449-582 HIGHER EDUCATION THEORY AND POLICY. (3) Major issues facing universities and colleges in Canada and internationally. Review of systems of higher education in Canada. Analysis of the most important issues across higher education institutions, for example, quality of programs, instruction.

449-588 THE HIGHER EDUCATION ENVIRONMENT. (3) Investigation of the postsecondary environment, its constraints and potential for facilitating intellectual development and higher order learning. The student in the learning environment. In-depth analysis of the learning environment provided by universities and colleges, with an emphasis on the steps that can be taken to ensure effective teaching and learning.

449-681 HIGHER EDUCATION DEVELOPMENT. (3) (Corequisite: 449-582 or permission of instructor.) Analysis of program and curriculum development across disciplines and multidisciplinary areas of study at the postsecondary level. Program organization and planning in particular disciplinary areas and in relation to that of other disciplines.

449-689 TEACHING AND LEARNING IN HIGHER EDUCATION. (3) Students will develop an understanding of teaching and learning as a process in which instruction is based on the learning to be accomplished. Students will design, develop, and evaluate a university course of their choice, and will develop facility and confidence in using teaching methods appropriate to their domains.

449-692 PRACTICUM IN UNIVERSITY TEACHING I. (3) Supervised by a professor in their Department, students will experience all aspects of planning and conducting a university course. This includes directed observation of course sessions, and the planning and implementation of teaching episodes. In order to enrol, the student must obtain agreement from the supervising professor in advance.

450-610 FOUNDATIONS OF ADULT EDUCATION. (3) Adult education in the North American context, with emphasis on Canada; historical development; conceptual bases; contemporary trends; major literature in the field.

450-612 THE ADULT LEARNER. (3) Patterns of adult development; application of theories of learning to the adult learner; influence of such factors as work history, family role, learner needs and motivation on the role of the adult as learner.

450-614 TEACHING THE ADULT. (3) Teacher roles in adult education; instructional strategies and systems such as self-directed learning and learning contracts; comparisons and contrasts with the teaching of the young.

450-615 ADMINISTERING ADULT EDUCATION PROGRAMS. (3) Human resource management in relation to unique employment conditions in the field; the procurement, disbursement and control of funds.

450-618 ISSUES IN ADULT EDUCATION. (3) Selected issues related to policy, curriculum, and alternative models in adult education, with particular emphasis given to Quebec and Canadian settings.

450-620 SELECTED TOPICS IN ADULT EDUCATION. (3) Seminar on special topics such as adult literacy education, the education of handicapped adults, educational services to an aging population. Content of the seminar will vary from year to year.

450-628 PRACTICUM IN ADULT EDUCATION. (6) Observation of a skilled practitioner and supervised experience in an adult education setting.

450-638 MONOGRAPH. (6) An independent investigation of a topic in adult education leading to the submission of a substantial written report.

Courses in Other Departments
Students interested in statistical models and techniques in test theory are welcome to enrol in 204-510 (Dept. of Psychology):

204-510 STATISTICAL ANALYSIS OF TESTS. (3) (2 lectures; Prerequisites: 204-305 or 435B, 204-406 or permission of instructor.) This course aims to introduce students interested in developing or

appraising tests to the important statistical problems and modern techniques associated with testing data. Testing situations discussed will range from one-shot classroom tests through special purpose scales to the highly refined large scale tests such as the SAT.

Qualitative research methods are offered primarily through 411-692 (Department of Educational Studies); 431-617 or 431-630 (Department of Second Language Education) and 416-687 (Department of Educational and Counselling Psychology).

411-692 QUALITATIVE RESEARCH METHODS. (3) Theoretical and practical exploration of the foundations of qualitative methods, with emphasis on underlying principles.

431-617 SPECIAL TOPIC. (3) Qualitative and ethnographic research methods. (May be offered in conjunction with 431-630.)

431-630 QUALITATIVE AND ETHNOGRAPHIC STUDIES IN SECOND LANGUAGE EDUCATION. (3) An examination of theoretical and applied issues in qualitative and ethnographic studies in second language education.

455-635 ADVANCED WRITTEN COMMUNICATION. (3) Rhetorical practices and principles that remain constant across disciplines: generating and organizing ideas; setting goals; planning; considering readers; editing and revising. Students will analyze and produce texts that use the formats, rhetorical strategies, styles, genres, and other conventions of their disciplines.

Students are encouraged to broaden their perspectives with elective courses from elsewhere in the Faculty of Education and the University as a whole. Eligibility to enrol in a specific course should always be ascertained in advance.

28 Educational Studies

Department of Educational Studies
Administrative Offices:
Education Building, Room 244S
3700 McTavish Street
Montreal QC H3A 1Y2
Telephone: (514) 398-4525
Fax: (514) 398-4529
Website: http://www.education.mcgill.ca/des/default.html

Graduate Programs:
Duggan House, Room 205
3724 McTavish Street
Telephone: (514) 398-4531
Fax: (514) 398-7436

Chair — Anthony Paré

Director of Graduate Programs — Lynn Butler-Kisber

To contact the academic staff of the Department: telephone (514) 398-6746, or fax (514) 398-7436. The administrative office is open Monday to Friday from 08:30 to 16:30. During the first week of classes, the office will remain open until 18:00.

Dr. Butler-Kisber is responsible for academic advising for all graduate programs in the Department. For general information, please initially contact the Graduate Program Coordinator at (514) 398-4531.

28.1   Staff

Emeritus Professors
Patrick X. Dias; B.A., M.A.(Karachi), B.Ed., Ph.D.(Montr.)
Margaret Gillett; B.A., Dip. Ed.(Syd.), M.A.(Russel Sage), Ed.D.(Col.) *(William C. Macdonald Emeritus Professor of Education)*
Wayne C. Hall; B.A., M.A.(Bishop's)*(William C. Macdonald Emeritus Professor of Education)*
Norman Henchey; B.A., B.Péd., Lic.Péd.(Montr.), Ph.D.(McG.)

Professors
David Dillon; B.A.(St. Columban's), M.S.(S.W. Texas St. Univ.), Ph.D.(U. of Texas, Austin)
Bernard Shapiro; B.A.(McG.), M.A.T., Ed.D.(Harv.)
John R. Wolforth; B.Sc.(Sheff.), M.A., Ph.D.(U.B.C.)

Associate Professors
Helen Amoriggi; B.Sc., M.A.(Rhode Island), Ed.D.(Boston)
Gary Anderson; B.Sc., M.A.(McG.), Ed.D.(Harv.)
Clermont Barnabé; B.Péd.(Laval), L.Péd.(Montr.), Ph.D.(S.U.N.Y., Buffalo)
Ann J. Beer; B.A.(Oxon.), M.A.(Tor.), D.Phil.(Oxon.)
Jon G. Bradley; B.A., M.A.(Sir G.Wms.)
Lynn Butler-Kisber; B.Ed., M.Ed.(McG.), Ed.D.(Harv.)
June E. Cooper; B.A.(Acad.), M.Ed.(Stetson)
Winston G. Emery; B.Ed., M.A.(McG.), Ph.D.(Montr.)
Donna Goodleaf; B.A.(Trent), M.Ed., Ed.D.(Mass.)
John B. Gradwell; B.A., M.A.(Cal. State), Ph.D.(Iowa)
Nancy S. Jackson; B.A., M.A., Ph.D.(U.B.C.)
Yarema G. Kelebay; B.A., B.Ed.(Montr.), M.A.(Sir G.Wms.), Ph.D.(C'dia) *(joint appt. with Culture and Values)*
Cathrine Le Maistre; B.Sc., Dip.Ed.(Exeter), M.Ed., Ph.D.(McG.)
Charles S. Lusthaus; B.S., M.S.(Canisius), Ph.D.(S.U.N.Y.)
Lynn McAlpine; B.A.(McG.), M.A.(C'dia), Ed.D.(Tor.) *(joint appt. with Educational and Counselling Psychology)*
David D. McWethy; B.S., M.A.(Mich. St.), Ph.D.(Iowa St.) *(joint appt. with Educational and Counselling Psychology)*
Christopher S. Milligan; B.A.(Sir G.Wms.), M.Ed.(McG.), Ed.D.(Tor.)
Claudia A. Mitchell; B.A.(Brandon), M.A.(Mt. St. Vincent), Ph.D.(Alta.)
Anthony Paré; B.Ed, M.Ed., Ph.D.(McG.)
Howard N. Riggs; B.Ed.(Alta.), M.A., Ph.D.(Minn.)
Phyllis Shapiro; Dip.Ed.(McG.), B.A.(C'dia), M.Ed., D.Ed.(Boston)

Assistant Professors
Brian J. Alters; B.Sc., Ph.D.(USC)
Patricia Boston; B.A., M.A.(C'dia), Ph.D.(McG.)
William Smith; B.A.(Carl.), M.A., Ph.D.(McG.)

Adjunct Professors
Patrick A. Baker; B.Com., B.A.(Sir G.Wms.), M.Ed.(McG.)
Mary Bear; B.Ed.(Qué.)
Tino Bordonaro; B.A.(Bishop's), M.A.(McG.)
William Corrigan; M.T.M.(C'dia)
Edward Cross; B.A.(Carl.), M.Ed.(McG.)
Elaine Freeland; M.A.(Montr.)
Debbie House-Cox; B.Ed..(Qué.)
Kaia'titake Jacobs;, B.Ed.(Qué.)
Nellie Kusugak; B.Ed.(McG.)
Eva Louttit; B.Ed.(Qué.)
Ooloota Maatiusi; B.Ed.(McG.)
Hugh Macdonald;, M.A.(McG.)
Noel Mcdermott; B.A.(Lond.), M.A.(Birming.), M.Phil.(Wat.)
Howard G. Martin; M.Ed.(McG.)
Dan Mason; Ph.D.(Ott.)
Kevin O'Donnell; B.A.(Montr.)
Peesee Pitsiulak; B.Ed.(McG.)
Linda Simon; B.Ed.(Montr.)
Clarence Tomatuk; M.Ed.(McG.)
Cecil Welch; Ph.D.(McG.)
Gilbert Whiteduck; B.Ed.(Qué.), M.Ed.(Carleton)
Doris Winkler; B.A.(Sir G.Wms.), M.Ed.(Harv.)
Vicki Zack; B.A., Dip.Ed.(McG.), M.A.(Montr.), Ph.D.(McG.)

Professional Associate
Marilyn Blaeser

28.2   Programs Offered

The Department of Educational Studies is composed of the former Departments of Administration and Policy Studies in Education and Curriculum and Instruction. The Department offers M.Ed. and M.A. degrees.

The M.Ed. is intended mainly to serve the needs of educational leaders in schools, colleges and non-formal educational settings who are interested in advanced qualifications to enhance knowledge and improve professional skills.

The M.A. program is research oriented. It involves in-depth study of suitable research topics related to administrative processes and policies, curriculum and instruction, and literacy in formal and informal educational institutions and settings.

Prospective applicants to the Ph.D. *(ad hoc)* program should contact the Department at (514) 398-4531.

28.3   Admission Requirements

Candidates must hold a Bachelor's degree from a recognized university with a minimum standing equivalent to a CGPA of 3.0 on 4.0 or 3.2 out of 4.0 for the last two full-time academic years.

M.A. Administration and Policy Studies in Education
1. Students should have an honours or a similar good standing in their undergraduate academic work.
2. Normally a minimum of two years of educational experience (teaching or related professional experience).
3. Well qualified students may be admitted to the program without teaching experience.
4. A mastery of spoken and written English. For international students, a TOEFL score of 550 is required. The Department reserves the right to interview candidates before the period of initial registration.

M.Ed. Administration and Policy Studies
1. Students should have an honours or a similar good standing in their undergraduate academic work.
2. Normally a minimum of two years of educational experience (teaching or related professional experience).
3. A statement indicating the candidate's academic background, professional teacher training (or rationale of its non-applicability), teacher and/or other related experience in relationship to future career plans.
4. Two letters of recommendation from administrative superiors attesting to the candidate's potential as an administrator, to be forwarded directly to the Chair of the Department of Educational Studies.

M.Ed. Curriculum Studies
1. Students should have an honours or a similar good standing in their undergraduate academic work.
2. A copy of the permanent Québec Teacher Certification or evidence of appropriate teaching experience.
3. Two letters of recommendation are required: one from a past university-level instructor and one from an education supervisor.
4. The candidate must also provide a statement describing personal goals and any additional information which might be helpful to the decision committee.

Pre-application counselling by mail, telephone or in person is strongly encouraged.

M.Ed. Literacy Studies
1. Students should have an honours or a similar good standing in their undergraduate academic work.
2. The candidate must have successfully completed at least 12 undergraduate credits in reading, language arts, composition, linguistics, literature or TESL. It is also required that at least one of the courses presented to meet this requirement be either children's literature or literature for young adults. Courses proposed by the candidate to meet this requirement may be evaluated during pre-admission counselling if desired.
    For candidates lacking the background, many appropriate courses are offered through McGill's Centre for Continuing Education. Suggestions may be made during pre-admission counselling.
3. Two letters of recommendation are required: one from a past university-level instructor and one from an education supervisor.

4. The candidate must also provide a statement describing personal goals and any additional information which might be helpful to the decision committee.

Pre-application counselling by mail, telephone or in person is strongly encouraged.

M.A. Educational Studies (Thesis Option)
(Awaiting University approval)
1. Students should have an honours or a similar good standing in their undergraduate academic work.
2. Normally students should have at least two years of relevant educational experience (teaching or related professional experience).
3. A mastery of spoken and written English is required. The Department reserves the right to interview candidates.
4. A personal statement of academic and professional experience and interests and **intended research direction** should be submitted to the Admissions and Review Committee.
5. Two letters of recommendation are required: usually one from a past university-level instructor and one that attests to the student's potential to do research.

M.A. Educational Studies (Non-Thesis Option)
(Awaiting University approval)
1. Students should have an honours or a similar good standing in their undergraduate academic work.
2. Normally students should have at least two years of relevant educational experience (teaching or related professional experience).
3. A mastery of spoken and written English is required. The Department reserves the right to interview candidates.
4. A personal statement of academic and professional experience and interests should be submitted to the Admissions and Review Committee.
5. Two letters of recommendation are required: usually one from a past university-level instructor and one from a supervisor in an educationally relevant context.

28.4   Application Procedure

Applications will be considered upon receipt of:
1. application form;
2. official transcripts;
3. $60 applicant fee.

The deadlines for submitting applications are:

Fall session – March 1
Winter session – November 1
Summer session – February 1

For international students, applications must be submitted at least 6 months prior to the official deadline indicated above.

All documentation is to be submitted directly to the Graduate Program Coordinator in the Department of Educational Studies.

28.5   Program Requirements

M.A. Administration and Policy Studies in Education
(48 credits)

This program will be of interest to those who wish to pursue a research degree with a thesis. Students develop their course work with their advisor. Students are expected to have a thesis proposal by the end of their first full year of study and will be required by their supervisor to follow courses necessary to support their area of research. The M.A. is a prerequisite for those interested in pursuing admission to an *(ad hoc)* Ph.D. program

Students are required to complete 12 credits of required and complementary courses, 24 credits for a thesis, and 12 credits as electives. The appropriate elective courses at the graduate level will be chosen in consultation with an advisor. Additional requirements may be necessary if a student shifts the direction of research during the program of study.

Required Courses (9 credits)
411-612 (3) Foundations of Administration and Policy Studies in Education I
411-613 (3) Foundations of Administration and Policy Studies in Education II
411-690 (3) Research Methods

Complementary Course (3 credits)
411-691 (3) Quantitative Research Methods
or 411-692 (3) Qualitative Research Methods

Elective Courses (12 credits)
4 graduate courses chosen in consultation with an advisor.

Thesis Component – Required (24 credits)
411-621 (6) Thesis I
411-623 (6) Thesis II
411-699 (12) Thesis III

M.Ed. Administration and Policy Studies in Education
(45 credits)

The M.Ed. program is intended for present and potential educational administrators interested in advanced professional preparation related to educational practice in schools and non-formal educational settings. The program aims to assist practitioners in improving professional practice in education. The program builds on a core of required courses followed by electives catering to individual needs and experiences which link and synthesize conceptual and theoretical learning with the realities of professional practice.

Students are required to complete 45 credits as outlined in the following description with the advice of the candidate's advisor and/or Department. The program may be completed through part-time or full-time study. The program can be completed in two fall and two winter semesters by full-time students. Part-time students generally require three to five years.

Required Courses (15 credits)
411-612 (3) Foundations of Administration & Policy Studies I
411-613 (3) Foundations of Administration & Policy Studies II
411-690 (3) Research Methods
411-695 (3) Policy Studies in Education
423-614 (3) Sociology of Education

Complementary Courses (6 or 12 credits)
At least one course from Applications
411-625 (6) Special Project
411-634 (12) Monograph Preparation and Presentation
411-683 (6) Advanced Practicum

Elective Courses (18 or 24 credits)

M.Ed. Curriculum Studies (45 credits)

The aim of the M.Ed. in Curriculum Studies is to produce graduates who are master classroom teachers in the field of curriculum studies, who also become leaders in their schools and professional organizations by becoming "teachers of teachers", either from the base of their classrooms or in closely related positions (consultant, curriculum planner, teacher educator). They receive specific training in the following areas: 1) foundational work in curriculum which includes historical and contemporary perspectives; 2) numeracy as part of curriculum studies; 3) relationships between literacy and learning; 4) curriculum inquiry as basic to both subject specialization and broader areas of curriculum study. The program also contributes to the professional growth of teachers by offering strong support for a variety of modes of inquiry, academic writing, and professional scholarship.

Required Courses (33 credits)
Departmental Core:
455-604 (3) Literacy and Learning Across the Curriculum
455-605 (3) Research Methods
455-606 (3) Seminar in Curriculum Inquiry

Curriculum Studies:
455-602 (3) Foundations of Curriculum
455-614 (3) Numeracy Across the Curriculum
455-613 (6) Selected Readings in Curriculum

Complementary Courses (12 credits)
12 credits selected from the following:

425-601	(3)	Contemporary Issues in Post-Elementary Education
425-602	(3)	Special Studies in Subject Area I
425-604	(3)	Special Studies in Subject Area II
425-631	(3)	Principles, Practices and Trends in Vocational Education
425-651	(3)	Mathematics Curriculum Issues
425-671	(3)	Issues in Science Curriculum
425-681	(3)	Social Sciences Secondary Curriculum
433-635	(3)	Mathematics Elementary Curriculum
433-660	(3)	Social Sciences Curriculum
433-661	(3)	Global Education
448-607	(3)	Issues in Educational Technology
455-603	(3)	Reading Course (6 credits)
455-615	(3)	Discourse in Teacher Education
455-616	(3)	Reading Course
455-636	(3)	Issues in Pedagogical Practices
455-637	(3)	Gender, Genre, and Schooling
455-638	(3)	Science in Elementary Curriculum

Research Monograph – Required (12 credits)
455-690   (12) Monograph Preparation and Presentation

M.Ed. Literacy Studies (45 credits)

The aim of the M.Ed. in Literacy Studies is to produce graduates who are master classroom teachers in the field of literacy education, who also become leaders in their schools and professional organizations by becoming "teachers of teachers", either from the base of their classrooms or in closely related positions (consultant, curriculum planner, teacher educator). They receive specific training in the following areas: 1) foundational work in literacy which includes historical and contemporary perspectives; 2) literacy as part of curriculum studies; 3) relationships between literacy and learning; 4) concentrated work in one or more areas such as media literacy, emergent literacy, adult literacy. The program also contributes to the professional growth of teachers by offering strong support for a variety of modes of inquiry, academic writing, and professional scholarship.

Students normally begin with Departmental Core and Literacy Studies courses and complete the program with a monograph. Students will choose complementary courses according to their area of concentration and the particular orientation of their research.

Required Courses (21 credits)
Departmental Core:

455-604	(3)	Literacy and Learning Across the Curriculum
455-605	(3)	Research Methods
455-606	(3)	Seminar in Curriculum Enquiry

Literacy Studies:

455-607	(3)	Foundations of Literacy
455-608	(6)	Selected Reading in Literacy
455-635	(3)	Advanced Written Communication

Complementary Courses (12 credits)
selected from the following:

455-603	(6)	Reading Course
455-609	(3)	Drama and Literacy
455-610	(3)	Literature: Children/Young Adults
455-611	(3)	Issues in Adult Literacy
455-612	(3)	Media Literacy
455-616	(3)	Reading Course (3 credits)
455-617	(3)	Special Topics in Literacy Studies
455-621	(3)	Trends and Issues in Literacy Studies
455-623	(3)	Emergent Literacy
455-627	(3)	Responding to Texts
455-628	(3)	Literacy in Multilingual Settings
455-629	(3)	Writing: Theory, Research, and Practice
455-630	(3)	Assessment of Literacy
455-631	(3)	Individual Assessment in Literacy
455-633	(3)	Practicum in Literacy
455-634	(3)	Supervision of Literacy Programs
455-642	(3)	Language Development

Research Monograph – Required (12 credits)
455-690   (12) Monograph Preparation and Presentation

M.A. Educational Studies (Thesis and Non-Thesis Options)
(Awaiting University approval)

Graduate students in the Department of Educational Studies explore areas of education with special concern for the relationship between curriculum and educational leadership. The program includes the social, cultural, and ideological factors that influence formal and informal contexts for learning. Particular attention is paid to the content and activity of the curriculum and to the ways in which leadership at local, national, and international levels affects the nature and practice of education. The program provides a framework for effectively linking the direction and expertise with the existing graduate programs in Literacy, Curriculum, and Administration and Policy Studies.

Curriculum Concentration

This concentration is designed for experienced teachers and other practitioners in educational settings who are interested in pursuing graduate work that has its roots in the field of curriculum and instruction. It draws from the expertise of Department members in broad areas of curriculum studies: language and literacies for learning, pedagogy, media and cultural studies; from expertise in specific curriculum areas: English, Language Arts, Mathematics, Science, Vocational Education and the Social Sciences; from the expertise of those working in the Centre for the Study and Teaching of Writing, and from the various Department members whose funded research investigates areas such as literacy, global education, gender, workplace learning, student engagement, and teacher education.

Leadership Concentration

The Leadership concentration aims to prepare men and women as educational leaders of broad vision and integrity, committed to personal and institutional improvement in schools, adult education centres, non-governmental organizations, and other settings of formal and informal learning. This goal requires the ongoing development of reflective practitioners who have a sense of educational purpose and mission, an understanding of frameworks to guide action, the capacity to anticipate needs, the ability to exercise professional judgment within the realities of policy frameworks, and the ability to both lead and support institutional and organizational change at all levels.

M.A. Educational Studies (Thesis Option) (45 credits)
Curriculum Concentration
Required Courses (9 credits)

411-609	(3)	Issues in Educational Studies
455-606	(3)	Seminar in Curriculum Inquiry
411-620	(3)	Meanings of Literacy

Complementary Courses (6 credits)

411-690	(3)	Research Methods
411-692	(3)	Qualitative Research Methods
411-679	(3)	Interpretive Inquiry

or equivalent

Elective Courses (6 credits)
Two courses chosen in consultation with an advisor.

Thesis Component – Required (24 credits)

411-621	(6)	Thesis I
411-623	(6)	Thesis II
411-699	(12)	Thesis III

Leadership Concentration
Required Courses (9 credits)

411-609	(3)	Issues in Educational Studies
411-673	(3)	Leadership Theory in Education
411-610	(3)	Leadership in Action

Complementary Courses (6 credits)
411-690   (3) Research Methods
411-692   (3) Qualitative Research Methods
411-679   (3) Interpretive Inquiry
or equivalent

Elective Courses (6 credits)
Two (2) courses chosen in consultation with an advisor.

Thesis Component – Required (24 credits)
411-621   (6) Thesis I
411-623   (6) Thesis II
411-699   (12) Thesis III

M.A. Educational Studies (Non-Thesis Option)

Curriculum Concentration
Required Courses (12 credits)
411-609   (3) Issues in Educational Studies
411-690   (3) Research Methods
455-606   (3) Seminar in Curriculum Inquiry
411-620   (3) Meanings of Literacy

Complementary Courses (15 credits)
Four (4) Curriculum courses
  (Chosen in consultation with an advisor and with the approval of
  Program Director.)
One (1) Leadership course

Elective Courses (6 credits)
Chosen in consultation with an advisor.

Project Component – Required (12 credits)
411-625   (6) Project I
411-627   (6) Project II

Leadership Concentration
Required Courses (12 credits)
411-609   (3) Issues in Educational Studies
411-690   (3) Research Methods
411-673   (3) Leadership Theory in Education
411-610   (3) Leadership in Action

Complementary Courses (15 credits)
Four (4) Leadership courses
  (Chosen in consultation with an advisor and with the approval of
  Program Director.)
One (1) Curriculum course

Elective Courses (6 credits)
Chosen in consultation with an advisor.

Project Component – Required (12 credits)
411-625   (6) Project I
411-627   (6) Project II

28.6 Courses

The course credit weight is given in parentheses (#) after the course title.

● Denotes courses not offered 1999-2000.

411-603 READING COURSE. (6) Independent study of an approved topic with the guidance of a faculty advisor.

411-606 EDUCATIONAL LEADERSHIP ISSUES. (3) Critical analysis and appraisal of leadership issues across geographic, linguistic, racial, gender and cultural contexts from a comparative perspective. Students will analyze their own experience.

● **411-608 COMPUTER TECHNOLOGY IN EDUCATION.** (3) (Prerequisite: 432-200 or equivalent (determined by the instructor.)

411-609 ISSUES IN EDUCATIONAL STUDIES. (3) The purpose is to explore critically the contemporary trends, issues, historical contexts and implications in curriculum and leadership through processes that engage students with each other and various members of the Department.

411-610 LEADERSHIP IN ACTION. (3) Teaching of the use of reflective practice as a means of developing individual theories of action in educational settings. It provides students with the knowledge, skills and attitudes necessary to engage in processes that can improve individual and organizational performance. Special emphasis will be given to communication, problem solving and decision-making.

● **411-612 FOUNDATIONS OF ADMINISTRATION & POLICY STUDIES IN ED. I.** (3)

● **411-613 FOUNDATIONS OF ADMINISTRATION & POLICY STUDIES IN ED. II.** (3)

411-616 READING COURSE. (3) Independent study of an approved topic with the guidance of a faculty advisor.

● **411-618 EDUCATION IN QUÉBEC.** (3)

411-620 MEANINGS OF LITERACY. (3) Investigation of basic issues related to definitions of literacy. Issues include new directions in literacy and education, the need for non-print literacies in contemporary life, and the challenges these changes present for educators.

411-621 THESIS I. (6) Departmental seminar to guide students through the process of developing a thesis proposal, identifying a supervisor, research sites and participants, and considering ethical issues.

● **411-623 THESIS II.** (6)

411-625 PROJECT I. (6) Theoretical or practical project under the supervision of a departmental faculty member to explore and analyze an area of interest relevant to the concentration in leadership or curriculum.

● **411-627 PROJECT II.** (6)

411-628 EDUCATION RESOURCE MANAGEMENT. (3) An exploration of the concepts and skills necessary to manage the human and financial resources of small organizations (schools, NGOs, departments). Among the areas to be explored are labour contracts, supervision, grantsmanship, use of volunteers, managing site-based budgets.

● **411-629 QUALITY OF WORKING LIFE IN EDUCATIONAL INSTITUTIONS.** (3)

● **411-630 POLICY ISSUES IN WORKPLACE LEARNING.** (3)

● **411-634 MONOGRAPH PREPARATION AND PRESENTATION.** (12) (Prerequisite: Completion of required courses.)

● **411-635 FISCAL ACCOUNTABILITY IN EDUCATION.** (3)

● **411-637 MANAGING EDUCATIONAL CHANGE.** (3)

● **411-640 CURRICULUM THEORY.** (3)

● **411-642 CURRICULUM DESIGN.** (3)

411-644 CURRICULUM DEVELOPMENT AND IMPLEMENTATION. (3) Processes of planning, developing, implementing and adapting curricula in various learning systems.

● **411-645 PRACTICUM IN THE SUPERVISION OF INSTRUCTION.** (3)

411-646 PLANNING AND EVALUATION. (3) Knowledge and skills development in educational planning and monitoring at the service delivery unit (school, non-governmental organization, adult education centre). Areas of study include strategic management, results-based management, log frame analysis, systems assessment, stakeholders analysis, and fourth generation evaluation.

● **411-653 INSTITUTIONAL EVALUATION.** (3)

● **411-654 CASE STUDIES.** (3)

● **411-659 PROGRAM EVALUATION.** (3)

● **411-660 COMMUNITY RELATIONS IN EDUCATION.** (3)

● **411-661 POLITICS OF EDUCATION.** (3)

● **411-664 EDUCATION AND LAW.** (3)

● **411-669 POLICY ISSUES IN CANADIAN EDUCATION.** (3)

● **411-671 THE PRINCIPALSHIP.** (3)

411-673 LEADERSHIP THEORY IN EDUCATION. (3) Concepts of leadership and the role of leadership in educational settings.

411-674 ORGANIZATION THEORY AND EDUCATION. (3) Contemporary organization theories and their implications for education and the management of learning environments.

411-675 SPECIAL TOPICS I. (3) Important current issues in the field of Educational Studies. (Content varies from year to year.)

● **411-676 ORGANIZING NON-FORMAL LEARNING.** (3)

411-677 SPECIAL TOPICS II. (3) Important current issues in the field of Educational Studies. (Content varies from year to year.)

411-679 INTERPRETIVE INQUIRY. (3) Focus on issues of voice, reflectivity, and representation when using interpretive frameworks in qualitative research.

411-681 PRACTICUM IN ADMINISTRATIVE STUDIES. (3) Field studies and applied research, including the preparation of a research report.

411-682 PRACTICUM IN POLICY STUDIES. (3) (Prerequisite: Completion of required courses.) Field studies and applied research, including the preparation of a research report.

411-683 ADVANCED PRACTICUM. (6) (Prerequisite: Completion of required courses.) A field experience in which the intern performs a relevant professional role under supervision.

411-690 RESEARCH METHODS. (3) Students will develop a critical understanding of quantitative and qualitative research in the field of Educational Studies. Students will learn about the purposes and types of research, the research process and how to evaluate and use research information. (Awaiting University approval)

● **411-691 QUANTITATIVE RESEARCH METHODS.** (3)

411-692 QUALITATIVE RESEARCH METHODS. (3) Theoretical and practical exploration of the foundations of qualitative methods, with emphasis on underlying principles.

411-693 SCHOOL IMPROVEMENT APPROACHES. (3) Analysis of action research approaches used to improve school performance.

● **411-695 POLICY STUDIES IN EDUCATION.** (3) Issues in the field of policy studies with specific reference to the formulation, analysis, and assessment of educational policies.

● **411-699 THESIS III.** (12)

● **425-601 CONTEMPORARY ISSUES IN POST-ELEMENTARY EDUCATION.** (3)

● **425-602 SPECIAL STUDIES IN THE SUBJECT AREA I.** (3)

● **425-604 SPECIAL STUDIES IN THE SUBJECT AREA II.** (3)

● **425-631 PRINCIPLES, PRACTICES AND TRENDS IN VOCATIONAL EDUCATION.** (3)

● **425-651 MATHEMATICS CURRICULUM ISSUES.** (3)

425-671 ISSUES IN SCIENCE CURRICULUM. (3) Exploration of current research in science curricula, teaching methods, and conceptual change, and investigation of the relevant historical changes in science and science education. Students will probe these issues in relation to their interface with society, technology, work views, philosophy of science and philosophy of education.

● **425-681 SOCIAL SCIENCES SECONDARY CURRICULUM.** (3)

● **433-635 MATHEMATICS ELEMENTARY CURRICULUM.** (3)

433-655 SPECIAL TOPICS IN CURRICULUM STUDIES. (3) A detailed examination of a selected topic. The content will vary from year to year and will be announced prior to registration.

● **433-660 SOCIAL SCIENCES CURRICULUM.** (3)

● **433-661 GLOBAL EDUCATION.** (3)

● **448-607 ISSUES IN EDUCATIONAL TECHNOLOGY.** (3)

455-500 TUTORING WRITING. (3) Theory and practice of teaching writing through one-on-one conferencing. Focus on composition theory and research, rules of English usage, and tutorial teaching strategies. Practical experience offered through work in Writing Tutorial Service. Relevant for anyone who teaches or will teach in English at any level and in any subject.

455-602 FOUNDATIONS OF CURRICULUM. (3) The processes of development, implementation and evaluation will be studied from the perspective of the teacher. The focus will be on the role of the teacher as a curriculum professional at the preschool, elementary and secondary school levels.

455-603 READING COURSE. (6) Individualized guided study of a topic in the teaching of the candidates' specialties selected according to their interest and teaching experience.

455-604 LITERACY AND LEARNING ACROSS THE CURRICULUM. (3) Examination of the central role of language in learning across the curriculum: the processes by which pupils acquire information and understanding and the ways in which teaching must take account of these processes: learning through talk, learning by writing, learning from text.

● **455-605 RESEARCH METHODS.** (3)

455-606 SEMINAR IN CURRICULUM INQUIRY. (3) Students will be introduced to debates that are current in curriculum studies which centre on the appropriate emphasis to be accorded to traditions of schooling. To join the debate, students will need to explore the nature of a variety of traditions and the concomitant curricular manifestations and approaches to pedagogy.

● **455-607 FOUNDATIONS OF LITERACY.** (3)

455-608 SELECTED READINGS IN LITERACY. (6) This course serves as a tutorial course that would normally involve the monograph supervisor. Students would concentrate their reading in an area pertinent to the monograph.

● **455-609 DRAMA AND LITERACY.** (3)

455-610 LITERATURE: CHILDREN/YOUNG ADULTS. (3) An examination of the growth of children's literature from the Middle Ages to modern times, with special emphasis on its reflection of social, cultural, psychological and historical events, issues and norms of the times. Particular emphasis is given to its implications for school programs.

● **455-611 ISSUES IN ADULT LITERACY.** (3)

455-612 MEDIA LITERACY. (3) The course examines the nature and possibilities of media literacy education in schooling, including both the development of students' ability to critically analyze the mass, visual, electronic media in society as well as the development of their own ability to utilize various new media for their own communication.

455-613 SELECTED READINGS IN CURRICULUM. (6) This course serves as a tutorial course that would normally involve the monograph supervisor. Students would concentrate their reading in an area pertinent to the monograph.

455-614 NUMERACY ACROSS THE CURRICULUM. (3) "Numeracy" refers to the kind of numerical, computational, and graphical literacy which forms part of virtually all areas of the school curriculum. This course examines the nature and importance of numeracy as a particular way of knowing for learners, as well as the teaching approaches to utilizing and fostering this kind of learning in the classroom.

● **455-615 DISCOURSE IN TEACHER EDUCATION.** (3)

455-616 READING COURSE. (3) Individualized guided study of a topic in the teaching of the candidates' specialties selected according to their interest and teaching experience.

● **455-617 SPECIAL TOPICS IN LITERACY STUDIES.** (3)

● **455-621 TRENDS AND ISSUES IN LITERACY STUDIES.** (3)

● **455-622 MODELS OF READING AND WRITING.** (3)

- **455-623 EMERGENT LITERACY.** (3)

- **455-624 DEVELOPMENT OF MATURE READING.** (3)

455-627 RESPONDING TO TEXTS. (3) An examination of current theory and research on response to texts and implications for classroom practice at the elementary, secondary, and post-secondary levels. A special emphasis on the processes involved in reading texts, theories of audiences, and researching and assessing response to texts.

- **455-628 LITERACY IN MULTILINGUAL SETTINGS.** (3)

- **455-629 WRITING: THEORY, RESEARCH, AND PRACTICE.** (3)

- **455-630 ASSESSMENT OF LITERACY.** (3)

- **455-631 INDIVIDUAL ASSESSMENT IN LITERACY.** (3)

- **455-633 PRACTICUM IN LITERACY.** (3)

- **455-634 SUPERVISION OF LITERACY PROGRAMS.** (3)

455-635 ADVANCED WRITTEN COMMUNICATION. (3) Rhetorical practices and principles that remain constant across disciplines: generating and organizing ideas; setting goals; planning; considering readers; editing and revising. Students will analyze and produce texts that use the formats, rhetorical strategies, styles, genres, and other conventions of their disciplines.

- **455-636 ISSUES IN PEDAGOGICAL PRACTICES.** (3)

- **455-637 GENDER, GENRE, AND SCHOOLING.** (3)

- **455-638 SCIENCE IN ELEMENTARY CURRICULUM.** (3)

- **455-642 LANGUAGE DEVELOPMENT** (3)

- **455-690 MONOGRAPH PREPARATION AND PRESENTATION.** (12)

29 Electrical and Computer Engineering

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Website: www.ee.mcgill.ca

Chair — D.A. Lowther

Associate Chair (Director, Graduate Program) — J.P. Webb

29.1 Staff

Emeritus Professors
E.L. Adler; B.Sc.(Lond.), M.A.Sc.(Tor.), Ph.D.(McG.), Eng.
G.W. Farnell; B.A.Sc.(Tor.), S.M.(M.I.T.), Ph.D.(McG.), F.I.E.E.E., Eng.
T.J.F. Pavlasek; B.Eng., M.Eng., Ph.D.(McG.), Eng.

Professors
P.R. Belanger; B.Eng.(McG.), S.M., Ph.D.(M.I.T.), F.I.E.E.E., Eng.
M.L. Blostein; B.Eng., M.Eng.(McG.), Ph.D.(Ill.), Eng.
P.E. Caines; B.A.(Oxon.), D.I.C., Ph.D.(Lond.), F.I.E.E.E.E., F.C.I.A.R.
C.H. Champness; M.Sc.(Lond.), Ph.D.(McG.) (part-time)
F.D. Galiana; B.Eng.(McG.), S.M., Ph.D.(M.I.T.), Eng.
P. Kabal; B.A.Sc., M.A.Sc., Ph.D.(Toronto)
M.D. Levine; B.Eng.(McG.), Ph.D.(Lond.), F.C.I.A.R., Eng.
D.A. Lowther, B.Sc.(Lond.), Ph.D.(Brigh.Poly)
B.T. Ooi; B.E.(Adel.), S.M.(M.I.T.), Ph.D.(McG.), Eng.
N.C. Rumin; B.Eng., M.Sc., Ph.D.(McG.), Eng.
J.P. Webb; B.A., Ph.D.(Cantab.)
G.L.Yip; B.Sc.(Lond.), M.Sc.(Queen's), Ph.D.(Toronto), Eng.

Associate Professors
J. Clark; B.Sc., Ph.D.(Br.Col.)
F. Ferrie; B.Eng., M.Eng., Ph.D.(McG.)

V. Hayward; Dip.d'Ing.(ENSM, Nantes), Doc.Ing.(Orsay)
H. Leib; B.Sc., M.Sc.(Technion-Israel), Ph.D.(Tor.)
S. McFee; B.Eng., Ph.D.(McG.)
H. Michalska; B.Sc., M.Sc.(Warsaw), Ph.D.(Lond.)
D. Plant; M.S., Ph.D.(Brown)
G. Roberts; B.A.Sc.(Wat.), M.A.Sc., Ph.D.(Tor.), Eng.
I. Shih; M.Eng., Ph.D.(McG.)

Assistant Professors
B.Boulet; B.Sc.(Laval), M.Eng.(McG.), Ph.D.(Tor.)
J. Cooperstock; B.Sc.(Br.Col.), M.Sc., Ph.D.(Tor.)
M.El-Gamal; B. Sc.(Cairo),M.Sc.(Nashville), Ph.D.(McG.)
K. Khordoc; B.Eng., M.Eng., Ph.D.(McG.)
A. Kirk; B.Sc.(Brist.), Ph.D.(Lond.)
R. Negilescu; M..Sc.(Romania),M.Sc.(France), Ph.D.(Wat.)
Z. Zelic; B. Eng.(Zagreb), M.Sc., Ph.D.(Toronto)

Lecturers
K.L. Fraser; B.Eng., M.Eng.(McG.)
F. Danilo; M.Eng.(McG.)

Adjunct Professors
V.K. Agarwal, E. Cerny, B. Champagne, P. Freedman, M. Gavrilovic, J.F. Hayes, C.K. Jen, G. Joos, S. Kubina, I.Leszkowicz, L. Lin, M. Marin, D. McGillis, D. O'Shaughnessy, A. Pinchuk, J. Rajski, F.M. Reza, F. Rizk, M.A. Sawan, M.R. Soleymani, O. Tanir, L.A. Wegrowicz

Associate Members
M. Buehler *(Mechanical Engineering);* G. Dudek *(Computer Science);* J.H.T.Bates, A.C. Evans, W.R. Funnell, H.L. Galiana, J. Gotman, R.E. Kearney, T.M. Peters, K.L. Watkin *(Biomedical Engineering*)

Visiting Professors
B. Prasada; M.Sc.(Ban), Ph.D.(Lond.)
M. Kaplan; M.Sc., Ph.D.(C'nell)

29.2 Programs Offered

The Department offers programs of graduate studies leading to a degree of Master of Engineering or Doctor of Philosophy.

An equivalent of one (1) calendar year of full time study is required to obtain a Master's in Engineering.

The Ph.D. program maintains a requirement of the equivalent of two (2) calendar years of full time study besides the requirements for the Master's degree.

The research interests and facilities of the Department are very extensive, involving more than 30 faculty members and 200 postgraduate students. The major activities are divided into the following groups: Biomedical Engineering, Communications Systems, Computer Vision and Robotics, Computational Analysis for Engineering Design, Software Systems for Intelligent Design, Electronic Devices and Materials, High Frequency Electromagnetics and Optics, Power Engineering, Systems and Control, Microelectronics and Computer Systems, and Photonics.

Research Facilities

The Department has extensive laboratory facilities for all its main research areas. In addition, McGill University often collaborates with other Institutions for teaching and research.

- The laboratories for research in Robotics, Control and Vision are in the Centre for Intelligent Machines (CIM).

- Telecommunications laboratories focus their work on signal compression and wireless communications. These laboratories form part of the Canadian Institute for Telecommunications Research (CITR). This is a federally funded network of Centers of Excellence.

- The Microelectronics and Computer System (MACS) Laboratory supports research in VLSI, mixed signal circuits, design for testability, formal methods telecommunications, computing and optical systems.

- Antenna and microwave research, and optical fiber and integrated optics research are carried out in a fully equipped facility.

- The Photonics Systems laboratory includes continuous wave and femtosecond Ti:Sapphire lasers, diode lasers, extensive optics and optomechanics, and sophisticated electronic and imaging equipment.
- Solid state facilities include measurement equipment for magnetic and electric properties of materials, vacuum deposition and RF sputtering systems.
- The Computational Analysis and Design Laboratory provides tools for numerical analysis, visualization, interface design and knowledge-based system development.
- There is also a well-equipped laboratory for power electronics and power systems research.

The Department has extensive computer facilities. Most research machines are networked providing access to a vast array of hardware. In addition, McGill University is linked to the Centre de Recherche Informatique de Montréal (CRIM) and the University Computing Centre.

There are three other universities in Montreal: Concordia University is the other English language university; L'Université de Montréal, and its affiliated school of engineering, L'Ecole Polytechnique, is the largest Francophone university; L'Université du Québec has a campus in Montreal and in major towns throughout the province.

The proximity of these schools to McGill University, ensures a rich array of courses is available to suit individual needs. McGill also collaborates on research projects with many organizations such as l'Institut Nationale de la Recherche de L'Hydro-Québec (IREQ) and L'Institut Nationale de la Recherche Scientifique (INRS).

Financial Support

Graduate Assistantships: The Department awards a number of graduate assistantships that carry an annual stipend of approximately Can$15,000 per year to qualified full-time graduate students. These are normally funded from research grants or contracts awarded to individual faculty members. In return, the graduate assistant is expected to perform research-related tasks assigned by the professor from whose grant the assistantship is paid. A good part, but not necessarily all, of this work can be used for preparing a thesis. There is no special application form for graduate assistantships; all applicants who indicate a need for support on their application forms will be considered. A large fraction of research funding comes from Canadian Government agencies, with the stipulation that only graduate students who are either Canadian citizens or Permanent Residents may be supported. Consequently, graduate assistantships can be offered to a very small number of international students. They should also note that Canadian authorities will not grant an Immigrant Visa to a foreign national who wishes to enter Canada to study.

Teaching Assistantships: Graduate students, with the approval of their supervisors, may also undertake teaching assistantship for an additional remuneration of between Can$400 to Can$3,000 per year. These are awarded at the beginning of the semester. The Department can make no prior commitments.

Differential Fee Waivers: All eligible visa students accepted or registered in a full-time term of residency will be considered for a limited number of waivers that reduce international tuition fees to the equivalent of Canadian tuition fees. McGill bases awards entirely on academic merit.

Graduate students can also receive financial aid through either fellowships, loans or bursaries. For more information, please refer to the Office of Fellowships & Awards website (http://www.mcgill.ca/fgsr/fellowl.htm), or contact OFA, Faculty of Graduate Studies and Research, McGill University, Dawson Hall, Room 311, 853 Sherbrooke Street West, Montreal, QC H3A 2T6.

29.3   Admission Requirements

TOEFL Requirement: Non-Canadian applicants whose mother tongue is not English and who have not completed an undergraduate degree using the English language, must submit documented proof of competency in English by a Test of English as a Foreign Language (TOEFL) with a score not below 600 or IELTS with a minimum overall band of 6.5. Permanent Residents may also be required to submit TOEFL results. Official results must be received before February 1st.

GRE Requirement: A GRE (Graduate Record Examinations) score on the General Aptitude Test and the Advanced Test in Engineering is required by all students who have completed their undergraduate degrees outside Canada. A minimum total score of 1800 is required. Official results must be received before February 1st.

M.Eng. Degree (Admission Requirements)

The applicant must be the graduate of a recognized university and hold a Bachelor's degree equivalent to a McGill degree in Electrical or Computer Engineering or a closely allied field. An applicant holding a degree in another field of engineering or science will be considered but a qualifying year may be given to make up any deficiencies. The applicant must have a high academic achievement: a standing equivalent to a Cumulative Grade Point Average **(CGPA) of 3.0 out of 4 (75%) or a GPA of 3.2 out of 4.0 for the last two full-time academic years.** Satisfaction of these general requirements does not guarantee admission. Admission to graduate studies is limited and acceptance is on a very competitive basis.

Ph.D. Degree (Admission Requirements)

Candidates who fulfill the general requirements of the Faculty of Graduate Studies and Research and who possess a Master's degree may be accepted for a course of study leading to the Ph.D. degree in Electrical Engineering.

29.4   Application Procedures

Applications will be considered upon receipt of:
1. completed application form;
2. application fee (Can$60);
3. two official copies of all previous transcripts;
4. two reference letters (sent directly by the referees);
5. TOEFL and GRE scores (if applicable)

Applications are processed in March for the following September session. This takes place once every year. **There is no January admission.** All documents must be directly sent to to Graduate Program Admissions, Department of Electrical and Computer Engineering.

The deadline to receive the complete application in the Department is **February 1.**

29.5   Program Requirements

A student may satisfy the M.Eng. degree requirements by completing one of the following options:

M.Eng. Thesis Option (46 credits)
The Thesis option requires satisfactory completion of six graduate level courses (with a grade of B or better) of which four courses must be chosen from the Department (304-5xx or 304-6xx), plus research leading to a Master's thesis (28 credits), the total amounting to at least 46 credits. Students who are required to take more than two non-departmental courses must bring a letter of recommendation from their supervisors outlining the reason for such an action. There are no circumstances under which the maximum number of non-departmental courses will be raised above three. The following are the thesis component courses:

304-691 Thesis Research I	4 credits
304-692 Thesis Research II	4 credits
304-693 Thesis Research III	4 credits
304-694 Thesis Research IV	4 credits
304-695 Thesis Research V	4 credits
304-696 Thesis Research VI	4 credits
304-697 Thesis Research VII	4 credits
Total credit weight of thesis:	28 credits

Students who choose the thesis option must register for all 28 credits during the course of study. Students in the thesis option must carry a full load (minimum of 12 credits) during the three terms of the residency requirement.

M.Eng. Non-Thesis (Project) Option (47 credits)
The Project option requires satisfactory completion of at least nine graduate level courses (with a grade of B or better) of which six courses must be chosen from the Department (304-5xx or 304-6xx), plus a project (up to 20 credits), the total amounting to 47 credits. Students who are required to take more than three non-departmental courses must bring a letter of recommendation from their supervisors outlining the reason for such and action. There are no circumstances under which the maximum number of non-departmental courses will be raised above four. The following are the project component courses:

304-651 Research Project I	1 credit
304-652 Research Project II	2 credits
304-653 Research Project III	3 credits
304-654 Research Project IV	4 credits
304-655 Research Project V	5 credits
304-656 Research Project VI	5 credits

Total number of project credits: 20 credits

The credits assigned to the project can vary between 11 and 20 depending on the number of course credits taken. A part-time program is possible.

Non-thesis option students have an oral presentation and two examiners grade their project.

Ph.D. Program Requirements

To complete the doctoral program, the following requirements must be met.

a) Successful completion of the courses prescribed by the student's Supervisory Committee.

b) Completion of a minimum of two units (100 hours) of teaching work (tutoring or lab demonstration). A written confirmation of the type of teaching work done either inside or outside the Department must be submitted to the Department.

c) Passing the Qualifying Examination (course 304-701). Students must register for this course upon admission to the doctoral program. It is recommended that the exam take place within one year of admission to the doctoral program. The contents of the Qualifying Examination are set at the Preliminary Meeting. The examiners at the Qualifying Examination include the student's Supervisory Committee together with any other examiners chosen by the committee. Successful completion of this course will award the student a PASS grade in the course 304-701.

d) Approval of the thesis proposal submitted by the student (course 304-702). Students must register for this course upon successful completion of the course 304-701. It should be completed within one year of the Qualifying Examination. The student must present a brief written thesis proposal to the Supervisory Committee. The proposal should contain a statement of the proposed research, results already obtained, if any, and expected results. The proposal is to be received by members of the Committee in advance of its presentation. The format of the thesis proposal submission is an oral presentation of the written statement by the student and then a period in which he/she will be questioned on the proposal by the Supervisory Committee. When the proposal is accepted by the Supervisory committee, the student receives a PASS grade in the course 304-702.

e) Passing the final thesis defense conducted by the Faculty of Graduate Studies and Research.

29.6   Courses

● Denotes not offered in 1999-2000.
▢ Denotes limited enrolment.

The course credit weight is given in parentheses (#) after the course title, along with the number of weekly contact hours (lectures, lab/tutorials) and expected hours of study, e.g. 3(3-0-6) indicates 3 credits(3 lecture hours - no other contact hours - 6 hours of personal study).

304-501A LINEAR SYSTEMS. 3(3-0-6) (Prerequisite: 304-303) State equations and input-output descriptions of linear systems: basic properties and solution. Observability and controllability. Matrix Fraction Descriptions. Canonical forms. Feedback synthesis: linear quadratic control problems, pole placement, observers and compensators.   **Staff**

304-502B CONTROL ENGINEERING. 3(3-0-6) (Prerequisites: 304-304, 304-305) Modelling of engineering systems, simulation. Linear systems theory. Performance limitations. Stability of single-input-single-output closed-loop systems. Classical design in the frequency domain. Sampled-data implementation of coutinuous-time design.   **Professor Bélanger**

304-503B LINEAR STOCHASTIC SYSTEMS I. 3(3-0-6) (Prerequisites: 189-587 or 304-510) Stochastic processes: stationary processes, the Wold decomposition. The spectral representation theorem. Linear stochastic systems. Estimation Theory: Wiener-Kolmogorov prediction theory, Kalman filtering. Stochastic realization theory. Linear quadratic control theory.   **Professor Caines**

304-504B COMPUTER CONTROL. 3(3-0-6) (Prerequisites: 304-404 or 304-502 and 304-305) Sampling and aliasing. Conversion of continuous-time controllers using s-to-z transformations; pre- and post-filtering. Discrete time state representation and z-transfer function of sampled linear, time-invariant systems. Correspondence between system theoretic results for continuous- and discrete-time systems. Sampled-data design, including deadbeat and Linear Gluadratic Gaussian control. Quantization. Specification of computer system. Study of control system design through case studies.   **Staff**

304-505B MULTIVARIABLE NONLINEAR CONTROL SYSTEMS. 3(3-0-6) (Prerequisite: 304-501) Basic ODE formulation of non-linear systems; structural properties; Lyapunov and LaSalle stability theory and nonlinear and multivariable controller design; input-output stability; small gain theorem, conservation, passivity; system linearization, zero and inverse dynamics and regulator design; discontinuous and sliding mode control; applications to deterministic adaptive control.   **Professors Caines and Michalska**

304-507A OPTIMIZATION AND OPTIMAL CONTROL. 3(3-0-6) (Prerequisites: 189-265 or 189-248 and 189-270 or 189-247) General Introduction to optimization methods including steepest descent, conjugate gradient, Newton algorithms. Generalized matri inverses and the least squared error problem. Introduction to constrained optimality; convexity and duality; interior point methods. Introduction to dynamic optimization; existence theory, relaxed controls, the Pontryagin Maximum Principle. Sufficiency of the Maximum Principle.   **Professor Michalska**

304-510A RANDOM PROCESSES. 3(3-0-6) (Prerequisite: 304-305) Gaussian random processes and linear systems: analysis and control. Markov chains in discrete time: classification of states. Markov chains in continuous time and diffusion processes: forward and backward equations. Laws of large numbers for stochastic processes. Renewal theory with applications to queuing systems.
                Professor Caines

304-511A COMMUNICATIONS SYSTEMS. 3(3-0-6) (Prerequisite: 304-304 and 304-305) Amplitude and angle modulation including AM, FM, FDM and television systems; introduction to random processes; sampling and quantization; PCM systems, TDM; digital modulation techniques, Maximum-Likelihood receivers, synchronization issues; elements of information theory including information sources, source coding and channel capacity.
                Professor Leib

304-512A DIGITAL SIGNAL PROCESSING. 3(3-0-6) (Prerequisite: 304-304 and 304-305) Review of discrete-time systems and signals including Fourier and Z-transform theory and the discrete Fourier transform; structures for discrete-time systems, FIR and

IIR filter design techniques, FFT techniques, the discrete Hilbert transform, Fourier analysis of stationary and non-stationary random signals. **Professor Kabal**

304-521B DATA COMMUNICATIONS. 3(3-0-6) (Prerequisite: 304-411 or 304-511) System design for intersymbol interference: limits of performance, channels, lowpass equivalent systems, signal design (Nyquist theory), PAM receivers. Linear modulation (QAM, combined AM/PSK), nonlinear modulation (FSK, differential PSK). Adaptive equalization. Combined coding/modulation (TCM). Spectral shaping codes, phase and timing recovery, scramblers. Error control and automatic repeat request. **Professor Kabal**

304-522A ASYNCHRONOUS CIRCUITS & SYSTEMS. 3(3-3-3) (Prerequisite: 304-323) Specification of asynchronous behaviors. Asynchronous logic components. Hierarchical design and verification. Concurrency issues: deadlock, livelock, starvation, safety. Timing Issues. Modern design styles: handshaking, micropipelines. Asynchronous analysis models for protocols and software. (Awaiting University approval) **Professor Negulescu**

304-523B SPEECH COMMUNICATIONS. 3(3-0-6) (Prerequisite: 304-412 or 304-512) Human speech production: articulatory and acoustic descriptions; models of speech production; speech perception; digital processing of the speech signal; vocoders format, (linear predictive, cepstral); automatic speech recognition by computer; speech synthesis-by-rule; speaker recognition/verification. Some background in digital signal processing recommended. **Professor O'Shaughnessy**

304-525B COMPUTER ARCHITECTURE. 3(3-0-6) (Prerequisites: 304-222 and 304-323) Complex and reduced instruction set processors. The design and analysis of memory systems. Interconnection networks. Architecture design. Pipelining, parallel processing, array processors, associative computing. Systolic and wavefront architectures, data flow computers, supercomputing. Fault-tolerant computing. Performance evaluation of computer systems. **Professor Szymanski**

304-526B ARTIFICIAL INTELLIGENCE. 3(3-0-6) (Prerequisite: 304-222) Fundamentals of automated reasoning in expert systems: Semantics and satisfaction, inference procedures, logical implication, proofs, unification, resolution, soundness and completeness. Searching strategies and problem solving. Limits of monotonic logic: forms of non-monotonic reasoning. The course includes a term project which consists of writing a small inference engine in Lisp. **Professor Cooperstock**

304-527B OPTICAL AND PHOTONIC SYSTEMS. 3(3-0-6) (Prerequisite: 304-304 and 304-352) A structured introduction to modern optical engineering. Topics covered include the propagation of light through space, refraction, diffraction, polarization, lens systems, ray-tracing, aberrations, computer-aided design and optimization techniques, Gaussian beam analysis, micro-optics and computer generated diffractive optical elements. Systems and applications will be stressed throughout. **Professor Kirk**

304-528B TELECOMMUNICATION NETWORKS. 3(3-0-6) (Prerequisite: 304-305 and 304-323) Modelling, organization and performance analysis of telecommunication networks. Statistical mutiplexing, packet switching, circuit switching, datagrams, protocols, SONET, ATM, performance analysis, product-form queueing networks, local area networks, CSMA/CD, Ethernet, Fiber-Distributed-Data-Interface (FDDI), token rings, token busses, polling systems, optimal routing and flow controls. **Dr. Kaplan**

304-529A IMAGE PROCESSING AND COMMUNICATION. 3(3-0-6) (Prerequisite: 304-304) Introduction to vision in man and machine; computer vision systems; biological vision systems; biological signal processing; edge detection; spatial- and frequency-domain processing; color. Low-level visual processing in computer vision, psychophysics, and neurobiology, and their similarities and differences. **Professor Levine**

304-530B LOGIC SYNTHESIS. 3(3-2-4) (Prerequisite: 304-323) The place of logic synthesis in microelectronics. Representations of Boolean functions; logic covers, binary decision diagrams. Two-level synthesis algorithms, Espressso. Multi-level synthesis to Boolean networks: don't care methods, algebraic optimizations, delay modelling. Sequential synthesis: state-based optimizations, state assignment, network optimizations. Technology mapping: library cell and FPGA mapping. (Awaiting University approval) **Professor Zilic**

304-531B REAL TIME SYSTEMS. 3(3-3-3) (Prerequisites: 304-323 and 304-222) Real-time engineering applications of computers to online control communication systems and data acquisition. Aspects of hardware, software, interfacing, operating systems, and their integration into a complete system are addressed. **Professor Khordoc**

304-532A COMPUTER GRAPHICS. 3(3-3-3) (Prerequisite: 304-222) Introduction to computer graphics systems and display devices: raster scan, scan conversion, graphical input and interactive techniques – window environments; display files: graphics languages and data structures: 2D transformations; 3D computer graphics, hidden line removal and shading; graphics system design; applications. Laboratory project involving the preparation and running of graphics programs. **Ms. Leszkowicz**

304-533B PHYSICAL BASIS OF SEMICONDUCTOR DEVICES. 3(3-0-6) (Prerequisites: 198-350 and 304-330) Quantitative analysis of diodes and transistors. Semiconductor fundamentals, equilibrium and non-equilibrium carrier transport, and Fermi levels. PN junction diodes, the ideal diode, and diode switching. Bipolar Junction Transistors (BJT), physics of the ideal BJT, the Ebers-Moll model. Field effect transistors, metal-oxide semiconductor structures, static and dynamic behaviour, small-signal models. **Professor Plant**

304-534A ANALOG MICROELECTRONICS. 3(3-0-6) (Prerequisite: 304-334) Design of analog ICs using specialized analog CAD tools such as SPICE. Voltage and current amplifier design which encompasses the study of biasing circuits, current sources and mirrors, input and output stages, and frequency compensation; precision reference sources; analog multipliers; oscillators; waveform generators and shaping circuits, and analog switches. **Professor Roberts**

304-543B NUMERICAL METHODS IN ELECTRICAL ENGINEERING. 3(3-0-6) (Prerequisites: 304-222, 304-334 and 304-352) DC resistor networks and sparse matrix methods. Nonlinear electric and magnetic circuits: curve-fitting; the Newton-Raphson method. Finite elements for electrostatics. Transient analysis of circuits: systems of Ordinary Differential Equations; stiff equations. Transient analysis of induced currents. Solution of algebraic eigenvalue problems. Scattering of electromagnetic waves: the boundary element method; numerical integration. **Professor Webb**

● **304-545A MICROELECTRONICS TECHNOLOGY.** (3-0-6) (Prerequisite: 304-432 or 304-533)

304-547A FINITE ELEMENTS IN ELECTRICAL ENGINEERING. 3(3-0-6) (Prerequisites: 304-222 and 304-352) Finite elements for electrostatics. Energy minimization. Semi-conductors. Nonlinear magnetics and Newton-Raphson. Axisymmetric problems. Capacitance, inductance, and resistance through finite elements. Resonance: cavities, waveguides. High order and curvilinear elements. **Professor McFee**

▭ **304-548A INTRODUCTION TO VLSI SYSTEMS.** 3(2-2-5) (Prerequisites: 304-334 and 304-323) An interdisciplinary course for electrical engineering and computer science students. A structured design methodology for managing the complexity of VLSI system design. Sufficient information on integrated devices, circuits, digital subsystems and system architecture is presented to enable students to span the range of abstractions from device physics to VLSI digital systems. **Professor Rumin**

304-549A EXPERT SYSTEMS IN ELECTRICAL DESIGN. 3(3-0-6) (Prerequisites: 304-361 and 304-494) Design processes in electrical engineering. Hierarchical design. Computer aided design. Expert system technology. Device representations, heuristics and structures, algebraic models. Design versus diagnosis, "Shallow" and

"Deep" systems, second generation (multi-paradigm) systems. Shells and their uses in design systems. Knowledge acquisition systems. **Professor Lowther**

304-559X FLEXIBLE CC TRANSMISSION SYSTEMS. 3(3-0-6) (Prerequisite: 304-361 and 304-334) Vision of Flexible AC Transmission Systems. Principles of operation of the contLrollers and their applications in FACTS. Passive-Controllers: shunt and series capacitor/inductor compensation, phase-shifting transformers, Interphase Power Controllers (IPC). Thyristor or Line Commutated Controllers: Graetz bridge and Static VAR Controller (SVC) topologies. Thyristor-controlled series capacitor (TCSC), series reactor (TCSR), phase angle regulator (TCPR). Gate-turn-off thyristor (GTO) or Force Commutated Controllers: Shunt and series capacitive/inductive reactance compensation, phase shifters. **Professor Ooi**

● **304-560A POWER SYSTEMS ANALYSIS II.** 3(3-0-6) (Prerequisite: 304-464)

● **304-562A CONTINUUM ELECTROMECHANICS.** 3(3-0-6) (Prerequisite: 304-352)

304-563B POWER SYSTEMS OPERATION AND PLANNING. 3(3-0-6) (Prerequisite: 304-361) Design and operation of large scale power systems: Temp oral, spatial and hierarchical decomposition of tasks. Local vs. distributed control. Load-frequency control. Voltage and speed regulation. Interconnected power systems. Power flow. Security states. Optimal operation of power systems. Power system reliability. **Professor Galiana**

304-565A INTRODUCTION TO POWER ELECTRONICS. 3(3-0-6) (Prerequisite: 304-334) Semiconductor power switches – thyristors, GTO's, bipolar transistors, MOSFET's. Switch mode power amplifiers. Buck and boost principles. Modulation methods – PWM, delta, hysteresis current control. Rectifiers, inverters, choppers. **Professor Ooi**

304-571A INTRODUCTION TO PHOTONICS. 3(3-0-6) (Prerequisites: 304-304, 304-305, 304-352 and 304-533) Physical basis of optoelectronic devices including Light Emitting Diodes, semiconductor optical amplifiers, semiconductor lasers, quantum well devices, and solid state lasers. Quantitative description of detectors, optical modulation, optical logic devices, optical interconnects, and optomechanical hardware. Photonic systems applications will be addressed. **Professor Plant**

304-573A MICROWAVE ELECTRONICS. 3(3-0-6) (Prerequisite: 304-432 or 304-533) Physical basis of modern microwave devices and circuits. Microwave transistors and tunnel diodes, transferred electron devices, transit time devices and infra red devices. Microwave generation and amplification, microwave FET circuits. Noise and power amplification. **Professor Shih**

● **304-578A CRYSTALS AND CONDUCTION.** 3(3-0-6) (Prerequisite: 304-432 or 304-533)

● **304-579B PROPERTIES OF SOLIDS.** 3(3-0-6) (Prerequisite: 304-376)

● **304-592A MICROWAVE THEORY AND TECHNIQUES.** 3(3-0-6) (Prerequisite: 304-352)

● **304-593B ANTENNAS AND PROPAGATION.** 3(3-0-6) (Prerequisite: 304-352)

● **304-596B OPTICAL WAVEGUIDES.** 3(3-0-6) (Prerequisite: 304-352)

● **304-602A OPTIMIZATION METHODS.** 4(3-0-9) (Prerequisite: 304-501 or 304-502)

● **304-604B LINEAR STOCHASTIC SYSTEMS II.** 4(3-0-9) (Prerequisite: 189-587)

304-606B ADVANCED TOPICS CONTROL. 4(3-0-9) Topics selected from current research in large scale systems theory, logic control, adaptive control, stability and algebraic methods. **Professor Caines**

● **304-615B MULTIDIMENSIONAL SIGNAL PROCESSING.** 4(3-0-9) (Prerequisite: 304-412 or 304-512)

● **304-620B INFORMATION THEORY AND CODING.** 4(3-0-9) (Prerequisite: 304-305 or 304-310)

304-621B STATISTICAL COMMUNICATION THEORY. 4(3-0-9) (Prerequisite: 304-411 or 304-511: Corequisite: 304-510) Classical detection and estimation theory (hypothesis testing, estimation theory, composite hypothesis testing, performance bounds). Discrete representation of continuous-time signals (signal spaces, Karhunen-Loeve expansion); Single message communication (coherent and noncoherent detection of signals in noise, estimation of signal parameters, synchronization, performance bounds). Sequential message communication (sequential information sources, bit-by-bit versus block signalling, channel capacity). **Professor Leib**

304-624B DATA COMPRESSION. 4(3-0-9) (Prerequisites: 304-510 and 304-412 or 304-512) Theory and design of signal coding systems: Waveform characterization (speech and image waveforms), sampling (aliasing, optimal reconstruction filters), linear prediction. Scalar quantization: uniform and nonuniform, optimality, robust quantization. Differential coding, adaptive prediction, noise feedback. Run-length coding, entropy coding. Transform coding: transforms, bit assignment. Vector quantization: design, optimality, combined source/channel designs. Delayed decision coding: tree and trellis coding. **Staff**

● **304-626B COMPUTER VISION.** 4(3-0-9) (Prerequisite: 304-529)

304-629B VISUAL MOTOR SYSTEMS. 4(3-0-9) (Prerequisite: 304-529) Examination of the link between vision and action in artificial and natural systems. Active vision, spatial attention, perception and representation of space, gaze stabilization and tracking, scanning and saccadic eye movements, visual servoing. Design and control of robotic visual-motor systems. Neurobiology off visual-motor systems. **Professor Clark**

304-634B ANALOG INTEGRATED CIRCUITS FOR SIGNAL PROCESSING. 4(3-0-9) (Prerequisites: 304-334, 304-303 or equivalent) Analog signal processing techniques for monolithic implementation. Filter approximation theory; filter realization methods; integrated filter technologies; active-RC, MOSFET-capacitor, transconductance-capacitor, switched-capacitor, switched-current; filter tuning methods. Phase-locked loops; signal conversion techniques. (Awaiting University Approval) **Professor Roberts**

▢ **304-648B VLSI DESIGN.** 3(1-5-3) (Prerequisite: 304-548) A project course with the opportunity to apply the knowledge acquired in 304-548 to the design of a complete digital IC of medium complexity. Completed designs will be submitted for fabrication to the Implementation Centre of the Canadian Microelectronics Corporation. The course includes lectures on advanced topics in VLSI design. **Staff**

304-649B VLSI TESTING. 4(3-0-9) (Prerequisite: B.Eng. or equivalent.) The course is to orient designers of VLSI chips and boards to think about testing problems in parallel with the design process. Consideration in structured design-for-testability as a requirement for complex systems will be emphasized; as well as the emerging concept of built-in self-test (BIST). **Staff**

304-651A,B,C PROJECT RESEARCH I. 1(0-0-3)
304-652A,B,C PROJECT RESEARCH II. 2(0-0-6)
304-653A,B,C PROJECT RESEARCH III. 3(0-0-9)
304-654A,B,C PROJECT RESEARCH IV. 4(0-0-12)
304-655A,B,C PROJECT RESEARCH V. 5(0-0-15)
304-656A,B,C PROJECT RESEARCH VI. 5(0-0-15)

● **304-659Y ELECTRICAL AND THERMAL TRANSIENTS.** 4(4-0-8)
● **304-661Y NEW POWER GENERATION TECHNOLOGIES.** 4(4-0-8)
● **304-662X ELECTRIC MACHINE DYNAMICS.** 4(4-0-8) (Prerequisite: 304-462)
● **304-664X HVDC POWER TRANSMISSION.** 4(4-0-8)
● **304-668Y ENERGY EFFICIENT POWER SYSTEMS.** 4(4-0-8)
● **304-675A SOLAR CELLS AND JUNCTIONS.** 4(3-0-9) (Prerequisite: 304-432)

304-677A,B EXPERIMENTAL TECHNIQUES IN SOLID STATE. 4(0-6-6) (Prerequisite: 304-545) Experimental project in solid state involving the following: techniques of preparation, fabrication and orientation of samples and structures for experimental study; use of special laboratory apparatus; measurement of electronic, optical and structural properties of samples and structures; evaluation of electronic behaviour and performance; interpretation of relevant physical processes and phenomena. **Staff**

304-678A SPECIAL TOPICS IN SOLIDS I. 4(3-0-9) (Prerequisite: 304-432A) Discussion of topics in semiconductor electronics and electronic properties of materials in areas of current research to the Department.

304-680A,B TOPICS IN PHOTONICS. 4(3-0-9)

304-681A,B COLLOQUIUM IN ELECTRICAL ENGINEERING. (4) Directed reading, seminar and discussion course in various subjects of current interest in electrical engineering research.

304-682A,B TOPICS IN COMPUTERS AND CIRCUITS. 4(3-0-9)

304-683A,B TOPICS IN VISION AND ROBOTICS. 4(3-0-9)

304-684A,B TOPICS IN COMPUTER AIDED DESIGN. 4(3-0-9)

304-685A,B TOPICS IN POWER ENGINEERING. 4(3-0-9)

304-686A,B TOPICS IN COMMUNICATIONS SYSTEMS. 4(3-0-9)

304-687A,B TOPICS IN MICROWAVES & OPTICS. 4(3-0-9)

304-688A,B RECENT ADVANCES IN ELECTRICAL ENGINEERING. 4(3-0-9) Course content suited to the area of specialization of the lecturer.

304-689A,B RECENT ADVANCES IN ELECTRICAL ENG. II. 4(3-0-9) Course content suited to the area of specialization of the lecturer.

304-690A,B TOPICS IN BIOMEDICAL ENGINEERING. 4(3-0-9)

304-691A,B,C THESIS RESEARCH I. 4(3-0-9)

304-692A,B,C THESIS RESEARCH II. 4(3-0-9)

304-693A,B,C THESIS RESEARCH III. 4(3-0-9)

304-694A,B,C THESIS RESEARCH IV. 4(3-0-9)

304-695A,B,C THESIS RESEARCH V. 4(3-0-9)

304-696A,B,C THESIS RESEARCH VI. 4(3-0-9)

304-697A,B,C THESIS RESEARCH VII. 4(3-0-9)

304-701A,B,C PH.D. QUALIFYING EXAMINATION. Oral Examination of Ph.D. student's background in defined areas.

304-702A,B,C PH.D. RESEARCH PROPOSAL. Definition of a plan for Ph.D. research.

30 English

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Chair — G.S. Wihl

30.1 Staff

Emeritus Professors
L. Dudek; B.A.(McG.), A.M., Ph.D.(Col.) *(David J. Greenshields Emeritus Professor of English)*
J. Hemlow; M.A., LL.D.(Qu.), A.M., Ph.D.(Harv.) F.R.S.C.
S. Klima; B.A.(Bowdoin), M.A.(Masaryk), Ph.D.(Yale)
A. Lucas; M.A.(Queen's), A.M., Ph.D.(Harv.)
M. Puhvel; B.A., M.A.(McG.), Ph.D.(Harv.)
W.C. Wees; B.A.(Northwestern), M.A.(Roch.), Ph.D.(Northwestern)

Professors
M.D.Bristol; A.B.(Yale), Ph.D.(Prin.)
M. Dorsinville; B.A., M.A.(Sher.), Ph.D.(C.U.N.Y.)
M.A. Kilgour; B.A.(Tor.), Ph.D.(Yale)
R. Lecker; B.A., M.A., Ph.D.(York)
K. McSweeney; B.A., Ph.D.(Tor.)
P.H. Ohlin; Fil. Mag.(Stockholm), M.A., Ph.D.(New Mexico)
M. Stenbaek; B.A.(Copenhagen), M.A., Ph.D.(Montr.)
L.E. Troide; B.A., M.Phil.(Yale), M.A.(Col.) Ph.D.(Yale)
G.S. Wihl; B.A., M.A.(McG.) Ph.D.(Yale)
D. Williams; B.A.(Boston), M.A., Ph.D.(Tor.)

Associate Professors
K. Borris; B.A.(Vic., B.C.), Ph.D.(Edin.)
D.A. Bray; B.A.(McG.), Ph.D.(Edin.)
C.A. Conway; B.A., M.A., Ph.D.(Tor.)
M.N. Cooke; B.A.(Queen's), M.A.(C'nell.), M.A., Ph.D.(Tor)
P. Gibian; B.A.(Yale), M.A.(N.Y.), Ph.D.(Stan.)
D.C. Hensley; B.A., M.A.(Cantab.), Ph.D.(Yale)
B. Kaite; B.A.(C'dia), M.A.(McM.), Ph.D.(Carl.)
L. Lieblein; B.A.(C.C.N.Y.), A.M., Ph.D.(Roch.)
Y. Lindeman; Cand.Dr.Engl.(Amst.), Ph.D.(Harv.)
P. Neilson; B.A.(Bishop's), M.F.A.(Calg.)
T. Ponech; B.A.(McG.), Ph.D.(Northwestern)
D. Salter; B.A.(Br.Col.), M.A., Ph.D.(Tor.)
M.W. Selkirk; B.A.(Alta), M.F.A.(Ill.)
B. Trehearne; B.A., M.A., Ph.D.(McG.)
S. Westphal; B.A.(Oberlin), M.A., Ph.D.(Yale)

Assistant Professors
M. Hickman; B.A.(Brown), M.A., Ph.D.(Mich.)
M. Nash; B.A.(W.Ont.) B.A.Hons.(Brock), M.A.(Br.Col.), Ph.D.(Iowa)
T. O'Toole; A.B.(Harv.), M.A.(Chic.), Ph.D.(Harv.)
J. Treadwell; B.A., M.A., D.Phil.(Oxford)

30.2 Programs Offered

Master's and Ph.D.

All students who apply will be considered for support which normally takes the form of a Teaching or Research Assistantship.

30.3 Admission Requirements

A statement of proposed research, transcripts, writing sample and two letters of recommendation are required of all applicants.

M.A. Degree

Admission to the M.A. program requires an Honours degree in English or its equivalent. Outstanding applicants from related disciplines may be invited to take a qualifying year.

Ph.D. Degree

Admission to the doctoral program is highly competitive. Outstanding applicants with an Honors B.A. in English or equivalent may be admitted to the first year of the Ph.D. program (the Accelerated Ph.D.). In the first year, students in the Accelerated Ph.D. follow the M.A. program (Thesis Option). After an evaluation at the end of the first year, students whose progress has been satisfactory go on to complete the remaining requirements of the Ph.D. program. A student whose performance has indicated difficulty in successfully completing the Ph.D. will be asked to transfer into the M.A. program. Students who continue in the Ph.D. program but wish at the same time to complete the M.A. may use the summer to do so. Students accepted into the Accelerated Ph.D. are free to transfer after the first year into the terminal M.A. program. Applicants with an M.A. in English enter directly into the second year of the program.

30.4 Application Procedures

Applications will be considered upon receipt of:
1. application form;
2. transcripts;

3. two letters of reference;
4. $60 application fee;
5. a writing sample;
6. statement of proposed research.

All information is to be submitted directly to the Graduate Coordinator.

Applications close February 1.

30.5 Program Requirements

A detailed description of the program requirements, course offerings, and faculty can be found at www.arts.mcgill.ca/programs/english/9900/grad/hdbk.html-ssi.

M.A. Degree

The Department offers two options towards the M.A. degree, one with a thesis and the other without thesis. Both options consist of 48 credits and are designed to be completed in four terms (of 12 credits each), but it is possible to complete the program in three terms, or one calendar year.

The two programs are similar; the non-thesis option substitutes two seminars and a research paper for the thesis. Both options require participation in a series of sessions on bibliography and research methods.

Ph.D. Degree

Doctoral students are expected to complete in their first year (Ph.D.2) the two halves of the compulsory proseminar and four other courses, but may substitute for the two second-semester courses one extended supervised research project. This course work must be chosen in order to make possible the identification of a major and a minor area of concentration. In Ph.D.3, candidates complete a compulsory research project in the area of the dissertation and submit the dissertation proposal. The language requirement must be fulfilled before the dissertation proposal is approved.

It is the policy of the Department to urge candidates to complete the Ph.D. program within four years. A candidate intending to submit the thesis to meet the deadline for Spring Convocation must give notice of this intention before January 1. A candidate intending to meet the deadline for Fall Convocation must give such notice before May 1.

30.6 Courses for Higher Degrees

The following is a list of all courses in English approved for offering at the graduate level. A list of courses to be given in 1999-2000 will be available from the Departmental office. Courses at the 500 level are also open to advanced undergraduates. A maximum of two courses at the 500 level may be taken by Masters students.

The course credit weight is given in parentheses (#) after the course title.

110-500A MIDDLE ENGLISH. (3)
110-501A,B 16TH CENTURY. (3)
110-502A,B 17TH CENTURY. (3)
110-503A,B 18TH CENTURY. (3)
110-504A,B 19TH CENTURY. (3)
110-505A,B 20TH CENTURY. (3)
110-516A,B SHAKESPEARE. (3)
110-525A,B AMERICAN LITERATURE. (3)
110-527A,B CANADIAN LITERATURE. (3)
● **110-528A,B CANADIAN LITERATURE.** (3)
110-530A,B LITERARY FORMS. (3)
110-531B LITERARY FORMS. (3)
110-533A,B LITERARY MOVEMENTS. (3)
110-535A,B LITERARY THEMES. (3)
110-540A,B LITERARY THEORY I. (3)
110-541A,B LITERARY THEORY II. (3)

110-553A,B OLD ENGLISH LITERATURE. (3)
● **110-555A,B OLD NORSE.** (3)
● **110-565D MEDIEVAL DRAMA WORKSHOP.** (6)
110-566A,B STUDIES IN DRAMA. (3)
● **110-568D STUDIES IN DRAMATIC FORM.** (6)
110-585A,B MODES OF COMMUNICATION I. (3)
110-586A,B MODES OF COMMUNICATION II. (3)
● **110-602A,B BIBLIOGRAPHY** (3)
110-604A,B OLD ENGLISH LANGUAGE AND PROSE LITERATURE. (3)
● **110-607A,B MIDDLE ENGLISH LITERATURE** (3)
110-608A CHAUCER I. THE CANTERBURY TALES. (3)
● **110-609B CHAUCER II. TROILUS AND CRISEYDE AND OTHER POEMS.** (3)
● **110-615A,B SHAKESPEARE.** (3)
110-616A,B ELIZABETHAN AND JACOBEAN DRAMA. (3)
110-640B THE AMERICAN NOVEL. (3)
110-661A,B SEMINAR OF SPECIAL STUDIES. (3)
110-662A,B SEMINAR OF SPECIAL STUDIES. (3)
110-665A,B STUDIES IN AMERICAN LITERATURE AND INTELLECTUAL HISTORY. (3)
110-675A,B LITERARY CRITICISM. (3)
110-680A,B CANADIAN LITERATURE. (3)
110-681A,B M.A. RESEARCH PAPER PREPARATION I. (3)
110-682A,B M.A. RESEARCH PAPER PREPARATION II. (3)
110-683A,B M.A. RESEARCH PAPER PREPARATION III. (3)
110-684D,N,K,E,C,L,T M.A. RESEARCH PAPER. (15)
110-687A,B RESEARCH SEMINAR. (3)
110-690A,B SEMINAR OF SPECIAL STUDIES. (3)
110-694A BIBLIOGRAPHY AND RESEARCH METHODS. (3)
110-695A,B M.A. THESIS PREPARATION I. (3)
110-696A,B M.A. THESIS PREPARATION II (3)
110-699D,N,K,E,C,L,T M.A. THESIS. (24)
110-708A,B STUDIES IN A LITERARY FORM. (3)
110-710A RENAISSANCE STUDIES. (3)
● **110-714A,B RENAISSANCE POETRY.** (3)
110-716A,B SPECIAL STUDIES IN SHAKESPEARE. (3)
● **110-722A,B MILTON.** (3)
110-726A,B NARRATIVE PROSE OF THE 18TH CENTURY. (3)
● **110-727A,B AUGUSTAN POETRY.** (3)
● **110-728BTHE LATER 18TH CENTURY.** (3)
110-730A,B ROMANTIC THEORY AND POETRY. (3)
110-731A 19TH CENTURY STUDIES. (3)
110-733A,B THE VICTORIAN NOVEL. (3)
110-734A,B STUDIES IN FICTION. (3)
110-736A,B MODERN POETRY. (3)
110-746B THE 19TH CENTURY. (3)
110-757A,B MODERN DRAMA. (3)
110-761A,B 20TH CENTURY NOVELISTS. (3)
110-770A STUDIES IN AMERICAN LITERATURE. (3)
110-775B RECENT AMERICAN AND CANADIAN LITERATURE. (3)
110-776A,B FILM THEORY. (3)
110-785A STUDIES IN LITERARY THEORY. (3)
110-786B RESEARCH SEMINAR. (3)
110-787A RESEARCH SEMINAR I. (3)
110-788B RESEARCH SEMINAR II. (3)

COURSES RESTRICTED TO PH.D. CANDIDATES
● **110-745D INTRODUCTORY SEMINAR FOR PH.D. STUDENTS.**
110-791D DOCTORAL COMPREHENSIVE EXAMINATION, PART I.
110-792D DOCTORAL COMPREHENSIVE EXAMINATION, PART II.

110-793D DOCTORAL COMPREHENSIVE EXAMINATION, PART III.
110-794D DOCTORAL COMPREHENSIVE EXAMINATION, PART IV.
110-795D DOCTORAL COMPREHENSIVE EXAMINATION, PART V.
110-796A,B OPTIONAL RESEARCH PROJECT. (6)
110-797A,B COMPULSORY RESEARCH PROJECT. (6)
110-798A,B DISSERTATION PROPOSAL. (3)

31 Epidemiology and Biostatistics

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Chair — G. Thériault

31.1 Staff

Emeritus Professors
J.C. McDonald; M.B. B.S.(Lond), M.D.(Lond.), M.Sc.(Harvard), M.R.C.P.(Lond.), F.R.C.P.(Can)
M.R. Becklake; B.Ch.Hon., M.D.(Witw.), F.R.C.P.
F.D.K. Liddell; M.A.(Cantab.), Ph.D.(Lond.)
W.O. Spitzer; M.D.(Tor.), M.H.A.(Mich.), M.P.H.(Yale), F.R.C.P.(C)

Professors
L. Abenhaim; M.D.(Paris), M.Sc.(McG.)
R. Battista; B.A., M.D.(Montr.), M.P.H., Sc.D.(Harv.)
J.F. Boivin; M.D.(Laval), S.M., Sc.D.(Harv.)
E.L.F. Franco; M.P.H., Dr.P.H.(Chapel Hill)
J. Hanley; B.Sc., M.Sc.(N.U.I.), Ph.D.(Wat.)
T. Hutchinson; M.B., B.Ch., B.A.O.(Dub.)
M.S. Kramer; B.A.(Chic.), M.D.(Yale)
A. Lippman; B.A.(C'nell), Ph.D.(McG.)
J. McCusker; M.D.(McG.), M.P.H., Ph.D.(Col.)
A.D. McDonald; M.D., B.S.(Lond.) [PT]
O.S. Miettinen; M.D.(Helsinki), M.P.H., M.S., Ph.D.(Minn.)
I.B. Pless; B.A., M.D.(W.Ont.)
S. H. Shapiro; B.S.(Bucknell), M.S., Ph.D.(Stan.)
S. Suissa; M.Sc.(McG.), Ph.D.(Flor.)
G. Thériault; M.D.(Laval), Dr.P.H.(Harv.)
S. Wood-Dauphinee; B.Sc.(Phys. Ther.), Dip. Ed., M.Sc.A., Ph.D.(McG.)

Associate Professors
M. Abrahamowicz; Ph.D.(Cracow)
Y. Bergevin; M.D.C.M., M.Sc.(McG.)
A. Ciampi; M.Sc., Ph.D.(Queen's), Ph.D.(Rome)
J.P. Collet; M.D.(C.B., Lyon), Ph.D.(McG.)
P. Ernst; M.Sc.(McG.), M.D.(Montr.)
T. Gyorkos; B.Sc.(McG.), M.Sc.(Bishop's), Ph.D.(McG.)
L. Joseph; M.Sc., Ph.D.(McG.)
C.P. Larson; M.D.C.M., M.Sc.(McG.)
J.D. MacLean; M.D.(Queen's), F.R.C.P.(C)
R. Menzies; M.D., M.Sc.(McG.)
G.S. Pekeles; M.D.(Baylor), M.Sc.(McG.)
M. Rossignol; B.Sc., M.D.(Sher.), M.Sc.(McG.)
N. Steinmetz; B.Sc., M.D., C.M.(McG.), M.P.H.(Mich.), F.R.C.P.(C)
R. Tamblyn; M.Sc.(McM.), M.Sc.(McG.)
P. Tousignant; B.A., M.D.(Laval), M.Sc.(McG.), F.R.C.P.(C) *(PT)*
C. Wolfson; B.Sc., M.Sc., Ph.D.(McG.)

Assistant Professors
F. Bellavance; B.Sc., M.Sc., Ph.D.(Montr.) *(PT)*
J. Bourbeau; B.Sc., M.D.(Laval), M.Sc.(McG.) *(joint appt. with Medicine)*
J. Carsley; B.A.(Yale), M.Sc., M.D.(McG.)
G. Dougherty; M.D., M.Sc.(McG.) *(joint appt. with Pediatrics)*
G. Galbaud du Fort; M.D., Ph.D.(Paris) *(joint appt. with Psychiatry)*

J. O'Loughlin; B.Sc.(Queen's), M.Sc., Ph.D.(McG.) *(PT)*
G. Paradis; M.D., M.Sc.(McG.) *(PT)*
J. Pickering; B.A.(Tor.), M.D., M.Sc.(McG.) *(joint appt. with Medicine)*
R.W. Platt; M.Sc.(Man.), Ph.D.(Wash.) *(PT)*
Y. Robitaille; B.Sc.(Montr.), Ph.D.(McG.) *(PT)*
K. Schwartzman; M.D.(McG.), M.P.H.(Harv.) *(joint appt. with Medicine)*
G. Tan; D.Phil.(Oxon) *(PT)*
T. Tannenbaum; B.A.(Brown), M.D.(Calg.), M.P.H.(Mass.)

Adjunct Professors
Direction régionale de la santé publique: A. Adrien, R. Allard, P. Brassard, C. Hankins, R. Lessard, R. Remis, E Robinson, D. Roy, E. Roy; *Hôpital Hotel-Dieu:* M. Jenicek, N. Kishchuk, J. Lelorier*; Inst. Armand-Frappier:* M.S. Goldberg, J.A. Siemiatycki*; Govt Northwest Territories:* P. Barss*; U. de Bordeaux:* B. Begaud; *U. de Montréal* R. Massé, Y. Moride; *U. of Toronto:* M. Hodge

Associate Members
Dentistry: J. Feine; *Family Medicine:* R. Guibert; *Human Nutrition & Dietetics* K. Gray-Donald*; Medicine:* P. Dobkin, P. Fortin, S. Grover, K. Flege, E. Latimer, N. Mayo, L. Pilote; *Pediatrics:* F. Ducharme; *Psychiatry:* N. Frasure-Smith*; Surgery*: J. Sampalis

Visiting Scientist
J. Bailar; B.A.(Colorado), M.D.(Yale), Ph.D.(American University)

31.2 Programs Offered

The Department of Epidemiology and Biostatistics offers four programs of study: Diploma, M.Sc. (thesis), M.Sc. (non-thesis) and Ph.D.

Students in the M.Sc. degree programs or the Ph.D. program may choose to follow a general program in epidemiology or specialize in biostatistics.

31.3 Admission Requirements

Candidates for the Diploma and the M.Sc. degree must hold a bachelor's degree or equivalent, and those for a Ph.D. must hold a Master's degree in epidemiology and biostatistics or its equivalent. Epidemiology as it is practiced today is a highly quantitative field and a good knowledge of differential and integral calculus at the level of a first year undergraduate course is required.

31.4 Application Procedures

When application is made to the Department at the M.Sc. level, students should clearly identify which M.Sc. degree they wish to consider.

Completed applications, with all supporting documents, must reach the Department by March 1st of the year to which candidate is applying.

31.5 Program Requirements

Diploma

Students must complete 30 credits, 21 of them in course work. Students must take (or be exempted from) 513-606 and 513-607. The remaining courses, to an overall total of 21 credits, should be chosen in consultation with the student's advisor. In addition, students must submit a Diploma dissertation (513-650: 9 credits) on an approved topic.

M.Sc. Degrees

The Department offers two programs of study towards an M.Sc. degree, the M.Sc. (thesis) and the M.Sc. (non-thesis). The same courses are available to all students in both programs and there is no difference in intellectual or academic rigor required. The difference lies in the breadth and depth of knowledge acquired. Students must complete a minimum of 48 credits.

Students in the non-thesis option must take (or be exempted from) 513-6606, 513-607*, 513-640, 513-695, 513-621* and 513-6681*. The remaining credits must include a project (513-630) and a Comprehensive Examination (513-601).

Students in the thesis option must take (or be exempted from) 513-606, 513-607*, 513-640, 513-695, 513-621* and 513-681*. The remaining credits must include a 24 credit thesis (690) on an approved subject of research.

NB: Both options: The remaining course work must be in graduate courses chosen in consultation with the student's academic advisor or supervisor.

 * Students (either option) specializing in biostatistics will be required to take 189-556 (4 credits) and 189-557 (4 credits) in place of 513-607/621/681. A description of these courses can be found in the Department of Mathematics and Statistics entry.

Ph.D. Degree

Students must complete (or be exempted from) 513-640 and 513-604D (Graduate Seminars) and may choose other courses in consultation with their supervisors. Students must pass a Comprehensive Examination (701), usually taken in their second year of registration. Thereafter students must submit a thesis on an approved subject of research.

31.6   Courses

Note: Special students and students from other departments or universities require the permission of the course instructor.

Courses 513-606 and 513-607 are prerequisites for most other courses.

Not all the courses are taught every year and there may be other courses offered. A Fall and Winter time-table showing scheduled courses is available from M. Abrams.

513-601A,B,D M.SC. (NON-THESIS) COMPREHENSIVE EXAMINATION. (5) The examination will be held at the end of the fourth term. It will test students' problem-solving ability and their integration and synthesis of the courses.

513-604A,B,D GRADUATE SEMINARS. (3) Scientific meetings and seminars of departmental interest. Required course for Ph.D. students.

513-605D COURSE FOR M.SC. AND PH.D. CANDIDATES. (3) Prescribed course of study to meet a candidate's particular requirements.

513-606A,B,C EPIDEMIOLOGY: PRINCIPLES AND METHODS. (3) Introduction to the principles and methods of epidemiology. Definition of epidemiology. Measures of disease frequency. Descriptive epidemiology. Cohort studies. Case-control studies. Intervention studies. Biases in epidemiologic research. Special topics.

513-607A,C,L PRINCIPLES OF INFERENTIAL STATISTICS IN MEDICINE. (3) (Prerequisite: A first year course in undergraduate differential and integral calculus.) Introduction to the basic principles of statistical inference used in clinical and epidemiologic research. Topics include variability; methods of processing and describing data; sampling and sampling distributions; inferences regarding means and proportions, non-parametric methods, regression and correlation.

513-608D ADVANCED EPIDEMIOLOGY. (3) (Prerequisite: Ph.D. candidates or permission of instructor.) Discussion of methodologic issues in the recent literature, including causal inference, measures of disease frequency, measures of effect, epidemiologic study designs, biases, statistics in epidemiology, and special topics. Discussion of day to day practice of epidemiology. Offered in alternate years or yearly depending on demand.

513-610A HEALTH EVENTS IN THE POPULATION. (2) The description of disease and health in populations including measurement of disease frequency. Sources of data, their synthesis and interpretation and their relevance to health care planning, management and evaluation in the major fields of practice: clinical epidemiology, occupational health, mental health, community health and infectious disease control.

513-615A PRINCIPLES OF EPIDEMIOLOGIC RESEARCH I: STUDY DESIGN. (3) (Prerequisites: 513-606, 513-607, 513-610, 513-628) Principles of epidemiologic study design with reference to applied scientific problems in clinical and community medicine.

513-616C PRINCIPLES OF EPIDEMIOLOGIC RESEARCH II: DATA ANALYSIS. (3) Principles of epidemiologic data analysis with reference to applied scientific problems in clinical and community medicine.

513-621B DATA ANALYSIS IN THE HEALTH SCIENCES I. (3) (Prerequisites 513-606, 513-607.) Multivariable and multivariate statistical techniques for continuous outcomes. Topics include multiple regression and analysis of variance.

513-622B APPLICATIONS OF STATISTICS IN THE HEALTH SCIENCES. (3) (Prerequisites: 513-607 and 513-621.) Discussion of the statistical issues in a series of medical research problems brought for consultation. Problem recognition and approaches to analysis will be emphasized rather than methodological techniques.

513-623B RESEARCH DESIGN IN THE HEALTH SCIENCES. (3) (Prerequisite: 513-606. Restrictions: Diploma/Degree students in Epidemiology and Biostatistics.) Lectures and discussions plus oral and written presentations by students, to provide guidance and experience in the development of objectives, for the formulation and constructive peer criticism of designs for research in the health sciences, including etiologic and evaluative, cross-sectional, case-reference and cohort studies.

513-626A,B RISKS AND HAZARDS IN EPIDEMIOLOGY. (3) (Prerequisites: 513-621B and 513-681C.) Classical and modern methods of analysis for survival, cohort, and case-control studies. Emphasis on the similarity of models used in the analyses of these studies. Hazard functions. Relative-risk functions. Regression modelling. Likelihood function. Interpretation of statistical parameters.

513-630A,B,D RESEARCH PROJECT IN EPIDEMIOLOGY. (6) (Restricted to non-thesis M.Sc. students who have completed requirements.) Students will critically assess research and summarize the findings in a research paper on a health related topic from an epidemiologic perspective. Topic to be approved by faculty member who will direct student and evaluate the paper.

513-631A,B,C,L PHARMACOEPIDEMIOLOGY II. (2) (Prerequisites: 513-633, or instructor's permission, and basic knowledge of epidemiology and biostatistics.) An advanced course on the methodology to be used when confronted with an alleged adverse or beneficial event related to a drug, a vaccine or a biological product. It includes four parts: i) designs for etiological research; ii) surveillance (modelling, statistical appraisal); iii) hazard functions in pharmacoepidemiology; iv) exposure assessment.

513-632C,L CLINICAL DECISION MAKING. (3) (Prerequisite: Clinical degree.) This course will present a framework for rational decision making in the clinical setting. The approach will be quantitative and based on probability theory and decision analysis. The main objective of the course is to enable the student to apply this theory and technique to decision problems involving the individual patient, including problems of differential diagnosis, causality assessment, prognosis and treatment.

513-633A,B,C,L PHARMACOEPIDEMIOLOGY I. (2) This course is an introduction to epidemiological thinking as it applies to the evaluation of the effects of drugs on the health of populations. It is composed of four parts: i) assessment of adverse event reports; ii) basic designs for pharmacoepidemiologic investigations; iii) data gathering in pharmacoepidemiology; iv) introduction to the use of epidemiologic methods for the assessment of benefits and economic impacts of drugs.

513-635A CLINICAL TRIALS. (3) (Prerequisites: 513-606, 513-607) Lectures and discussions on issues, approaches and techniques of clinical trials including assessment of feasibility, ethics, randomization, strengths and weaknesses of alternative designs, sample

size requirements, protocol development, trial management and analysis, reporting and interpretation of trial results.

513-637C,L INFECTIOUS AND PARASITIC DISEASE EPIDEMIOLOGY. (3) (Prerequisite: 513-606 or equivalent.) This course provides in-depth review of principles of infectious disease epidemiology and illustrates these using local and global infections of current importance. Students will gain an understanding of principles of infectious disease epidemiology and how they apply to infections in both temperate and tropical areas.

513-640A PRACTICUM. (1) This course gives students the opportunity to integrate knowledge from and apply principles covered in courses 513-606, 513-607, 513-610 and 513-639. The course examination must be taken, in their first term, by students in Masters and Ph.D. programs.

513-641 TO 513-645A,B,C,D,T,L SUBSTANTIVE EPIDEMIOLOGY I TO V. (1 credit each) Each of these 1-credit courses is designed to give students an overview of a major disease or health problem. Students will develop their knowledge of a topic regarding 1) key definitions, concepts and indicators useful in study of the problem; 2) epidemiology of problem, 3) major studies of interventions designed to address the problem. Topics currently offered include cancer, respiratory disease and heart disease but not all are offered in each semester.

513-646A,B,C EVALUATION OF HEALTH SERVICES. (3) (Prerequisites: 513-606, 513-607) This course will present methodologies for the evaluation of health services, and illustrate these approaches with a variety of clinical and community services. Topics will include: levels of evaluation, evaluation design, identification and measurement of key variables, and practical aspects of evaluation.

513-647L FUNDAMENTALS OF PHARMACOLOGY FOR EPIDEMIOLOGISTS. (1) (Prerequisite: 513-606) This course is designed for the epidemiologist who is interested in monitoring patterns of drug use. It will lay out the basic principles of pharmacology and emphasize those areas of drug therapy that have undergone the greatest change in recent years.

513-650A,B,C,D,L DIPLOMA DISSERTATION. (9) A scholarly paper tailored to the student's interests and approved by the student's supervisor.

513-651 TO 513-653A,B,C,D,L,T SELECTED TOPICS IN BIOSTATISTICS I TO III. (1 credit each) The purpose of these 1-credit courses is to cover specific methodologic topics in more detail than is given in the main courses on statistical methods. The topics to be offered may vary from year to year. Topics currently offered include "Biometric Methods in Occupational Epidemiology" and "Practical Considerations of Statistical Power".

513-654A,B,C,D,L PHARMACOEPIDEMIOLOGY IV. (2) (Prerequisites: 513-606, 513-607 or permission of instructor.) The utility of epidemiological techniques for the assessment of drug benefits after their marketing is presented. The course is composed of four parts: (i) methodology of Phase IV studies (efficacy and effectiveness studies); (ii) measurement of quality of life; (iii) evaluation of the economic impact of drugs; (iv) assessment of the effects of drugs and vaccines on the public health system.

513-655A EPIDEMIOLOGY IN PUBLIC HEALTH. (3) (Prerequisites: 513-606, 513-607) The course is structured around a model of the cycle of public health research, including the surveillance of the health status, identification of modifiable risk factors and the evaluation of public health interventions. The course demonstrates the specific contribution of various disciplines to public health research, including statistics, demography, sociology and epidemiology.

513-656B,T HEALTH CARE TECHNOLOGY ASSESSMENT. (3) The objectives, principles, and methods of health care technology assessment will be examined and related to the policy process accompanying the diffusion of health care technology.

513-657A,B,C,D,L,T RISK ASSESSMENT AND MANAGEMENT. (3) Principles of identifying and dealing with environmental risk factors for human disease. Class exercises focus on the steps of quantitative health risk assessment and management, including hazard identification and characterization, exposure characterization, risk determination, and weighing of control options.

513-658 AND 513-659 A,B,C,D,T,L TOPICS IN BIOSTATISTICS I AND II. (1 credit each) The purpose of this 1-credit course is to cover specific methodologic topics in more detail than is given in the main courses on statistical methods. The topics to be offered may vary from year to year. Topics currently offered include, "Biometric Methods in Occupational Epidemiology" and "Practical Considerations of Statistical Power".

513-660L PRACTICAL ASPECTS OF PROTOCOL DEVELOPMENT. (3) (Prerequisites: 513-606, 513-607 or equivalent.) The course is designed to give students working in groups the opportunity to develop, under guidance and criticism from instructors and fellow students, a protocol addressing a research question in their field of interest.

513-661A,B,C,D,L PHARMACOEPIDEMIOLOGY III. (2) (Prerequisites: 513-631, 513-633 or permission of instructor) In this course, students are confronted with real examples of pharmaco-epidemiologic problems. Flagship studies in parmacoepidemiology are reviewed in terms of protocol, design issues, data collection, statistical analysis and interpretation of results.

513-662L HEALTH IN DEVELOPING COUNTRIES. (3) (Prerequisites: 513-606 or equivalent.) This course will provide an introduction to health issues in developing countries, including major health problems, health determinants and strategies to improve health status. Due emphasis will be given to the primary health care strategy and to the impact of other sectors of development on health. Examples of the work of communities, ministries, non-government organizations and international agencies will be presented and discussed with particular references to issues of burden of disease, effectiveness and efficiency, feasibility, priority setting, sustainability and management.

513-663 TO 513-667 A,B,C,D,T,L SUBSTANTIVE EPIDEMIOLOGY VI TO X. (1 credit each) This course is designed to give students an overview of major disease or health problem, disease or substantive area. The students will develop their knowledge of the topic regarding 1) The key definition, concepts and indicators useful in the study of the problem; 2) The epidemiology of the problem, and 3) Major studies of interventions designed to address the problems.

513-668 TO 513-672 A,B,C,D,L SPECIAL TOPICS IN EPIDEMIOLOGY & BIOSTATISTICS. (2 credits each) Study, through lectures, guided reading, practicals, assignments etc., of an elected and approved topic of epidemiologic importance.

513-675 TO 513-679A,B,C,D,L SPECIAL TOPICS IN EPIDEMIOLOGY AND BIOSTATISTICS. (3 credits each) Study, through guided reading, visits, practicals, assignments, etc., of an elected and approved topic of epidemiologic importance.

513-680A,B COMPUTATION INTENSIVE STATISTICS. (4) (Prerequisites: 189-556, 189-557 or permission of instructor.) (Restrictions: Not open to students who have taken or are taking 189-680.) Introduction to a statistical computing language, such as S-PLUS; random number generation and simulations; EM algorithm; bootstrap, cross-validation and other re-sampling schemes; Gibbs sampler. Other topics: numerical methods; importance sampling; permutation tests.

513-681A,B,C DATA ANALYSIS IN THE HEALTH SCIENCES II. (3) (Prerequisites: 513-606, 513-607, 513-621, 513-695) Univariate and multivariate statistical techniques for categorical and survival data. Topics include logistic regression, generalized linear models, and survival analysis.

513-686A,B SURVIVAL ANALYSIS. (4) (Restrictions: Not open to students who have taken or are taking 189-686. Prerequisites: 189-556, 189-557, or permission of instructor.) Parametric survival models. Nonparametric analysis: Kaplan-Meier estimator and its properties. Covariates with emphasis on Cox's proportional haz-

ards model. Marginal and partial likelihood. Logrank tests. Residual analysis. Homework assignments a mixture of theory and applications. In-class discussion of data sets.

513-687A AND 513-688B DEPARTMENTAL SEMINARS. (1 credit each) A multidisciplinary research seminar course held weekly and given by faculty and guest lectures, designed for an in-depth discussion on selected topics in Epidemiology and Biostatistics.

513-690A,B,C,D M.SC. THESIS. (24)

513-695B,L INTERMEDIATE EPIDEMIOLOGY. (3) (Prerequisites: 513-606, 513-607, 513-610, 513-640.) The purpose of this course is to expand on the basic material covered in 513-606. Current articles on methodologic issues in epidemiology will be used as a basis for discussion. Topics will include: non-standard designs; causation, latent period; bias; matching; selected statistical analyses of epidemiologic data.

513-697A,B,C,L (3) Applied Linear Models. Multiple regression, analysis of variance and analysis of covariance models will be presented under the general framework of linear models, Both theory and applications to medicine and epidemiology will be presented. Topics include model selection, diagnostics and validation.

513-701A,B,C,D,L PH.D. COMPREHENSIVE EXAMINATION. The comprehensive examination comprises both written and oral components. The objective is to assess the degrlee to which students have been able to assimilate and apply the principles of epidemiologic research. Examinations held twice yearly.

32 Food Science and Agricultural Chemistry

Department of Food Science and Agricultural Chemistry
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Chair — I. Alli

Chair of Graduate Program — I. Alli

32.1 Staff

Professors
W.D. Marshall; B.Sc.(U.N.B.), Ph.D.(McM.)
J.P. Smith; B.Sc., M.Sc.(Strath.), Ph.D.(Alta.)
F.R. van de Voort; B.Sc., M.Sc., Ph.D.(Br.Col.)

Associate Professors
I. Alli; B.Sc.(Guy.), M.Sc., Ph.D.(McG.); Chair
S. Kermasha; B.Sc.(Baghdad), DEAD, D.Sc.(Nancy)
H. Ramaswamy; B.Sc.(B'lore), M.Sc., Ph.D.(Br.Col.)
B.K. Simpson; B.Sc.(Ghana), Ph.D.(Nfld.)
V. Yaylayan; B.Sc.(Beirut), M.Sc., Ph.D.(Alta.)

Assistant Professor
A.A. Ismail; B.Sc., Ph.D.(McG.)

Adjunct Professors
J.S. Blais, Y. Konishi, B. Lee, J. McLaren, A. Morin, J.R.J. Pare

32.2 Programs Offered

M.Sc and Ph.D.

The Department has laboratory and research facilities required for research leading to the degree of Master of Science and Doctor of Philosophy in the field of food science, specifically in the chemical, biochemical and analytical aspects thereof.

32.3 Admission Requirements

General
GPA 3.0/4.0.

TOEFL with a minimum score of 550 (non-Canadian applicants whose mother tongue is not English).

Master's
Candidates should have a B.Sc. in Food Science or a related discipline such as Chemistry, Biochemistry, or Microbiology.

32.4 Application Procedures

Applications for Admission and all supporting documents must be sent directly to:
Student Affairs Office (Graduate Studies)
Macdonald Campus of McGill University
21,111 Lakeshore
Ste-Anne-de-Bellevue, Québec
H9X 3V9 CANADA
Telephone: (514) 398-7708
Fax: (514) 398-7968
Email: GRAD@macdonald.mcgill.ca

Applications will be considered upon receipt of a signed and completed application form, $60 application fee, all official transcripts, two signed original letters of reference on official letterhead of originating institution, and (if required) proof of competency in oral and written English by appropriate exams.

Deadlines – For **international students**, complete applications with supporting documents must reach the Student Affairs Office (Graduate Studies) at Macdonald Campus at least **eight months** prior to the intended start of program. May 1 for January (winter); September 1 for May (summer); January 1 for September (fall). For **domestic students**, complete applications with supporting documents must reach the office no later than **three months** in advance of intended start of program.

Application Fee (non-refundable) – *A fee of $60 Canadian* must accompany each application (including McGill students), *otherwise it cannot be considered.* This sum must be remitted using one of the following methods:
1. Certified personal cheque in Cdn.$ drawn on a Canadian bank;
2. Certified personal cheque in U.S.$ drawn on a U.S. bank;
3. Canadian Money order in Cdn.$;
4. U.S. Money Order in U.S.$;
5. Bank draft in Cdn.$ drawn on a Canadian bank;
6. Bank draft in U.S.$ drawn on a U.S. bank;
7. Credit card (by completing the appropriate section of the application form).

Transcripts – Two official copies of all transcripts are required for admission. Transcripts written in a language other than English or French must be accompanied by a certified translation. An explanation of the grading system used by the applicant's university is essential. It is the applicant's responsibility to arrange for transcripts to be sent. DOCUMENTS SUBMITTED WILL NOT BE RETURNED.

It is desirable to submit a list of the titles of courses taken in the major subject, since transcripts often give code numbers only. Applicants must be graduates of a university of recognized reputation and hold a Bachelor's degree equivalent to a McGill Honours degree in a subject closely related to the one selected for graduate work. This implies that about one-third of all undergraduate courses should have been devoted to the subject itself and another third to cognate subjects.

The minimum cumulative grade point average (CGPA) is 3.0/4.0 (second-class upper) or 3.2/4.0 during the last two full-time years of university study. High grades are expected in courses considered by the academic unit to be preparatory to the graduate program.

Letters of Recommendation – Two letters of recommendation on letterhead and with original signatures from two instructors

familiar with the applicant's work, preferably in the applicant's area of specialization, are required. It is the applicant's responsibility to arrange for these letters to be sent.

Competency in English – Non-Canadian applicants whose mother tongue is not English and who have not completed an undergraduate degree using the English language are required to submit documented proof of competency in oral and written English, by appropriate exams, e.g. TOEFL (minimum score 550) or IELTS (minimum 6.5). The MCHE is not considered equivalent. Results must be submitted as part of the application. The University code is 0935 (McGill University, Montreal); department code is 31 (graduate schools), Biological Sciences - Agriculture.

Graduate Record Exam (GRE) – The GRE is not required, but it is highly recommended.

Financial aid is very limited and highly competitive. It is suggested that students give serious consideration to their financial planning before submitting an application.

Acceptance to all programs depends on a staff member agreeing to serve as the student's supervisor and the student obtaining financial support. Normally, a student will not be accepted unless adequate financial support can be provided by the student and/or the student's supervisor. Academic units cannot guarantee financial support via teaching assistantships or other funds.

Qualifying Students – Some applicants whose academic degrees and standing entitle them to serious consideration for admission to graduate studies, but who are considered inadequately prepared in the subject selected may be admitted to a *Qualifying Program* if they have met the Faculty of Graduate Studies and Research minimum CGPA of 3.0 /4.0. The course(s) to be taken in a *Qualifying Program* will be prescribed by the academic unit concerned. *Qualifying students* are registered in the Faculty of Graduate Studies and Research, **but not as candidates for a degree.** Only one qualifying year is permitted. **Successful completion of a qualifying program does not guarantee admission to a degree program.**

32.5   Program Requirements

MASTER'S

For candidates entering the M.Sc. program without restrictions, (i.e.,those not requiring a qualifying term/year), the M.Sc. degree consists of 45 graduate credits. These credits are obtained through a combination of graduate courses and a research thesis.

Course Requirements (15 credits)
Six (6) credits of graduate seminar courses

A minimum of nine (9) additional course credits, usually at the 500/600 level.

Thesis Requirements (30 credits)
333-690A,B   (8)   M.Sc. Literature Review
333-691A,B   (7)   M.Sc. Research Proposal
333-692A,B   (15) M.Sc. Thesis

The residence time for an M.Sc. degree is three academic terms based on unqualified entry into the M.Sc. program and students are encouraged to complete their studies within this time frame.

Each student must be registered for a minimum of 12 credits per term to qualify as a full-time graduate student. This limits the approach that one can take in taking courses within the three terms allotted. Listed below are two common options in terms of course selection which a student may take to meet the three-term, 45-credit M.Sc. program requirements.

Option A		Option B	
Term 1		*Term 1*	
Course 1	3.0	Course 1	3.0
Course 2	3.0	Seminar 1	1.5
Seminar 1	1.5	M.Sc. Literature Review	8.0
M.Sc. Literature Review	8.0	**Total Credits**	**12.5**
Total Credits	**15.5**		

Term 2		*Term 2*	
Course 3	3.0	Course 2	3.0
Seminar 1 (continued)	1.5	Course 3	3.0
Seminar 2	1.5	Seminar 1 (continued)	1.5
M.Sc. Research Protocol	7.0	Seminar 2	1.5
Total Credits	**13.0**	M.Sc. Research Protocol	7.0
		Total Credits	**16.0**

| *Term 3 --* | | *Term 3 --* | |
For either option (A or B)		*For either option (A or B)*	
Seminar 2 (continued)	1.5	Seminar 2 (continued)	1.5
M.Sc. Research Thesis	15.0	M.Sc. Research Thesis	15.0
Total Credits	**16.5**	**Total Credits**	**16.5**
Grand Total Credits	**45.0**	**Grand Total Credits**	**45.0**

The program outlined above does not preclude students from taking more than 45 credits.

PH.D

Candidates will be judged principally on their ability in research. Course work will be arranged in consultation with the departmental graduate advisory committee. Candidates should be prepared to take the Comprehensive Preliminary Examination by the end of the second year in which they are candidates for the Ph.D. degree.

32.6   Courses

● Denotes not offered 1999-2000.

★ Alternate year courses – (o) for odd years, (e) for even years but double check with Graduate Adviser.

The course credit weight is given in parentheses (#) after the course title.

★**333-500B FOOD ENZYMOLOGY.** (3) (3 lectures) (Prerequisite: 333-305A; Corequisite: 333-305A) Enzymes as they pertain to the deteriorative processes, as processing aids and their use as analytical tools in food systems. (e)   **Professor Simpson**

● **333-510B FOOD HYDROCOLLOID CHEMISTRY.** (3) (3 lectures) (Prerequisite: 333-319B; Corequisite: 333-305A)

★**333-519B ADVANCED FOOD PROCESSING.** (3) (3 lectures) (Prerequisite: 333-330B) Advanced technologies associated with food processing studied in more detail. Topics include food irradiation, reverse osmosis, supercritical fluid extraction and extrusion. (e)
Professor Ramaswamy

★**333-520A BIOPHYSICAL CHEMISTRY OF FOOD.** (3) (3 lectures) (Prerequisites: 333-233B) Recent advances in the application of spectroscopic techniques, including infrared, Raman, near-infrared, circular dichroism, and fluorescence spectroscopy, to the study of biomolecules of relevance to food. Particular emphasis will be placed on the molecular basis of structure-function and structure-functionality relationships. (o)   **Professor Ismail**

★**333-530A ADVANCED ANALYTICAL CHEMISTRY.** (3) (3 lectures) (Prerequisite: 333-223B) Selected instrumental methodologies including advances in automated chromatography, wide band NMR, chemical sensors, and the application of other spectroscopic techniques to the analysis of food constituents. (o)
Professor Marshall

333-535A FOOD BIOTECHNOLOGY. (3) (3 lectures) (Prerequisite: 333-230B) Developments in biotechnology as it relates to food production and processing concerning traditional food fermentations as well as novel food biotechnology enzymes, ingredients, genetic engineering, plant tissue culture and developments for microbiological and food analysis.   **Professor Lee**

Graduate Courses

333-625A ADVANCED TOPICS IN FOOD SCIENCE. (3) (3 lectures) (Prerequisite: 333-330B, 333-305B) Selected subjects related to advancements taking place in the discipline of Food Science will be studied to gain an indepth understanding of their principles, application and potential impact.   **Staff**

333-651A FOOD ANALYSIS I. (3) (3 lectures; one 3-hour lab) (Prerequisite: 333-211A and 333-211B) The theory and methodology for the analysis of food products for moisture, fat, protein, ash, fibre and carbohydrate (proximate and analysis). Quantitative visible and infrared spectroscopy are developed in relation to color measurement and the analysis of the major components in food systems. **Professor Alli**

333-652B FOOD ANALYSIS II. (3) (3 lectures; one 3-hour lab) (Prerequisite: 333-211A and 333-212A) A specialized course on the principal analytical techniques used for analysis of carbohydrate, lipid, protein and vitamin constituents of foods and feedstuffs, for detection and determination of chemical additives and contaminants. **Professor Kermasha**

333-690A,B M.SC. LITERATURE REVIEW. (8) Master of Science literature review.

333-691A,B M.SC. RESEARCH PROTOCOL. (7) Master of Science research protocol.

333-692A,B M.SC. THESIS. (15) Master of Science research portion of the M.Sc. thesis based on results obtained from the research phase of the M.Sc. thesis. Satisfactory completion of the M.Sc. Thesis, its approval by reviewers and acceptance by Graduate Faculty is required to pass the course.

333-695D,N GRADUATE SEMINAR. (3) Presentation on a selected topic, research proposal or research results based on progress in degree work (M.Sc.1). **Professor van de Voort**

333-696D,N GRADUATE SEMINAR. (3) Presentation on a selected topic, research proposal or research results based on progress in degree work (M.Sc.2). **Professor van de Voort**

333-700D,N COMPREHENSIVE PRELIMINARY EXAMINATION. (See Faculty Regulations) **Staff**

333-797D,N GRADUATE SEMINAR. (3) Presentation on a selected topic, research proposal or research results based on progress in degree work (Ph.D.). **Professor van de Voort**

333-798D,N GRADUATE SEMINAR. (3) Presentation on a selected topic, research proposal or research results based on progress in degree work (Ph.D.). **Professor van de Voort**

33 French Language and Literature

Département de langue et littérature françaises
Peterson Hall
3460 McTavish Street
Montreal, QC Canada, H3A 1X9
Telephone: (514) 398-6883
Fax: (514) 398-8557
Email: littfran@leacock.lan.mcgill.ca
Website: http://www.arts.mcgill.ca/programs/french

Directeur — Professeur Marc Angenot

*Directrice des ètudes de 2e et 3e cycles
et de la recherche* — Professeur Diane Desrosiers-Bonin

33.1 Staff

Professeurs
M. Angenot; L. Phil. Romane(Bruxelles), Dr. Phil. & Lettres (Belgique), M.S.R.C.
G. Di Stefano; Dr. ès L.(Turin), Dipl.Phil., Dr. 3rd Cy.(Paris - Sorbonne)
J.-P. Duquette; L. ès L.(Montr.), Dr. 3rd Cy.(Paris X - Nanterre)
Y. Lamonde; M.A.(Montr.), M.A., Ph.D.(Laval)
F. Ricard; M.A.(McG.), Dr. 3rd Cy.(Aix-Marseille), M.S.R.C.
J. Terrasse; L. Phil. Romane, Dipl. Phil., Dr. Phil. & Lettres (Bruxelles)

Professeurs Agrégés
C. Bouchard; M.A.(Montr.), Dr. 3rd Cy.(Paris VII - Jussieu)
J.-P. Boucher; M.A.(McG.) Dr. 3rd Cy.(Besançon)

A. Chapdelaine; M.A., Dr. 3rd Cy.(Paris VII - Jussieu)
D. Desrosiers-Bonin; M.A., Ph.D.(Montr.)
N. Doiron; Ph.D.(Montr.)
J. Everett; M.A.(Carl.), Ph.D.(McG.)
G. Lane-Mercier; M.A.(Montpellier), Ph.D.(McG.)
A. Maugey; M. ès L., Dr. 3rd Cy.(Paris - Sorbonne)
Y. Rivard; M.A.(McG.), Dr. 3rd Cy.(Aix-Marseille)

33.2 Programmes

M.A. avec mémoire et sans mémoire, et Ph.D en français.

33.3 Conditions d'admission

Propédeutique

Peuvent être admis en Propédeutique les étudiants titulaires d'un B.A. avec concentration en littérature française ou québécoise ("Major"), qui sont alors tenus de s'inscrire à temps complet à un programme de 8 cours, établi lors de leur inscription.

M.A.

Pour être admis directement en M.A. I, le candidat doit être titulaire d'un B.A. avec spécialisation en littérature française ou québécoise ou en traduction ("Honours"), ou d'un B.A. avec double spécialisation ("Joint Honours"). Le candidat doit également présenter un très bon dossier académique; le B.A. ne donne pas automatiquement droit à l'admission.

Ph.D.

Pour être admis au programme de Ph.D. le candidat doit satisfaire aux conditions suivantes:

1) Être titulaire du M.A. en littérature française ou québécoise de l'Université McGill, ou l'équivalent; avoir obtenu au cours de sa scolarité de maîtrise une moyenne d'au moins 75%.

2) Présenter, en plus du formulaire officiel de demande d'admission accompagné de deux lettres de recommandation et de ses relevés de notes officiels, un projet d'étude, en français, indiquant avec une certaine précision le domaine et la méthodologie de la recherche qu'il envisage de poursuivre pour sa thèse de doctorat et le nom du professeur sous la direction duquel il souhaite travailler. La Commission des admissions sera mieux à même de juger, d'après ce projet, du sérieux du candidat et de ses aptitudes à la recherche littéraire avancée. Les étudiants de l'extérieur du Département doivent fournir un spécimen de travail écrit, en français.

33.4 Demande d'admission

En plus du formulaire officiel de demande d'admission accompagné de deux lettres de recommandation et de ses relevés de notes officiels, les étudiants de l'extérieur du Département doivent fournir un spécimen de travail écrit, en français.

33.5 Programme d'études

M.A. (48 crédits)

La durée des études de maîtrise est de trois trimestres: deux trimestres pour la scolarité (M.A.I), et un trimestre pour la rédaction du mémoire (M.A. II) ou l'exécution d'autres travaux de recherche.

Le programme de maîtrise est à la fois un programme complet en soi et une première étape vers le Ph.D. Il vise deux buts également importants:

1) Permettre à l'étudiant de compléter et d'approfondir ses connaissances de l'ensemble du domaine littéraire grâce à un programme d'enseignement portant sur les littératures française et québécoise de même que sur une variété de sujets connexes: théorie littéraire, histoire de la langue, civilisation, etc.

2) Favoriser l'apprentissage de la recherche et un début de spécialisation de la part de l'étudiant qui suit des séminaires d'initiation à la recherche littéraire et, soit rédige un mémoire,

soit exécute d'autres travaux de recherche sous la direction des professeurs du Département.

Scolarité (M.A.I)

Dans le cas de la maîtrise avec mémoire, les deux premières sessions du programme de maîtrise sont consacrées à la scolarité, pour les étudiants inscrits à temps complet; ils doivent alors suivre 6 séminaires de 3 crédits (dont le 125-695, le 125-697 et le 125-680D/N) et préparer leur sujet de mémoire (125-696D/N: 6 crédits).

Dans le cas de la maîtrise sans mémoire, les deux premières sessions du programme sont aussi consacrées à la scolarité, pour les étudiants inscrits à temps complet; ils doivent suivre 8 séminaires de 3 crédits soit 4 par session. Les cours 125-695, 125-697, et 125-600A/B et 125-680D/N sont obligatoires.

Les étudiants inscrits à mi-temps doivent s'inscrire à un minimum de deux séminaires par session. La note de passage est 65%.

Les séminaires 125-609 et 125-611 – Création littéraire – sont fortement recommandés aux étudiants qui ont l'intention de présenter un mémoire d'écriture littéraire.

Le choix des séminaires que fait l'étudiant doit être approuvé par le Directeur des études au moment de l'inscription. La Commission des admissions du département peut accorder des dérogations au règlement des inscriptions à la Maîtrise en fonction du dossier de chaque étudiant, en reconnaissant un maximum de six crédits déjà obtenus dans une autre université.

Une partie de la scolarité (maximum de 6 crédits) peut être suivie dans un autre département de McGill qui offre des cours dans le domaine des Humanités de l'annuaire de la Faculté des études supérieures et de la recherche, ou dans une autre université, pourvu que les cours et séminaires y soient de même niveau que les cours 600 ou 700 offerts par le Département. Dans tous les cas, l'étudiant doit obtenir l'autorisation du Directeur des études de 2e et 3e cycles et de la recherche, qui ne sera accordée que si les cours en question cadrent avec le programme d'études du candidat.

Recherche (M.A.II)

L'étudiant peut présenter un mémoire de critique littéraire ou un mémoire d'écriture littéraire. Il peut aussi compléter sa maîtrise sans rédiger de mémoire, mais en exécutant d'autres travaux de recherche.

Dans le cas de la maîtrise avec mémoire, la composante recherche du programme est de 24 crédits (125-699A/B/D/N).

La composante recherche du programme de maîtrise sans mémoire est aussi de 24 crédits (125-600A/B: 3 crédits, 125-698A/B/D/N: 18 crédits, ainsi qu'un séminaire A ou B: 3 crédits).

Ph.D.

Épreuve d'anglais Tous les étudiants de Ph.D. doivent subir, avant le dépôt de leur thèse, une épreuve destinée à vérifier leur connaissance de la langue anglaise.

Peuvent être dispensés de cette épreuve les traducteurs professionnels et les étudiants qui ont fait des études antérieures dans des collèges ou des universités anglophones, à condition que leur programme ait compris des cours donnés en anglais. Le fait d'avoir suivi un ou plusieurs cours de traduction ne suffit pas.

Aucune dispense n'est automatique. Les demandes de dispense doivent être soumises par écrit au Comité des études de 2e et 3e cycles et de la recherche.

Programme Le programme de Ph.D. comporte trois parties:
- Scolarité
- Élaboration et défense orale du projet de thèse
- Thèse

Scolarité

L'admission se fait normalement au niveau de Ph.D. II. Lorsqu'un candidat, par exception, est admis en Ph.D. I, sa scolarité pendant cette année est la même que pour l'année de M.A. I (voir plus haut).

Ph.D. II
  Deux séminaires au choix, ainsi que le Séminaire de doctorat (125-711) et le Séminaire départemental (125-780D/N) qui sont obligatoires.

Ph.D. III
  Élaboration du projet de thèse (125-706A/B/D/N) et Défense orale du projet de thèse (125-707A/B/D/N).
  Après l'élaboration du projet de thèse, le sujet de recherche est soumis au Comité des études de 2e et 3e cycles et de la recherche, puis la défense orale du projet a lieu à une date convenue entre les intéressés, devant un jury constitué de trois professeurs.

Ph.D. IV Thèse
  Le directeur de thèse peut être un membre du jury de la défense orale du projet, mais l'étudiant peut aussi décider de travailler avec un autre professeur. Au moment de la défense orale du projet, un comité-conseil est constitué, comprenant le directeur de thèse et deux autres professeurs. Le rôle de ce comité-conseil est de suivre d'aussi près que possible le travail du candidat et de discuter avec lui de l'orientation de ses recherches.
  La soutenance de la thèse a lieu devant un jury d'au moins cinq personnes, présidé par un représentant du doyen; font partie du jury le comité-conseil de l'étudiant et trois autres professeurs, dont le Directeur du Département et au moins un universitaire étranger au Département ou à l'Université McGill.

33.6   Cours de 2e et 3e cycles

L'étudiant trouvera dans le Guide bleu, mis à sa disposition au Secrétariat des études de 2e et 3e cycles et de la recherche, sur le site WEB du département la description détaillée des séminaires offerts ainsi que tous les renseignements pertinents sur les programmes. Des exemplaires de ce Guide bleu sont aussi disponibles au Secrétariat des études de 2e et 3e cycles et de la recherche.

Le nombre de crédits est indiqué entre parenthèses, après le titre du cours. (#)

125-600A/B TRAVAUX DIRIGÉS I. ET II. (M.A.) (3)

125-609A CRÉATION LITTÉRAIRE I. (3)

125-615A LITTÉRATURE ET SOCIÉTÉ. (3) Écrivains de la francophonie.

125-616A LITTÉRATURE ET LINGUISTIQUE. (3) Les écrivains québécois et la langue.

125-621A PROBLÈMES D'ESTHÉTIQUE LITTÉRAIRE. (3) L'expérience littéraire.

125-680D/N SÉMINAIRE DÉPARTEMENTAL I. (3) Littérature et censure, de la Réforme au XIXe siècle.

125-694B LITTÉRATURE QUÉBÉCOISE ET IDÉOLOGIE. (3)

125-695B INITIATION À LA RECHERCHE LITTÉRAIRE. (3)

125-697A MÉTHODOLOGIE ET THÉORIE LITTÉRAIRES. (3)

125-711B SÉMINAIRE DE DOCTORAT. (3)

125-721A LA CRÉATION POÉTIQUE AU XV^E SIÈCLE. (3)

125-727B XVII^E SIÈCLE II. (3) Littérature et spiritualité sous l'Ancien Régime.

125-729B XVIII^E SIÈCLE I. (3) La littérature et la table au XVIIIe siècle.

125-750B ROMAN QUÉBÉCOIS I. (3) Gabrielle Roy.

125-780D/N SÉMINAIRE DÉPARTEMENTAL II. (3) Femmes écrivains sous l'Ancien Régime.