 120 and a second course in Philosophy.

A lecture and seminar course to examine the origins, expressions and significance of the contemporary analytic movement in philosophy.

TEXTS: Readings from representative members of the Analyst School.

*Lectures and Seminar: Three hours a week, two semesters.*

#### **456: Advanced Ethical Theory**

Prerequisite: Philosophy 120 and a second course in Philosophy.

A lecture and seminar course to examine certain fundamental problems of contemporary ethics. Attention will be concentrated on metaethical problems which arise from and are discussed in the writings of Moore, Stevenson, Hare, Nowell-Smith, Frankena, Hampshire, and Brandt.

TEXT: Selected readings in the above mentioned authors.

*Lectures and Seminar: Three hours a week, two semesters.*

#### **457: Augustine and Aquinas on Philosophy**

Prerequisite: Philosophy 120

A lecture and seminar course to explore the meaning of philosophy and its relation to theology in the writings of Augustine and Aquinas.

TEXTS: Selected readings from Augustine and Aquinas.

*Lectures and Seminars: Three hours a week, two semesters.*

#### **459: Philosophy of language**

Prerequisite: Philosophy 120 and a second course in Philosophy.

A seminar course to examine the role of analogy, and perceptual vocabulary.

TEXT: To be announced.

*Seminar: Three hours a week, two semesters.*

# PHYSICS

NOTE: Students failing to complete a laboratory course prior to the date of examination will not be eligible to write the examination. Marks will be awarded for the practical work and combined with the examination results for the final mark.

## 111: General Physics

Introduction to mechanics, sound, light, heat and electricity.

TEXT: *Physics*—White (Van Nostrand)

Lectures: *Three hours a week, two semesters.*

Laboratory: *Three hours a week, two semesters.*

## 121: University Physics

Tutorial (Compulsory) one hour week.

Prerequisite: Physics 111 or a knowledge of Grade 12 Physics is necessary and it will be essential for students to be taking an Introductory Calculus course concurrently.

Topics will include: Mechanics, heat, sound, light and electricity

TEXT: *University Physics*—Sears and Zemansky

Lectures: *Three hours a week, two semesters.*

Laboratory: *Three hours a week, two semesters.*

## 222. Light, Electricity and Modern Physics

Prerequisite: Physics 112 or 121

Mathematics 222 (may be taken concurrently)

Nature and propagation of light, reflection and refraction at plane and spherical surfaces; lens aberrations, optical instruments, interference, diffraction, polarization and photometry, electric fields, circuits, thermal e.m.f., Dielectrics, magnetic field, D.C. meters, alternating currents, X-rays, photo electric effect, radioactivity, artificial nuclear disintegration.

TEXTS: *Optics*—Sears (Addison-Wesley); *Electricity, Magnetism*—Duckworth

Lectures: *Three hours a week, two semesters.*

Laboratory: *Three hours a week, two semesters.*

## 234: Introduction to Theoretical Physics

Prerequisite: Physics 222 and Mathematics 222 (concurrently)

Vectors and Scalars; Multiplication of a vector by a Scalar; Derivative of a Vector with Respect to a Single Scalar Variable; Scalar, or Dot, Product of Two Vectors; Vector, or Cross, Product of Vectors; The Gradient Vector; Scalar and Vector Fields; the Line Integral of a Vector; The Laws of Motion; Statics of a Particle; Statics of Rigid Bodies; Equilibrium of Rigid Bodies; Statics of the Suspended String or Cable; Work and Potential Energy; The law of Gravitation; Principle of Virtual Work; Stability of Equilibrium, Motion of a Particle in a Uniform Field; One-Dimensional Motion of a Particle Acted upon by a Constant Force; Flight of a Projectile: Oscillatory Motion of a Particle in one Dimension; The Damped Harmonic Oscillator; The Forced Harmonic Oscillator; Departures from Harmonic Oscillations Motion of a System of Particles; System of Particles; Motion of a Rigid Body in a Plane; Motion of a Particle Under the Action of a Central Force; Inverse-square Field; The Orbit; Kepler's Laws; Disturbed Circular Orbits; Apesides; Accelerated Reference Systems and Con-

strained Motion of a Particle; Motion of a Rigid Body in Three Dimensions; Generalized Coordinates.

TEXT: Introduction to Theoretical Mechanics by R. A. Beckey (McGraw).

Lectures: Three hours per week, two semesters.

### 333. Electromagnetic Theory

Prerequisite: Physics 222, Mathematics 222, Mathematics 333 (may be taken concurrently)

Alternating currents, development of the theory of electric and magnetic fields, solutions of Maxwell's equations, theory of light, potential, images, skin effect, multipoles.

TEXT: To be announced.

Lectures: Three hours a week, two semesters.

Laboratory: Three hours a week, two semesters.

### 336: Electric Circuits—See Engineering 305

### 337: Atomic and Nuclear Physics

Atoms, electrons, radiations, the nuclear atom, X-rays, and atomic structure, quantum theory of radiation, special theory of relativity, group velocity and wave velocity, atomic spectra and atomic structure, the nucleus, isotopes, natural radioactivity and the radioactive laws, artificial nuclear disintegration, artificial radioactivity alpha-decay, beta-decay and gamma-decay, nuclear reactions, nuclear forces, nuclear fission, nuclear energy source, particle accelerators.

TEXT: *Nuclear Physics*—Irvin Kaplan (Addison-Wesley)

Lectures: Three hours a week, two semesters.

Laboratory: Three hours a week, two semesters.

### 339: Physical Optics and Optical Instruments

Prerequisite: Physics 202, Mathematics 303.

Geometrical optics, optical design and instruments, Radiation laws, wave behavior of light and formulation of theories, Stimulated radiation and coherence theory, Lasers and Q-switching.

TEXT: *Principles of Optics*—Max Born and Emily Wolf

Lectures: Three hours a week, two semesters.

Laboratory: Three hours a week, two semesters.

### 350: Electrical Measurements and Measuring Instruments

Prerequisite: Mathematics 222, Physics 333 (may be taken concurrently).

Measurements of inductance, capacitance, and resistance, potentiometers, magnetic measurements, illumination, high-voltage measure-

ments and testing, electrical methods of measuring temperature, eddy currents, measuring instruments, measurement of power, energy, measurement of speed, frequency and phase difference.

TEXT: *Electrical Measurements and Measuring Instruments*—Golding (Sir Isaac Pitman and Sons)

Lectures: *Three hours a week, two semesters.*

Laboratory: *Three hours a week, two semesters.*

#### **351: Electronics**

Prerequisite: Mathematics 222, Physics 333 (may be taken concurrently)

Electrical measurements, power supplies, application by vacuum tubes and transistors amplifier circuits, oscillators, comparison measurements, servo systems, operational amplifiers for measurement and control, electronic switching and timing and digital counting systems, an integrated system of instruments, test equipment and rapid-connect parts, electrical signals and reactive circuits.

TEXT: *Electronics for Scientists*—Malmstadt, Enke, and Toren (W. A. Benjamin, New York)

Lectures: *Three hours a week, two semesters.*

Laboratory: *Three hours a week, two semesters.*

#### **450: Introduction to Mathematical Physics**

Prerequisite: Physics 234, Mathematics 333

Advanced classical dynamics of both discrete and continuous systems, elasticity and heat flow, matrices, tensors, three-dimensional problems special relativity in classical mechanics—the Hamilton equations of motion—Hamilton-Jacobi theory—matrices—tensors—advanced classical dynamics of continuous systems—introduction to calculus of variations—elasticity—heat flow.

TEXT: To be announced

Lectures: *Three hours per week, two semesters.*

#### **451: Thermodynamics and Statistical Mechanics**

Prerequisite: Physics 333, Mathematics 333

First and second law of thermodynamics and their application to simple thermo-dynamic systems and to chemical reactions. Kinetic theory and transport phenomena—in statistical mechanics the macro canonical and grand canonical ensembles, and Bose-Einstein and Fermi-Dirac statistics are discussed and applied to gases, electrons in metals, and low temperature physics.

TEXT: *Thermodynamics and Statistical Mechanics*—Zemansky

Lectures: *Three hours per week, two semesters*

#### **452: Quantum Mechanics**

Prerequisites: Physics 333, Mathematics 333

Wave mechanical concepts—wave equation of Schrödinger—energy eigen function—examples of energy eigen functions—general principles of quantum mechanics—interpretative postulates of quantum mechanics—operators with continuous spectra—uncertainty principle—matrix mechanics—the equation of motion of operator—the Dirac notation for wave functions and operators—spin—Pauli's principle—time independent perturbation theory—collision processes—elastic scattering by fixed center of

force—Born approximation—inelastic scattering processes—Dirac equation for a free particle.

TEXT: *Quantum Mechanics*—Mandl (Butterworth Publication, London)

Lectures: *Three hours per week, two semesters.*

#### 453. Upper Atmosphere

Prerequisite: Physics 333, Mathematics 333.

Meteorological conditions in the lower stratosphere, structure and circulation of the upper stratosphere and mesosphere, the sun's radiation and the upper atmosphere, composition of the stratosphere and mesosphere, composition and structure of the thermosphere, heat transfer and radiative processes, atmospheric tides and winds in the lower thermosphere, introduction to some other aeronomic problems, the transport properties in the upper atmosphere.

TEXT: *The Upper Atmosphere*—Craig (Academic Press, New York)

REFERENCE: *Physics of the Upper Atmosphere*—Ratcliffe (Academic Press, New York)

Lectures: *Three hours a week, two semesters.*

## POLITICAL SCIENCE

### 121: Introductory Political Science

The scope and methodology of Political Science. The natural law, the nature of the state, the purpose of the state, constitutional government.

TEXT: To be announced.

Lectures: *Two hours a week, two semesters.*

Group Discussion: *One hour a week, two semesters.*

### 202: Democratic Government

An examination of the basic features of democratic government as it is practiced in Great Britain, the United States and Canada. Considerable attention is paid to the ideological foundations of the modern democratic state.

TEXT: *Democratic Government and Politics*—Corry and Hodgetts

Lectures: *Three hours a week, two semesters.*

### 203: Government and Politics in the Soviet Union and East Central Europe

History, culture and political institutions of the Russian Empire and the USSR. An analysis of the social and economic backgrounds of the political setting in the Soviet Union; the development and techniques of the one-party state; and the installation of Communist regimes in East Central Europe.

TEXT: *The Soviet System of Government*—John N. Hazard (University of Chicago Press)

Lectures: *Three hours a week, two semesters.*

### 204: Canadian Government

Prerequisite: Political Science 121 or equivalent.

A study of the Canadian form of constitutional democracy.

TEXTS: *Government of Canada*—R. McG. Dawson, 4th edition, N. Ward editor. (University of Toronto Press); *Politics Canada*—P. Fox, 2nd edition, McGraw-Hill

Lectures: *Three hours a week, two semesters.*



**305: International Relations**

Prerequisite: Political Science 121 or equivalent.

A general survey of theories and concepts in international relations which are relevant to problems of today.

TEXT: To be announced.

Lectures: *Three hours a week, two semesters.*

**306: Comparative Study of Governments**

Prerequisite: Political Science 121 or equivalent.

A detailed analysis of the institutional functions of the governments of the United Kingdom, France, Germany and the USSR.

TEXT: To be announced.

Lectures: *Three hours a week, two semesters.*

**308: International Law**

The principal features of international law as it developed and has been invoked in diplomatic practice, international adjudication, and national courts; the defects and weakness of the international legal system; trends in law and its probable lines of development.

TEXTS: *International Law*—Charles G. Fenwick. (4th edition; Appleton-Century-Crofts, 1965); *The Elements of International Law: A Casebook*—(Dorsey, 1963)

Lectures: *Three hours a week, two semesters.*

**312: Government and Politics of the U.S.A.**

Prerequisite: Political Science 121 or equivalent

A detailed study of the structure and function of the United States' political system.

TEXT: To be announced.

Lectures: *Three hours a week, two semesters.*

**355: Political Thought to the 19th Century**

An historical treatment of the most important ideas in political philosophy from the earliest writings on politics to the end of the eighteenth century. These political philosophies are studied in their social context and their influence on society is discussed.

TEXT: *A History of Political Theory*—Sabine; *Republic*—Plato; *Politics*—Aristotle; *The Prince and the Discourses*—Machiavelli; *Utopia*—More; *Two Treatises on Government*—Locke; *Leviathan*—Hobbes; *The Social Contract and the Discourses*—Rousseau.

Lectures: *Three hours a week, two semesters.*

**356: Modern Political Thought**

An examination of political ideas from the end of the eighteenth century to the present, with special attention to Utilitarianism, Liberalism and Marxism.

TEXT: *A History of Political Thought*—Sabine; *Theory of Politics*—Hume edited Frederick Watkins; *An Introduction to the Principles of Morals and Legislation*—Bentham; *On Liberty*—J. S. Mill; *The Communist Manifesto*—Marx and Engels; *What is to be Done?*—Lenin; *State and Revolution*—Lenin; *Socialism: A Short History*—MacKenzie; *Socialist Thought* ed. A. Fried and R. Sanders.

Lectures: *Three hours a week, two semesters.*

### **359: The British Commonwealth**

Prerequisite: Political Science 121 or equivalent.

The development of governmental institutions in the nations of the Commonwealth, with particular attention to area problems in India, Africa and Canada.

TEXT: Lecture notes and assigned reading.

Lectures: *Two hours a week, two semesters.*

### **360: The Politics of the Developing Areas**

A survey of processes of political development in major Asian and African states, with special reference to factors responsible for authoritarianism in transitional societies.

TEXT: *The Politics of the Developing Areas*, ed. Gabriel A. Almond and James S. Coleman, (Princeton University Press 1960.) *Political Culture and Political Development*, ed., Lucian W. Pye and Sidney Verba, (Princeton University Press 1965.)

Lectures and Seminar: *Two lectures and one seminar a week, two semesters.*

### **361: Government and Politics in the Far East**

A historical comparative study of the political systems of Japan and China; the practice of parliamentary democracy in postwar Japan and the "People's democratic dictatorship" in China. Problems of Government in the states of Southeast Asia.

TEXT: *Far Eastern Governments and Politics*—Paul M. A. Linebarger, Djang Chu, Ardath W. Burke, (Van Nostrand, 1956) and selected new sources.

Lectures: *Two hours a week, two semesters.*

### **450: Seminar in the History of Political Thought**

A work-study group for the intense study of the major trends in political thought, early and modern, with special attention to contemporary political doctrines and ideologies, their transformation in the course of history and their interrelations with social and political institutions.

Lectures: *Two hours a week, two semesters (sessions of two hours)*

### **451: Canadian Government Seminar**

A study of some of the dynamic forces in Canadian politics, especially those which lie outside the formal constitutional framework.

Lectures: *Two hours a week, two semesters.*

### **452: Seminar in Comparative Government**

Conceived as a work-study group, the seminar is designed for political science students interested in the use of the comparative method in the study of contemporary governmental systems. It includes readings, discussion and reports on selected problems.

TEXTS: *European Political Institutions*—Assigned published, mimeographed and photoprint sources in addition to William G. Andrews (ed.). *A Comparative Government Reader* (Van Nostrand, 1962).

Lectures: *Two hours a week, two semesters (two hour sessions).*

### **453: Seminar in International Studies**

Prerequisite: Senior standing and some understanding of political concepts plus consent of the instructor.

Interdisciplinary honours seminar in international problems of the various geographic regions of the world.

TEXT: To be announced.

Lectures: *Two hours a week, two semesters.*

## **PSYCHOLOGY**

### **120: Introduction to Psychology**

The science of behaviour. Methods and measurement. Physiological basis of behaviour. Maturation and development. Sensory processes and perception. Learning and memory. Motivation and emotion. Social and clinical psychology. Applications of psychology.

TEXT: To be announced.

Lectures: *Three hours a week, two semesters.*

### **201: Contemporary Psychology Theory and Systems**

Prerequisite: Psychology 120.

The basic issues: classical and scientific psychology. Voluntary and involuntary behaviour. Responding and operant behaviour. Choice and preference. Drives and values. Uncertainty and Information. Intelligence. Symbolic processes and Language. Problems of measurement and evaluation. Interaction of psychology with the other sciences. Expectations for the near future.

TEXT: To be announced.

Lectures: *Two hours a week, two semesters.*

Laboratory: *One hour a week, two semesters.*

### **203: Psychology of Learning and Motivation**

Prerequisite: Psychology 120

The experimental investigation of the controlled modification of behaviour by systematically manipulated parameters in the environment. Selection of optimal responses, adjustment to changing conditions, perseveration and intensity of behaviour, causes of maladaptive behaviour.

TEXT: *Hilgard and Bower: Theories of Learning.*

Lectures and Laboratory: *Three hours a week, two semesters.*

### **204: The Psychology of Sensation and perception**

Prerequisite: Psychology 120.

The physical properties of stimuli, the physiological apparatus for sensing the environment, and the perceptual processes to extract relevant information from sensory data.

Lectures and Laboratory: *Three hours a week, two semesters.*

TEXT: To be announced.

Lectures and Laboratory: *Three hours a week, two semesters.*

**212:** See Mathematics 212.

**310: Social Psychology**

Prerequisite: Psychology 201, 203 or 204.

Membership of groups. Communication, interaction, language and culture. Values. Group norms, attitudes and roles. Leadership and social stratification. Authority and prejudice. Group behaviour as compared with individual behaviour. Motivation and opinion change. Conflict. Criminal behaviour. Gambling and utility. Game theory. Psychoeconomics.

TEXT: To be announced.

*Lectures: Three hours a week, two semesters.*

**321: History of Psychology**

Prerequisite: Psychology 201, 203 or 204.

Greek psychology. Arabian and Western European developments. Mediaeval and Renaissance approaches. Early scientific influences: ideas from physics, mathematics and physiology. Rationalists and empiricists. Beginnings of experimentation. Nineteenth and twentieth century theories and experiments. Psychology as a natural, biological and social science. The outlook.

TEXT: *Brett's History of Psychology* (ed. Peters) (Macmillan)

*Lectures: Three hours a week, two semesters.*

**331: Child Psychology and Adolescent Development**

Prerequisite: Psychology 201, 203, or 204.

The neonate. Maturation and Learning. Nature versus nurture. The development of intelligence and personality. Problems of early life. Pathological versus normal development. Puberty. Changes and problems of adolescence. Delinquency, neurosis, causes and cures early adulthood.

TEXT: To be announced.

*Lectures: Three hours a week, two semesters.*

**340: Industrial and Applied Psychology**

Prerequisite: Psychology 201, 203 or 204.

The individual within the organization. Interpersonal relations. Psycho-motor coordination in the carrying out of tasks. Cybernetics. Work study and linear programming. Elements of decision theory and critical path analysis.

TEXT: To be announced.

*Lectures: Three hours a week, two semesters.*

# SOCIOLOGY

## 121: Introductory Sociology

An introductory analysis of social structure, function and change; social interaction and control; constant and variable features of the major social institutions—familial, religious, economic, political, educational—with particular reference to modern industrial society. Social problems; population change; stratification; mass communication; and other selected topics.

TEXT: *Sociology*—Lundberg, Schrag, Larsen (Harper & Row, New York, 1964)

Lectures: Three hours a week, two semesters.

## 200: Methodology

The philosophy of science and its relationship to social research. Logic and scientific reasoning. Experimental design; hypothesis formulation; scaling techniques; questionnaire and interview schedule design; interpretation and data analysis; report writing; sampling techniques.

TEXT: *Surveys, Polls, and Samples*—M. Parten

SUPPLEMENTARY READINGS: To be announced.

Lectures: Three hours a week, two semesters.

## 300: Sociological Theory

A critical examination of sociological theory with particular emphasis on difference and congruence in the writings of European and American scholars from Comte to Parsons. Systematic sociology and its relationship to social research; models and system building; theories of social change; social structure and functions.

TEXT: *Image of Man*—C. W. Mills

SUPPLEMENTARY READINGS: Selected topics from Weber, Durkheim, von Wisse, Pareto, Simmel, Merton, Parsons, and others.

Lectures: Three hours a week, two semesters.

## 302: Social Problems Involving Disorganization and Deviance

A positive approach to establish proper perspectives for adjustment to personal, family, industrial, religious, social and various other problems such as addictions, health, handicaps; vocational difficulties; emotional controls and suicide; industrial hazards, community problems, national problems, minority groups, war, population, prejudice and discrimination; family problems.

TEXT: *Social Problems*—J. A. Kane (Prentice-Hall)

REFERENCES: *Current Social Problems*—Mihanovich (Bruce); *The World of Work*—Robert Dublin (Prentice-Hall); *Psychology of Personal Adjustment*—F. McKinney (Wiley); *Social Problems and Social Action*—Walsh & Furley (Prentice-Hall); *Canadian Society*—Blisshen, Jones, Naegle, Porter (Macmillan).

Lectures: Three hours a week, two semesters.

Field Work: Tours and investigations to local institutions are an essential part of the course. Term reports on these investigations are required.

## 303: Criminology and Penology

The philosophies of causation and prevention of crime; types of criminal behavior; organized crime and vice. Agencies of apprehension, trial, custody and after-care of prisoners. World trends in penological philosophy.

TEXT: *Criminology*—Cavan (Crowell Co.) 3rd Edition

REFERENCE: Standard texts.

Field work in correctional areas is an essential part of the course.

Lectures: *Three hours a week, two semesters.*

### **305: Anthropology**

Prerequisite: One Sociology course.

The aim of the course is to acquaint the student with the major branches of the "Science of Man", i.e. physical and cultural anthropology.

TEXTS: *What Happened in History*—V. G. Childe; *Adam's Ancestors*—L. Leakey; *The Science of Man*—A. Montagu; *The Humanization of Man*—A. Montagu.

SELECTED REFERENCES: To be announced.

Lectures: *Three hours a week, two semesters.*

### **308: Urban Sociology**

Study of modern cities including: physical patterns and location; city planning and redevelopment; problems of population composition and mobility; social problems arising out of class distinction, leisure and changing human relations; community behavior; metropolitan planning.

TEXTS: *The City*—Rose Hum Lee (Lippincott); *Urban Sociology*—J. A. Quinn (American Book Co.); *Urban Society*—W. E. Cole (Houghton Mifflin).

Lectures: *Three hours a week, two semesters.*

### **315: The Communication Process.**

An introductory course in human communication, including its history, scope, purpose, and effects on human information and beliefs. The course will examine models of the communication process, social factors affecting how man communicates and the role of mass media in society.

TEXT: To be announced

Lectures: *Three hours a week, two semesters.*

### **316: Industrial Sociology**

The problem of social control in industry. An examination of major theories of bureaucracy and scientific management; special emphasis is given to the works of Taylor, Weber, Etzioni, Blau, Mayo and the Human Relations School. Worker commitment and morale; labour force participation; labour productivity. The role and organization of trade and industrial unions; work standard setting; time and motion; industrial conflict and its solution. Automation.

TEXT: *Industrial Relations and the Social order*—W. E. Moore.

Supplementary Readings: To be announced.

Lectures: *Three hours a week, two semesters.*

## **SPANISH**

### **100 (120): Introduction to the Spanish Language**

Concentrated study of basic structures with particular emphasis on oral aspects.

TEXT: To be announced.

Lectures: *Three hours a week, two semesters.*

Laboratory: *Three periods of 1/2 an hour a week.*

### **300: Elementary Spanish**

Prerequisite: Spanish 102 or Spanish matriculation.

Continuation of work begun in Spanish 100 (120) with particular emphasis on conversation and reading with understanding. Systematic building of vocabulary through study of Spanish civilization.

TEXT: To be announced.

Lectures: *Three hours a week, two semesters.*

Laboratory: *Three periods of 1/2 an hour a week.*

### **302: Completion of the Audio-Lingual program.**

Prerequisite: Spanish 200.

Particular emphasis on conversation and writing using a style and vocabulary appropriate to the material or the occasion. Building of vocabulary through study of cultural materials and specially the anthropological concept of culture.

TEXT: To be announced.

Lectures: *Three hours a week, two semesters.*

Laboratory: *Three periods of 1/2 an hour a week.*

### **303: Spanish Drama**

An interpretation of the Spanish Drama from the Middle Ages to our days, with particular emphasis on modern Spanish drama and its peculiar characteristics.

TEXT: To be announced.

Lectures: *Three hours a week, two semesters.*

### **304: The Generation of 1898**

The Spanish culture before and after this generation. Particular emphasis on Baroja, Unamuno and Ortega.

TEXT: To be announced.

Lectures: *Three hours a week, two semesters.*

### **305: Don Quijote**

Cervantes and his time.

TEXT: To be announced.

Lectures: *Two hours a week, and one hour seminar, two semesters.*

## **THEOLOGY**

### **121: Introduction to Theology**

An examination of certain important questions concerning the Bible, the Church and morality.

Lectures and Discussions: *One lecture and two discussions a week, two semesters.*

### **301: Religious Roots of Western Culture**

A study of some key religious ideas which arose among the Hebrews, the Greeks or the Church of New Testament times; and how they have influenced western culture.

Lectures and Discussions: *Three hours a week, two semesters.*

**302: Atheistic Humanism**

A study of the humanism of the Marxists and of the French existentialists, particularly their thesis, that only an atheism can be a true humanism.

TEXTS: *Atheistic Humanism*, H. de Lubac  
*Atheism*, E. Borne

*Lectures and Discussions: Three hours a week, two semesters.*

**303: Myth and History**

A study of the program to demythologise the Christian message; beyond this, an attempt to formulate a Christian view of history.

*Lectures and Discussions: Three hours a week, two semesters.*

**305: Introduction to the Bible**

A study of the history and literary form of various books in the Bible. A detailed study of the text a Gospel and letter of Paul.

*Lectures and Discussions: Three hours a week, two semesters.*

**310: The Christian understanding of Man**

A study of who man is from the point of view of the Bible, Christian tradition and modern insights.

*Lectures and Discussions: Three hours a week, two semesters.*

**311: Development of Christian Personality**

A study of the notion of person and personal relationships; of the place of freedom in the development of the Christian person; of the transforming, activating reality of grace; of the role of the Sacraments of Initiation in Christian transformation.

**312: Teilhard de Chardin and the Future of Man**

A study of Teilhard's vision of cosmic redemption as a response to the needs and problems of contemporary man.

**313: Moral Theology**

A study of recent attempts to reformulate moral theology; and of some moral problems of the day.

**315: The Christian in Society**

A study of some of the problems which emerge when we recognise that we live at the beginning of the "post-constantinian" age; of some contemporary social problems and possible Christian responses and responsibility.



**316: Sacraments and Liturgy**

The history of liturgy; a study of the role of liturgy and sacraments in the life of a Christian.

**320: Contemporary Protestant Theology**

A study of the great Protestant thinkers of this century, especially Karl Barth and Paul Tillich; and of some problems of contemporary concern.

# CONVOCATION - - - MAY 8, 1967

## MEDALS AND PRIZES

**GOVERNOR-GENERAL'S MEDAL**.....Michael Joseph Holmes

## UNIVERSITY GOLD MEDALS:

**ARTS**.....Michael Joseph Holmes  
Donated by Most Reverend J. Gerald Berry, D.D.

**SCIENCE**.....Fernando Huerta de Eguiluz  
Donated by Saint Mary's University Ladies Auxiliary

**COMMERCE**.....Angus Pefhany  
Donated by Messrs. Henry Birks & Sons

**ENGINEERING**.....John S. Archer  
Donated by Mr. and Mrs. J. M. Inglis in memory of their son,  
Delisle Inglis

**EDUCATION**.....Chethicad O. Thomas  
Donated by Truro Printing and Publishing Co. Limited

**GRADUATES—MAY 8, 1967**

**BACHELOR OF ARTS**

Allen, William John.....	Halifax, N. S.
Antle, G. Michael.....	Halifax, N. S.
Bailey, Donald N. (Honours History).....	Scarborough, Me.
Belliveau, Robert Gerald.....	Halifax, N. S.
Berrigan, Oliver Anthony.....	Halifax, N. S.
Bowes, Gregory M.....	Halifax, N. S.
Britton, Robert W.....	Halifax, N. S.
Canning, Nettie Lee.....	Armdale, N. S.
Cotton, Ronald G. (Magna Cum Laude).....	Porter's Lake, N. S.
Dib, Boutros Elias.....	Halifax, N. S.
Dougherty, Richard D.....	Washington, D.C.
Dulong, Joseph Laur��n��.....	Halifax, N. S.
Fennessey, Francis William, Jr.....	Halifax, N. S.
Flemming, Thomas Leslie (Honours English) (Magna Cum Laude).....	Shelburne, N. S.
Gerrior, William Dawson.....	Halifax, N. S.
Givoannetti, David Gerald.....	Sydney, N. S.
Goldring, James Philip.....	Tusket, N. S.
Goldring, Paul Michael.....	Tusket, N. S.
Haney, Thomas Patrick.....	Fort Erie, Ont.
Hartt, Barry William.....	Dartmouth, N. S.
Holmes, Michael Joseph (Honours History) (Summa Cum Laude).....	Halifax, N. S.
James, Dorothy Mae (Cum Laude).....	Fairview, N. S.
Jolemore, Ronald.....	Rockingham, N. S.
LaPierre, Edward J.....	Halifax, N. S.
MacDonald, David Alexander (Cum Laude) .....	Amherst, N. S.
MacGillivray, Colin William.....	Halifax, N. S.
MacInnis, Paul James.....	Halifax, N. S.
MacKinnon, J. Alan.....	Dartmouth, N. S.
MacSween, Peter B.....	New Waterford, N. S.
Mitchell, Brian Charles (Honours History) (Cum Laude).....	Halifax, N. S.
Murphy, Bernard Frederick.....	Armdale, N. S.
O'Brien, Wayne Douglas.....	Toledo, Ohio
O'Toole, Paschal H.....	Halifax, N. S.
Rambeau, Leonard Theodore.....	Dartmouth, N. S.
Reardon, Joseph John.....	Halifax, N. S.
Regan, Frank Michael.....	Boston, Mass.
Romans, John David.....	Halifax, N. S.
Russell, John Robert.....	Fort Fairfield, Me.
Spiropoulos, Athanasios T.....	Amalias, Greece

Voisard, Paul Huntley.....	Montreal, P. Q.
Wall, William Gerard.....	Grand Falls, Nfld.
Wilson, Harry A.....	Springhill, N. S.

### BACHELOR OF SCIENCE

Fitzpatrick, Neil Francis.....	Halifax, N. S.
Frewer, Frederick Barry.....	Victoria, B. C.
Grainger, Colin Arthur.....	Dartmouth, N. S.
Huerta de Eguiluz, Fernando (Cum Laude).....	Madrid, Spain
Melanson, James B.....	Halifax, N. S.
Mitchell, Francis Gordon.....	Fairview, N. S.
Murphy, Raymond Michael.....	Dartmouth, N. S.
Purcell, Wayne Francis.....	Lower Sackville, N. S.
Quinn, James Jerome.....	Scarborough, Me.
Schumph, Bernard.....	Stephenville, Nfld.
Sharma, Anthony.....	Port of Spain, Trinidad
Thorburn, Thomas Joseph.....	Kelowna, B. C.

### BACHELOR OF COMMERCE

Arab, Donald.....	Halifax, N. S.
Aranaz, Julio.....	Caracas, Venezuela
Artz, Ronald Douglas.....	Halifax, N. S.
Barnstead, Hubert Henry, Jr.....	Halifax, N. S.
Berrigan, Ralph David.....	Halifax, N. S.
Clancy, Gerald Thomas.....	Toronto, Ontario
Conrad, Graham Edward.....	Halifax, N. S.
Davison, Roderick Bruce.....	Halifax, N. S.
Desmarais, Karl M.....	Quebec, P. Q.
Dorey, Joseph T.....	Halifax, N. S.
English, David Francis.....	Halifax, N. S.
Gagné, Paul René Joseph.....	Spryfield, N. S.
Geary, Michael Kean.....	Halifax, N. S.
Gorman, Frederick Barry.....	Toronto, Ont.
Johnson, David Snowden.....	Halifax, N. S.
MacGillivray, Roderick A. C.....	St. John's, Nfld.
McNeil, Allan B.....	Bedford, N. S.
Marchand, Godfrey Edward.....	Weston, Ont.
Pefhany, Angus (Cum Laude).....	Halifax, N. S.
Pettipas, Paul A.....	South Easton, Mass.
Stenton, Murray William.....	Halifax, N. S.

### DIPLOMA IN ENGINEERING

Archer, John S. (With Distinction).....	Port of Spain, Trinidad
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Aucoin, Marcel Amedee.....	Halifax, N. S.
Bourque, Gerald Joseph.....	Yarmouth, N. S.
Bourque, John Maynard.....	Yarmouth, N. S.
Mahon, Wayne Harold.....	Woodbrook, Trinidad
Selatile, Samuel Selatile.....	Maseru, Lesotho
VanAuken, Michael J.....	Morristown, N. J.
Vaughan, Michael Stephen.....	Ottawa, Ont.
Yogis, Vincent Wayne.....	Halifax, N. S.

### BACHELOR OF EDUCATION

Bennett, Wayne A., B.A.....	Halifax, N. S.
Cassivi, Denis John, B.A.....	Halifax, N. S.
Conrod, Carole Winnifred, B.A.....	East Chezzetcook, N. S.
Coolen, Michael Douglas, B.A.....	Halifax, N. S.
Cosgrove, Brian Francis, B.Comm.....	Halifax, N. S.
Godreau, Robert Norman, B.A.....	Halifax, N. S.
Johnston, Derek Stephen, B.A.....	Halifax, N. S.
Kearns, William George, B.A.....	Halifax, N. S.
Latimer, Joyce Kerr, B.A. (Cum Laude).....	Halifax, N. S.
LeBlanc, Joseph Leonard Eric, B.A.....	Pictou, N. S.
MacDonald, Isabel Ann, B.A.....	Halifax, N. S.
McElhiney, Gerald Rogers, B.Comm.....	Halifax, N. S.
McKinnon, Murdock C., B.Comm.....	Halifax, N. S.
MacPhail, Ronald Daniel, B.A.....	Halifax, N. S.
Malone, Bernard Gregory, B.Sc.....	Halifax, N. S.
O'Neill, Gerald Dennis, B.Comm.....	Halifax, N. S.
Thomas, Chethicad O., B.Sc. (Cum Laude).....	Kerala, India
Thomas, Robert Moyle, B.Sc.....	Fairview, N. S.

### MASTER OF SOCIAL WORK

Kiley, Joseph Edward, B.A.....	Saint John, N. B.
MacDonald, Catherine Sarah, B.A.....	Dartmouth, N. S.
Murphy, John W., B.A.....	Halifax, N. S.
O'Connor, Mary Alice, B.A.....	Halifax, N. S.
Ruotolo, Robert Andre, B.A.....	Wolfeboro, N. H.

### MASTER OF ARTS (IN EDUCATION)

Clancy, Catherine Marie, B.A., B.Ed.....	Halifax, N. S.
Dunlop, Douglas Franklyn, B.Sc., B.Ed.....	Armdale, N. S.
Flack, Donald Alexander, B.Sc., B.Ed.....	Halifax, N. S.
MacDonald Stewart L., B.A.....	Dartmouth, N. S.
O'Neil, Anthony Fabian, B.A., B.Ed.....	Dartmouth, N. S.

## GRADUATES—OCTOBER 4, 1967

### BACHELOR OF ARTS

Baldwin, William Arthur.....	Herring Cove, N. S.
Blundell, Robert Thomas.....	Halifax, N. S.
Boutillier, Phyllis Carolina (Magna Cum Laude).....	Sydney, N. S.
Clarke, Daniel J.....	Halifax, N. S.
Connolly, James J.....	Halifax, N. S.
Craig, Michael Frederick.....	Purcell's Cove, N. S.
Dorion, Peter James.....	Saint John, N. B.
Donahoe, Christopher Robert.....	Halifax, N. S.
Fitzgerald, Paul Douglas.....	Dartmouth, N. S.
Gallagher, Graham Edward.....	Halifax, N. S.
Glenister, Peter Gerard.....	Halifax, N. S.
Guyette, Mary Jacqueline (Cum Laude).....	Elmsdale, N. S.
Hannington, Edith Ada (Cum Laude).....	Rockingham, N. S.
Kelley, Robert Martin.....	Portland, Maine
Khan, Walter S.....	Dartmouth, N. S.
Lind, Annie Frances (Cum Laude).....	Dartmouth, N. S.
McCluskey, Richard Paul.....	Halifax, N. S.
McCombs, Dorothy Esther.....	Dartmouth, N. S.
MacDougall, Bernard R.....	Halifax, N. S.
McEnany, Thomas H., Jr.....	Milton, N. S.
MacKinnon, Gregory Malcom.....	Sydney, N. S.
Morris, William G.....	Dartmouth, N. S.
Nicholson, Wayne James.....	Halifax, N. S.
Oliver, James John.....	Norristown, Penn.
Richards, James Francis.....	East Chezzetcook, N. S.
Robertson, James Kirk.....	Halifax, N. S.
Strang, Lawrence Ellison.....	Halifax, N. S.
Wilson, William E.....	Halifax, N. S.

### BACHELOR OF SCIENCE

Ishmael, Rasheed Anthony.....	Trinidad, W.I.
McCarthy, Justin William.....	Moncton, N. B.
MacNeill, Robert F.....	Moncton, N. B.
Manuel, David George.....	Rockingham, N. S.
Merdsoy, Bora Ruhi.....	Dartmouth, N. S.
Vaughan, Michael Stephen.....	Ottawa, Ontario

### BACHELOR OF COMMERCE

Giroux, Paul Pearson, B.A.....	Dartmouth, N. S.
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LeBlanc, Thomas Francis.....	Halifax, N. S.
McKinnon, Donald John.....	Halifax, N. S.
Miller, David Roughead.....	Halifax, N. S.
O'Neill, Robert Hugh.....	Halifax, N. S.
Retteff, Murdock William, B.A.....	Halifax, N. S.
Sampson, Joseph Robert.....	Louisdale, Cape Breton
Wolldridge, Stephen Anthony.....	Trinidad, W.I.

#### **BACHELOR OF EDUCATION**

Mitchell, Francis Gordon, B.Sc.....	Fairview, N. S.
Wilson, Harry Alexander, B.A.....	Springhill, N. S.

#### **MASTER OF ARTS**

Bulger, David Michael, B.A.....	Charlottetown, P. E. I.
Wanjohi, Gerald Joseph, B.A.....	Karatina, Kenya