

ness of the problems involved in the area of concentration under departmental supervision.

434-672D EXPERIMENTAL PROBLEMS. (6) See 434-671. This course, however, is more intensive and comprehensive in nature.

434-691 THESIS RESEARCH I. (6) A comprehensive literature review in the general area of the thesis topic. Independent work under the supervision of the thesis advisor(s).

434-692 THESIS RESEARCH II. (6) Independent work under the supervision of the thesis advisor(s) culminating with a written proposal and oral seminar explaining the direction of the thesis research. The Department and Advisory Committee evaluate both the proposal and the presentation.

434-693 THESIS RESEARCH III. (6) Ongoing research pertaining to the thesis under the direction of the thesis advisor(s).

434-694 THESIS RESEARCH IV. (6) Independent work under the supervision of the thesis advisor(s). Final submission and approval of the thesis.

64 Physics

Department of Physics
Ernest Rutherford Physics Building
3600 University Street
Montreal, QC H3A, 2T8
Canada

Telephone: (514) 398-6485

Fax: (514) 398-8434

E-mail (General):

SECRETARIAT@PHYSICS.MCGILL.CA

E-mail (Graduate information):

PAULAD@PHYSICS.LAN.MCGILL.CA

Website: www.physics.mcgill.ca

Chair — J. Barrette

64.1 Staff

Emeritus Professors

M.P. Langleben; B.Sc., M.Sc., Ph.D.(McG.), F.R.S.C.

E.R. Pounder; B.Sc., Ph.D.(McG.), F.R.S.C.

R.T. Sharp; B.Sc., M.Sc., Ph.D.(McG.)

P.R. Wallace; B.A., M.A., Ph.D.(Tor.), F.R.S.C.

M.J. Zuckermann; M.A., D.Phil.(Oxon.), F.R.S.C.

Post-Retirement

A.P. Contogouris; B.A.(Nat. Tech. Athens), Ph.D.(C'nell)

W.B. Muir; B.Sc.(McG.), M.Sc.(W.Ont.), Ph.D.(Ott.)

Professors

J. Barrette; M.Sc., Ph.D.(Montr.)

C. Burgess; B.Sc.(Wat.), Ph.D.(Texas)

M. Cohen; B.Sc., Ph.D.(Lond.), A.R.C.S.; Faculty of Medicine

J.E. Crawford; B.A., M.A.(Tor.), Ph.D.(McG.)

S. Das Gupta; B.Sc., M.Sc.(Calc.), Ph.D.(McM.)

N.B. DeTakacsy; B.Sc., M.Sc.(Montr.), Ph.D.(McG.)

M. Grant; B.Sc.(P.E.I.), M.Sc., Ph.D.(Tor.)

R. Harris; B.A.(Oxon.), Ph.D.(Sus)

C.S. Lam; B.Sc.(McG.), Ph.D.(M.I.T.)

J.K.P. Lee; B.Eng., M.Sc., Ph.D.(McG.)

S. Lovejoy; B.Sc.(Cantab.), Ph.D.(McG.)

S.K. Mark; B.Sc., M.Sc., Ph.D.(McG.)

R.B. Moore; B.Eng., M.Sc., Ph.D.(McG.)

R. Myers; B.Sc.(Wat.), M.A., Ph.D.(Prin.)

P.M. Patel; B.Sc., M.Sc.(Manc.), Ph.D.(Harv.)

D.G. Ryan; B.Sc., M.Sc.(Queen's), Ph.D.(Birm.)

D.G. Stairs; B.Sc., M.Sc.(Queen's), Ph.D.(Harv.)

J.O. Strom-Olsen; B.A., M.S., Ph.D.(Cantab.)

M. Sutton; B.Sc., M.Sc., Ph.D.(Tor.)

J.M. Trischuk; B.Eng.(McG.), Ph.D.(Cal. Tech.)

Associate Professors

F. Corriveau; Ph.D.(Zür.)

C. Gale; B.Sc.(Ott.), M.Sc., Ph.D.(McG.)

P. Grutter; Diploma, Ph.D.(Basel)

H. Guo; B.Sc.(Sichuan), M.Sc., Ph.D.(Pitt.)

D. Hanna; B.Sc.(McG.), M.A., Ph.D.(Harv.)

V. Kaspi; B.Sc.(McG.), M.A., Ph.D.(Prin.)

K. Ragan; B.Sc.(Alta.), Ph.D.(Geneva)

D.H. Ryan; B.A., Ph.D.(Dub.)

Assistant Professor

J. Cline; B.Sc.(Calif.), M.Sc., Ph.D.(Cal. Tech.)

Lecturers

Z. Altounian, F. Buchinger

Associate Members

R. Davies (Atmospheric and Oceanic Sciences);

B.C. Eu (Chemistry); G. Fallone (Radiation Oncology);

M. Mackey (Physiology); E. Podgorsak (Radiation Oncology);

D. Ronis (Chemistry)

64.2 Programs Offered

M.Sc. and Ph.D.

FIELDS OF RESEARCH

High-Energy Physics

Theoretical: The McGill high energy theorists have interests in a wide range of problems pertaining to all fundamental interactions: strong, electromagnetic, weak and gravitational. The research program extends from studies closely connected with experimental data to purely theoretical questions. Ongoing projects involve: particle phenomenology, quantum chromodynamics, electroweak baryogenesis, group theory, astroparticle physics, quantum gravity, grand unification and string theory.

Experimental High Energy Physics The experimental high energy physics group is engaged in a number of experiments at the research frontiers of the field, both in subatomic physics and in high energy astrophysics. These include:

- BaBar: The group played a major role in constructing installation and commissioning of the drift chamber. The full detector has been operational and taking data since summer 1999. The physics interests of the group center on CP violation in B-meson decays to CP eigenstates and in the determination of CKM matrix elements V_{cb} and V_{ub} .
- STACEE: Members of the group are currently constructing and installing a major air Cherenkov detector for the study of high energy gamma rays emitted by astrophysical objects such as supernova remnants and active galactic nuclei. In 1999, a partially instrumented version of the detector (located at Sandia National Labs in Albuquerque, New Mexico) operated and successfully observed the Crab Nebula, providing a proof-of-principle of this novel technique. By the end of 2000, we expect to be operating the full-size detector and entering into a multi-year campaign of astrophysical observations.
- ZEUS: A group working at the world's first electron-proton collider (HERA, at DESY, Hamburg) studies lepton-quark interactions at high energy. The physics topics of interest to the group include deep inelastic scattering (proton structure, forward jet production and low-x physics) and flavour (strange, charm) production.

Thus, graduate students at the M.Sc. and Ph.D. levels are offered a strong program of research in a challenging and rapidly advancing field. Short term Master's projects are based mainly on instrumentation or data analysis conducted on Campus, while Ph.D. research may involve an extended stay at one of the world's major research laboratories.

Nuclear Physics

Theoretical: Transport equations for heavy ion collisions at intermediate energy; nuclear equation of state from heavy ion collisions; fragmentation at intermediate energy; electromagnetic probes in relativistic heavy ion collisions; effective lagrangians for hadronic systems at finite temperature; pion-nucleus interactions.

Experimental: Current research programs in experimental nuclear physics at McGill are focussed on two main axes:

- The study of heavy-ion reactions at relativistic energies to determine the properties of nuclear matter at high density. This program is being performed at the Brookhaven National Laboratory. McGill physicists are part of a major experiment at the new heavy-ion collider RHIC, presently under construction at BNL.
- The study of ground state properties of unstable nuclei using laser spectroscopy techniques and ion traps. This work is being carried out using the Canadian Penning trap facility at the Argonne National Laboratory and at the accelerator ISOLDE (CERN).

Furthermore, the Nuclear Physics Group has an active in-house research program that applies the ion trap and laser techniques to the detection of trace quantities of material and contaminants, and to ion spectroscopy.

Condensed-Matter Physics

Theoretical: Programs of research are in progress on the properties of dilute alloys and amorphous metals, including magnetic systems and "spin-glasses"; on nonequilibrium characteristics of quantum devices; on kinetics of pattern formation during first order phase transitions, on structured fluids and polymers, on the statistical mechanics of biological membranes and growth problems; and on interface instabilities in dendritic crystal growth. Research is being done by nonlinear analysis and large-scale computational modelling.

Experimental: Lines of research include structural, transport, Mössbauer and other magnetic properties of metallic glasses and rapidly quenched metals, and certain crystalline metal alloys. High resolution X-ray diffraction using synchrotrons to study the time evolution of non-equilibrium structures and to study thin films and buried interfaces. Scanning tunneling and atomic force microscopy.

Astrophysics

The Department has a new program in astrophysics. At present this group does research in radio and X-ray observation of neutron stars and ground-based gamma-ray astronomy. The research program in X-ray astrophysics uses various X-Ray observatories including the RXTE, Chandra and the XMM satellites. Among the scientific issues addressed in this program are the properties of young neutron stars, both pulsars and "magnetars", pulsar wind nebulae, and supernova remnants.

Nonlinear Variability in Geophysics

This group studies nonlinear dynamical processes in the atmosphere and other geophysical systems, especially those associated with turbulent, chaotic and extremely variable behaviour. Emphasis is placed on multifractal analysis and modelling as well as the development of new theories and techniques covering wide ranges of scale in time and space. Data from a variety of in situ and remotely sensed sources are used. This includes satellite data of the earth's atmosphere and surface as well as high quality precipitation data from the McGill Radar Weather Observatory.

64.3 Admission Requirements

M.Sc.

Normal requirement is a B.Sc. in Physics, or equivalent, with high standing.

Ph.D.

Normal requirement is a M.Sc. in Physics or equivalent. Candidates in good standing may have the option of transferring into this program from the M.Sc. program after one year.

64.4 Application Procedures

An application package is available upon request. It includes a brochure with a detailed description of the research activities in the Department, application forms for admission to graduate studies

and information concerning requirements for the M.Sc. and Ph.D. degrees. Inquiries should be addressed to the Graduate Coordinator.

Applications will be considered upon receipt of:

1. application;
2. transcripts;
3. letters of reference;
4. \$60 application fee;
5. test results (GRE, TOEFL).

All information is to be submitted to Paula Domingues, Department of Physics.

Applications and supporting documents should be submitted by:

- February 1st – international applicants,
- March 15th – Canadian applicants.

Financial Assistance

Subject to the availability of funds, financial assistance will be offered to students in the form of Teaching and Research assistantships. For new students, financial support will be offered at the time of acceptance and arrival. Forms are given and filled out on registration day.

64.5 Program Requirements

M.Sc.

Candidates must successfully complete five 3-credit courses, plus 198-691A or B, 198-692 A or B and 198-690D (M.Sc. Thesis), in addition to all the other normal requirements of the Graduate Faculty. The M.Sc. program in Physics carries 48 credits in total.

Ph.D.

Candidates must successfully complete two one-semester courses and a Preliminary examination and submit a Ph.D. thesis, in addition to all the normal requirements of the Graduate Faculty. (Courses taken as part of the M.Sc. program at McGill may be accepted as substitutes for the two required courses.) Normally one of the courses must be a 600 or 700-level course in the candidate's area of specialization.

64.6 Advanced Undergraduate and Graduate Courses

- Denotes not offered in 2000-01.

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

198-514B GENERAL RELATIVITY. (3) (3 hours) Transition from general relativity. Non-Euclidian geometry. The basic laws of physics in covariant form. Einstein's equations. Newton's theory of gravitation as an approximation. Propagation of gravitation. Rigorous solutions of the field equations. **Cosmology.**

Professor Myers

198-551A QUANTUM THEORY. (3) (3 hours) General formulation, scattering theory, WKB approximation, time-dependent perturbation theory and applications, angular momentum, relativistic wave equations.

Professor Gale

198-557A NUCLEAR PHYSICS. (3) (3 hours) General nuclear properties, nucleon-nucleon interaction and scattering theory, radioactivity, nuclear models, nuclear reactions. **Professor Mark**

198-558A SOLID STATE PHYSICS. (3) (3 hours) Properties of crystals, lattice vibrations and thermal properties of insulators, free electron model and band structure, semiconductors, metals, optical properties. **Professor D.H. Ryan**

198-559A STATISTICAL MECHANICS. (3) (3 hours) Bose and Fermi gas; cluster expansions; hydrodynamics of superfluids; second sound; Fermi liquid theory; phase transitions; the Ising model; fluctuations; the Fokker-Planck equation; the Onsager relation. **Professor Grant**

198-562B ELECTROMAGNETIC THEORY. (3) (3 hours) (Prerequisites: U1 or U2 Honours Physics or permission of instructor.) Electrostatics, dielectrics, magnetostatics, time-varying fields, relativity, radiating systems, fields of moving charges. **Professor de Takacsy**

198-567B PARTICLE PHYSICS. (3) (3 hours) Survey of elementary particles; hadrons, leptons and hadrons' constituents (quarks). Invariance principles and conservation laws. Detectors and accelerators. Phenomenology of strong, electromagnetic and weak interactions.

Professor Patel

198-610A ADVANCED QUANTUM MECHANICS. (3) (3 hours) Relativistic wave equations for spin-0, spin-1/2, and spin-1 particles. Review of Lagrangian and Hamiltonian formalisms for classical mechanics. Canonical, Feynman path-integral, and Schwinger external-source quantization techniques. Relativistic quantum field theories for free spin-0, spin-1/2, and spin-1 particles. Interactions, perturbation theory, and Feynman diagrams.

Professor Lam

● **198-612A ADVANCED MATHEMATICAL PHYSICS.** (3) (3 hours)

198-616A,B MULTIFRACTALS AND TURBULENCE (3) (3 hours) This course assumes knowledge of basic probability theory and Fourier analysis. The subjects covered are: scale invariant sets: fractal geometry, scale invariant fields: multifractal fields and processes, aspects of hydrodynamic turbulence, multifractal data analysis techniques, generalized scale invariance, space/time scaling, causality.

Professor Lovejoy

198-618B QUANTUM THEORY OF SOLIDS. (3) (3 hours) Includes some of the following topics; excitations in solids, phonons, the electron gas, superconductivity and phase transitions.

Professor Guo

● **198-619A,B THEORETICAL SOLID STATE PHYSICS.** (3) (3 hours)

198-620B EXPERIMENTAL METHODS OF SUBATOMIC PHYSICS. (3) (3 hours) Basic techniques of experimentation in nuclear and particle physics. Accelerators, beam optics, detection systems, major experiments, Monte-Carlo simulation, data acquisition and data analysis.

Professor Stairs (staff)

● **198-658A,B ADVANCED CONDENSED MATTER PHYSICS.** (3) (3 hours)

198-659B EXPERIMENTAL CONDENSED MATTER. (3) (3 hours) To obtain an active understanding of the principles, the possibilities and the limitations of various experimental techniques. Possible topics include vacuum and low-temperature techniques; transport, thermal, magnetization and de Haas van Alphen measurements; scattering techniques; Mossbauer spectroscopy, NMR, scanning probe microscopy, electron microscopy; surface science methods.

Professor Grutter (staff)

● **198-673B THEORETICAL HIGH ENERGY PHYSICS.** (3) (3 hours)

198-690D M.Sc. THESIS. (24)

198-691A,B. THESIS PREPARATION. (3) Directed study of research papers and experimental or theoretical techniques in the student's designated area of research under the supervision of the graduate studies committee of the Department.

198-692A,B THESIS PROJECT. (6) Independent work under the direction of the student's supervisor on a research problem in the student's designated area of research leading to a project report or seminar.

198-700A,B PRELIMINARY PH.D. EXAMINATION.

● **198-718A,B SPECIAL TOPICS IN SOLID STATE PHYSICS I.** (3) (3 hours)

● **198-719A,B SPECIAL TOPICS IN SOLID STATE PHYSICS II.** (3) (3 hours)

● **198-729A,B SELECTED TOPICS IN NUCLEAR PHYSICS** (3)

● **198-730A SPECIAL TOPICS IN HIGH ENERGY PHYSICS I.** (3) (3 hours)

● **198-731A SPECIAL TOPICS IN HIGH ENERGY PHYSICS II.** (3) (3 hours)

563-601A RADIATION PHYSICS. (3) The production and properties of ionizing radiation and their interactions with matter; basic theoretical and experimental aspects of radiation dosimetry.

65 Physiology

Department of Physiology
McIntyre Medical Sciences Building
3655 Drummond Street
Montreal, QC H3G 1Y6
Canada

Telephone: (514) 398-3689

Fax: (514) 398-7452

Website: <http://www.physio.mcgill.ca>

Chair — A. Shrier

Chair of Graduate Program — E. Cooper

65.1 Staff

Emeritus Professor

Geoffrey Melvill Jones; B.A., M.A., M.B., B.Ch., M.D.(Cantab.)

Professors

Catherine Bushnell; B.A.(Maryland), M.A., Ph.D.(American U.)
(*Harold Griffith Professor of Anaesthesia*) (joint appt with Dentistry)

Thomas M.S. Chang; B.Sc., M.D., C.M., Ph.D.(McG.), F.R.C.P.(C)
Munroe W. Cohen; B.Sc., Ph.D.(McG.)

Ellis J. Cooper; B.Eng.(Sir G.Wms.), M.Sc.(Surr.), Ph.D.(McM.)

Mony Frojmovic; B.Sc., Ph.D.(McG.)

Leon Glass; B.S.(Brooklyn), Ph.D.(Chic.)

Phil Gold; M.Sc., Ph.D., M.D., C.M.(McG.), F.R.C.P.(C.) (joint appt with Medicine)

David Goltzman; B.Sc., M.D., C.M.(McG.), F.R.C.P.(C) (*Antoine G. Massabki Professor of Medicine*) (joint appt with Medicine)

John Hanrahan; Ph.D.(Br.Col.)

James L. Henry; B.Sc.(Tor.), M.Sc., Ph.D.(W.Ont.)

Robert E. Kearney; B.Eng., M.Eng., Ph.D.(McG.) (joint appt with Biomedical Engineering)

Kresmir Krnjevic; B.Sc., Ph.D., M.B., Ch.B.(Edin.) (joint appt with Anaesthesia Research)

Wayne S. Lapp; M.S.A.(Tor.), Ph.D.(McG.)

Mortimer Levy; B.Sc., M.D., C.M.(McG.), F.R.C.P.(C) (joint appt with Medicine)

Michael Mackey; B.A., Ph.D.(Wash.)

Jacopo P. Mortola; M.D.(Milan)

John Orłowski; B.Sc.(McG.), M.Sc., Ph.D.(Queen's)

Premysl Ponka; M.D., Ph.D.(Prague)

Alvin Shrier; B.Sc.(C'dia), Ph.D.(Dal.) (*Hosmer Professor of Physiology*)

Douglas G.D. Watt; M.D., Ph.D.(McG.)

Associate Professors

Kathleen Cullen; B.Sc.(Brown), Ph.D.(Chic.)

Riaz Farookhi; B.Sc., M.Sc.(M.I.T.), Ph.D.(Tufts)

Mladen Glavinovic; B.Sc.(Zagreb), M.Sc.(Tor.), Ph.D.(McG.) (joint appt with Anaesthesia Research)

Michael Guevara; Ph.D.(McG.)

Sheldon Magder; M.D.(Tor.) (joint appt with Medicine)

Ursula Stochaj; Ph.D.(Cologne)

Teresa Trippenbach; M.D., Ph.D.(Warsaw)

Ann Wechsler; B.A.(Tor.), M.Sc., Ph.D.(McG.)

Peter Weldon; B.Sc., Ph.D.(McG.)

John White; B.Sc., M.Sc.(Car.), Ph.D.(Harv.)

Adjunct Professors

John Milton, Serge Rossignol, Malmur Sairam

Associate Members

Anaesthesia: Steven Backman

Dentistry: James Lund

Medicine: Andrey Cybulsky, Samuel O. Freedman,

Abraham Fuks, Claude Gagnon, Raymond Gagnon,

Harry L. Goldsmith, Alex Grassino, Geoffrey Hendy, Max Katz,

Peter T. Macklem, James Martin, Shree Mulay,

Mariana Newkirk, Barry Posner, Shafaat Rabbani, Ian Shrier,

J.Enrique Silva, Alan Sniderman, Mary Stevenson,
Simon Wing, Hans Zingg
Neurology and Neurosurgery: Albert Aguayo, Massimo Avoli,
Charles Bourque, Sal Carbonetto, Pierre Drapeau,
Daniel Guitton, Michael Rasminsky
Otolaryngology: Bernard Segal
Pediatrics: Immanuel Moss
Psychiatry: Bernardo Dubrovsky, Christina Gianoulakis

65.2 Programs Offered

The Physiology Department offers training leading to M.Sc. and Ph.D. degrees. The scope of the ongoing research, and close connections with the McGill teaching hospitals, offer excellent opportunities for collaborations with hospital based scientists.

All graduate students in Physiology receive financial support. Any faculty member who agrees to supervise a student who does not hold a fellowship, is obliged to provide financial support.

65.3 Admission Requirements

Admission to the Graduate Program is based on an evaluation by the Graduate Student Admissions and Advisory Committee (G.S.A.A.C.), and on being accepted by a research supervisor.

Candidates for the M.Sc. degree must hold a B.Sc. degree or its equivalent. Candidates who have completed an M.Sc. may be admitted directly to the Ph.D. program. M.Sc. students interested in a Ph.D., may transfer to the Ph.D. program after 12-18 months, if all of the transfer requirements have been fulfilled. The M.Sc. thesis requirement is then waived. Candidates with exceptional academic records may be considered to proceed directly to the Ph.D. degree from the B.Sc. degree.

The GRE General Test is required for anyone who does not have a degree from a Canadian University. The TOEFL is required for anyone whose university studies were completed in a language other than English outside of Canada. A minimum CGPA of 3.2 on 4.0 is required for a file to be considered.

65.4 Application Procedures

The G.S.A.A.C. will only consider applications upon receipt of all of the following documentation:

1. application form;
2. personal statement;
3. CV;
4. letters of reference, not more than six months old, from two professors;
5. two official copies of all university transcripts;
6. \$60 application fee;
7. results of the G.R.E. (Graduate Record Exam) General Test, for applicants whose undergraduate degree is not from a Canadian university.
8. results of the Test of English as a Foreign Language (TOEFL), minimum score of 600, if the undergraduate studies were carried out in a language other than English outside of Canada.

Applications should be submitted to the Student Affairs Officer as early as possible in order to facilitate processing. However, no applications will be considered after the following deadlines:

- May 1st for the September Term
- Oct. 1st for the January Term
- March 1st for the Summer Term (M.Sc. only)

Deadlines are six months earlier for international students.

Interested candidates should contact the Department for an application package.

65.5 Program Requirements

M.Sc.

The M.Sc. program is comprised of a minimum of 49 credits:

- 552-601A,B (1) M.Sc. Proposal Seminar
- 552-602A,B,C (3) Literature Search and Research Proposal
- 552-607A,B,C (3) Laboratory Research I
- 552-608A,B,C (3) Laboratory Research II
- 552-618A (3) Research Topics in Physiology I
- 552-619B (3) Research Topics in Physiology II
- 552-620A,B,C (3) Progress and Research
- 555-621A,B,C (12) Thesis I
- 552-622A,B,C (15) Thesis II
- 552-623A,B,C (3) M.Sc. Seminar

Additional course work may be required depending upon background of the candidate.

Students in the M.Sc. Program are required to:

1. fulfill the course requirements specified at the time of admission;
2. present a proposal seminar 3 months after starting the program, and a seminar based on the research project 2 months prior to submission of the thesis;
3. submit a thesis.

Each student will have a supervisory committee which will monitor the progress of the studies.

Transfer to the Ph.D Program

After 18 months students may transfer to the Ph.D. program if all of the transfer requirements have been fulfilled. This includes completion of the Ph.D. Preliminary Exam and the successful completion of a transfer seminar. The M.Sc. thesis requirement is then waived.

Ph.D.

Students in the Ph.D. Program are required to:

1. complete the Ph.D. Departmental Seminar Course and any other course requirements specified at the time of admission;
2. present a proposal seminar 3 months after starting the program, and a "work in progress" seminar every year until submission of the thesis;
3. pass the Ph.D. Preliminary Exam within 6-12 months of admission to the program;
4. submit a thesis and defend it orally.

Each student will have a supervisory committee which will monitor the progress of the studies.

65.6 Courses

☐ Denotes limited enrolment.

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

552-502B EXERCISE PHYSIOLOGY. (3) (Prerequisite: 552-311A, 312B, 313B) Behaviour of physiological processes in response to physical effort, in areas such as structural basis of muscle contraction, neural control of muscle, mechanics and energetics of muscle contraction, fuel utilization, fatigue, physiological adjustments during exercise and influence of training. **Professor Slawnych and Staff**

☐ **552-508A ADVANCED RENAL PHYSIOLOGY.** (3) (Prerequisite: 552-312B or the equivalent.) Offered in conjunction with the Department of Medicine. Lectures and seminars will cover advanced concepts in selected areas of kidney physiology (glomerular and tubular function) as well as membrane and epithelial transport. Students will be expected to critically discuss selected experimental papers. Open to advanced undergraduate and graduate students. **Professor Levy and Staff**

552-513B CELLULAR IMMUNOLOGY. (3) (4 hours lectures plus term paper) (Prerequisites: 528-314B, or permission of the instructor.) This course deals with cellular interactions, regulation and effector

mechanisms of the normal immune response in relation to diseases and pathogenic processes. It is taught at an advanced level.

Professor Lapp

552-515A PHYSIOLOGY OF BLOOD I. (3) (2 hours lecture plus 1 hour seminar weekly) (Prerequisites: 552-313B, or permission of the instructor.) Study of the cell and molecular physiology of hemostasis and its pathophysiology (bleeding and thrombosis). Emphases on molecular mechanisms regulating clot formation, fibrinolysis, and cell adhesion/aggregation. Experimental approaches and specific clinical disorders will be analyzed. Weekly discussions, and a major term paper.

Professors Frojmovic, Solymoss and Staff

552-516B PHYSIOLOGY OF BLOOD II. (3) (2 hours lecture plus 1 hour seminar weekly) Bone marrow hematopoiesis, with emphasis on regulation of stem cell proliferation and differentiation along hematopoietic pathways. Formation and differentiation of red and white blood cells and some of the diseases associated with hematopoiesis will be covered. Emphasis will be given to the molecular mechanisms involved in the normal and pathological conditions.

Professors Ponka and Hiscott

552-517B ARTIFICIAL INTERNAL ORGANS. (3) (Prerequisite: permission of instructors. Password required) Physiological, bioengineering, chemical and clinical aspects of artificial organs including basic principles and physiopathology of organ failure. Examples: oxygenator, cardiac support, vascular substitutes, cardiac pacemaker, biomaterials and tissue engineering, biocompatibility.

Professors Prakash and Chang

552-518A ARTIFICIAL CELLS & BIOTECHNOLOGY. (3) (Prerequisite: Permission of instructors; password required) Physiology, biotechnology, chemistry and biomedical application of artificial cells, immobilized enzymes, microorganisms and cells, blood substitutes, hemoperfusion, artificial kidneys and drug delivery systems. 517B and 518A when taken together, will give a complete picture of this field. However, the student can select one of these. Given jointly with the Artificial Cells and Organs Research Centre.

Professors Chang and Yu

552-520B ION CHANNELS. (3) (1½ hour lecture, 1½ hour seminar) (Prerequisites: 552-311A. Priority to Graduate and Honours students; others by permission of instructors. Password required.) (Offered in odd numbered years only.) A discussion of the principal theories and interesting new developments in the study of ion channels. Based on a textbook, computer exercises and critical reading, and presentation of research papers. Topics include: Properties of voltage- and ligand-gated channels, single channel analysis, structure and function of ion channels.

Professors Drapeau, Bourque and Hanrahan

552-531B TOPICS IN APPLIED IMMUNOLOGY. (3) (Permission of the instructor; U3 Interdept. Honours Immunology students and graduate students with strong immunology background i.e. 552-513A and 507-503B.) Seminar format course in which experts in immunologic mechanisms of resistance against a variety of infectious diseases, including AIDS, malaria, and tuberculosis oversee student moderators in their presentation of recent scientific literature in the field.

Professors Stevenson and Bernard

□ **552-550A PHYSIOLOGY OF BONE.** (3) (1 hour lecture, 2 hours per week) (Prerequisites: 552-311A, and 177-202B or equivalent) Preference given to Physiology graduate students, others by permission of instructor; password required.) Students will develop a working knowledge of cartilage and bone. Discussion topics will include: molecular and cellular environment of bone; heritable and acquired skeletal defects; research models used to study metabolic bone disease.

Professor Henderson

□ **552-552B ADVANCED TOPICS IN CELLULAR AND MOLECULAR PHYSIOLOGY.** (3) (1 hour lecture, 2 hours seminar weekly) (Prerequisite: 552-311A. Preference will be given to Physiology Honours and Graduate students.) Discussions of recent significant advances in our understanding of the gene products involved in diverse cellular signalling pathways. Topics will include cell-surface hormone receptors, nuclear steroid hormone receptors, and ion channels and transporters. Students will present and criti-

cally evaluate experimental approaches, results and interpretations of selected research publications.

Professors Orłowski and White

552-556B TOPICS IN SYSTEMS NEUROSCIENCE. (3) (Permission of the instructor required. Limited enrollment. Password required.) (Not open to students who have taken 552-456B.) Topics of current interest in systems neurophysiology and behavioural neuroscience including: the neural representation of sensory information and motor behaviours, models of sensory motor integration, and the computational analysis of problems in motor control and perception. Students will be expected to present and critically discuss journal articles in class.

Professors Cullen and Guitton

552-601A,B M.Sc. PROPOSAL SEMINAR. (1)

552-602A,B,C LITERATURE SEARCH AND RESEARCH PROPOSAL. (3)

552-607A,B,C LABORATORY RESEARCH I. (3)

552-608A,B,C LABORATORY RESEARCH II. (3)

552-610A,B SEMINARS IN THEORETICAL BIOLOGY. (3) (Prerequisite: permission of the instructor.) A series of seminars in selected topics in theoretical biology and biomathematics.

Professor Mackey

552-618A RESEARCH TOPICS IN PHYSIOLOGY I. (3) (Enrollment limited to new M.Sc. and Ph.D. students in Physiology.) Specific topics of current interest in physiology will be considered using molecular, cellular and systems level approaches. Students will be expected to critically discuss journal articles in class.

552-619B RESEARCH TOPICS IN PHYSIOLOGY II. (3) (Enrollment limited to new M.Sc. and Ph.D. students in Physiology.) Specific topics of current interest in physiology will be considered using molecular, cellular and systems level approaches. Students will be expected to critically discuss journal articles in class.

552-620A,B,C PROGRESS IN RESEARCH. (3)

552-621A,B,C THESIS I. (12)

552-622A,B,C THESIS II. (15)

552-623A,B,C M.Sc. SEMINAR. (3)

552-701D Ph.D. PRELIMINARY EXAMINATION.

552-702A,B Ph.D. PROPOSAL SEMINAR. (1)

552-703A,B Ph.D. PROGRESS SEMINAR I. (1)

552-704A,B Ph.D. PROGRESS SEMINAR II. (1)

552-720A,B Ph.D. SEMINAR COURSE I. (1) Required for Ph.D. students. Coordinated in conjunction with the weekly Departmental seminar series, students will meet for one hour before each seminar to critically discuss papers on the subject of the weekly seminar. Students will take turns introducing the papers and leading discussions on an overview of the research topic, some of the methodologies, results and conclusions.

Professor Orłowski and Staff

552-721A,B Ph.D. SEMINAR COURSE II. (1) Same as 552-720A,B

552-722A,B Ph.D. SEMINAR COURSE III. (1) Same as 552-720A,B

552-723A,B Ph.D. SEMINAR COURSE IV. (1) Same as 552-720A,B

552-724A,B Ph.D. SEMINAR COURSE V. (1) Same as 552-720A,B

552-725A,B Ph.D. SEMINAR COURSE VI. (1) Same as 552-720A,B

COURSES OFFERED BY OTHER UNITS –

Department of Medicine, Division of Experimental Medicine:

516-502A ADVANCED ENDOCRINOLOGY. (3)

516-503B ADVANCED ENDOCRINOLOGY. (3)

516-506B ADVANCED CARDIOVASCULAR PHYSIOLOGY. (3)

516-507A ADVANCED RESPIRATORY PHYSIOLOGY. (3)

516-508B TOPICS IN ADVANCED RESPIRATION. (3)

516-509A GASTROINTESTINAL PHYSIOLOGY AND PATHOPHYSIOLOGY. (3)

516-612D SEMINARS IN MEMBRANE BIOLOGY. (3)

516-615B BIOCHEMISTRY OF COMPLEX CARBOHYDRATES. (3)

Biomedical Engineering:

399-519B INTRODUCTION TO THE ANALYSIS OF BIOMEDICAL SYSTEMS AND SIGNALS. (3)

66 Plant Science

Department of Plant Science
Macdonald Campus
21,111 Lakeshore Road
Sainte-Anne-de-Bellevue, QC H9X 3V9
Canada

Telephone: (514) 398-7851
Fax: (514) 398-7897
E-mail: plantscience@macdonald.mcgill.ca
Website: <http://www.agrenv.mcgill.ca/plant>

Chair — M.G. Fortin

66.1 Staff*Emeritus Professors*

R.H. Estey; B.Ed.(U.N.B.), M.S.(Maine), D.I.C.(Imp. Coll.),
B.Sc.(Agr.), Ph.D.(McG.), F.L.S.
W.F. Grant; B.A., M.A.(McM.), Ph.D.(Va), F.L.S.
W.E. Sackston; B.S.A.(Man.), M.Sc.(McG.), Ph.D.(Minn.),
F.C.P.S., F.A.P.S.
H.A. Steppeler; B.S.A.(Man.), M.Sc., Ph.D.(McG.), F.A.I.C.

Professors

D.J.I. Buszard; B.Sc.(Bath), Ph.D.(Lond.)
D.L. Smith; B.Sc., M.Sc.(Acad.), Ph.D.(Guelph)
A.K. Watson; B.Sc.(Agr.), M.Sc.(Br.Col.), Ph.D.(Sask.)

Associate Professors

D.J. Donnelly; B.Sc.(Agr.) (McG.), M.Sc.(U.B.C), Ph.D.(S.Fraser)
P. Dutilleul; L.Sc., D.Sc.(Louvain)
M.G. Fortin; B.Sc.(Pi.Sc.), M.Sc.(Laval), Ph.D.(McG.)
S. Jabaji-Hare; B.Sc.(Beirut), M.Sc.(Guelph), Ph.D.(Wat.)
A.C. Kushalappa; B.Sc., M.Sc.(B' Lore), Ph.D.(Flor.)
D. Mather; B.Sc.(Agr.) (McG.), M.Sc., Ph.D.(Guelph)
T.C. Paulitz; B.Sc.(Cal.St.Pom.), Ph.D.(U.Cal.Riv.)
S.A. Sparace; B.S.(C' nell), Ph.D.(Wyoming)
K.A. Stewart; B.Sc.(Agr.) (Br.Col.), Ph.D.(R'dg)
M. Waterway; B.A.(Grand Rapids), M.S.(Wis.), Ph.D.(C' nell)

Faculty Lecturers

S. Lussier; B.Sc.(Agr.) (McG.)
P. Nantel; B.Sc., M.Sc.(Montr.), Ph.D.(UQAM)
D. Wees; B.Sc.(Agr.), M.Sc.(McG.)

Associate Member

T. Johns

Adjunct Professors

M.R. Bullen, O. Carisse, D. Cloutier, W.K. Coleman,
B.E. Coulman, S. Jenni, S. Khanizadeh, J.-F. Laliberté, C. Morris,
L. O'Donoghue, T. Ouellet

66.2 Programs Offered

The Department offers an M.Sc. and Ph.D. in Plant Science and provides for study in all fields of the plant sciences. Research facilities – both field and laboratory – are available for investigations in plant breeding, crop physiology, crop management, plant ecology, the epidemiology and biology of plant diseases, the physiology of diseased plants, cytogenetics, biosystematics, recombinant DNA technology, mycology, weed biology, tissue culture and plant biochemistry.

An advisory committee is named for each student, having the responsibility for developing the program of study appropriate to the student's background and area of specialization.

66.3 Admission Requirements**General**

An equivalent cumulative grade point average of 3.0/4.0 is required.

Ph.D.

Ph.D. candidates are required to have an M.Sc. degree in an area related to the chosen field of specialization for the Ph.D. program. Outstanding students may be permitted to transfer to the second year of the Ph.D program following one year of M.Sc. study.

66.4 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
Sainte-Anne-de-Bellevue, QC H9X 3V9
Canada

Telephone: (514) 398-7925
Fax: (514) 398-7968
E-mail: 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, negotiable in Canada;
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 or bearing the university seal 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.**

66.5 Program Requirements

M.Sc.

Candidates must complete a 45-credit course and research program established by their advisory committee. The program will consist of:

1. Two 3-credit graduate level courses or their equivalent;
2. M.Sc. Thesis I 367-664A,B,C;
3. M.Sc. Thesis II 367-665A,B,C;
4. M.Sc. Thesis III 367-666A,B,C;
5. Attendance at 367-665, 367-666, 367-767 and 367-768; and at invitational seminar (367-690).
6. Additional courses may be required at the discretion of the candidate's supervisory committee.

Plant Science research programs normally require two years for completion.

Ph.D.

Students will follow the program of study established by their advisory committee. This program will consist of:

1. Ph.D. comprehensive examination 367-701D,N, which must be taken within 1 year of registering;
2. Ph.D. Thesis I (367-766A,B,C);
3. Ph.D. Thesis II (367-767A,B,C);
4. Ph.D. Thesis III (367-768A,B,C);
5. Other courses deemed necessary for the chosen area of specialization.
6. Attendance at all thesis progress and program reports (367-665, 367-666, 367-767 and 367-768) and at invitational seminar (367-690).

Students who have taken their M.Sc. degree at McGill University will be required to spend one term in study at another research institution.

66.6 Courses for Higher Degrees

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

Courses may not be offered every year. Please see course availability at <http://www.agrenv.mcgill.ca/plant>

356-500A,B,E TECHNIQUES IN PLANT MOLECULAR GENETICS. (3)

This two-week intensive course uses an experimental, laboratory-based approach to provide basic training in the analysis of plant genes and gene products. Some of the techniques covered will include DNA purification, restriction analysis, cloning, hybridization and protein expression.

Professor Fortin

356-501B TOPICS IN PLANT MOLECULAR BIOLOGY AND GENETICS. (3)

Photosynthesis, plant development, plant genome mutagenesis and analysis, and plant stress are discussed. Journal articles and reviews on all aspects of plant molecular biology and genetics.

Professor Fortin

360-611B EXPERIMENTAL DESIGNS. (3) (3 hours lectures and 1 hour conference) (Prerequisite 360-310 or equivalent) (Given in alternate years.)

General principles of experimental design, incomplete block designs and unbalanced designs, analysis of repeated measures, multivariate and modified univariate analysis of variance, spatial heterogeneity and experimental design, plasticity experiments and genotype-by-environment interaction.

Professor Dutilleul

360-614B TEMPORAL AND SPATIAL STATISTICS. (3) (3 hours lectures) (Prerequisite 360-310 or equivalent) (Given in alternate years)

Temporal statistics: analysis in the time domain, Box-Jenkins forecasting methodology, analysis in the frequency domain; Spatial statistics: mapping, autocorrelation analysis, geostatistics; Statistical inference with autocorrelated sample data.

Professor Dutilleul

367-525B ADVANCED MICROPROPAGATION. (3) (one 3-hour lecture)

A detailed study of the principles and techniques of plant micropropagation.

Professor Donnelly

367-535B PLANT BREEDING. (3) (Given in alternate years)

Principles and practices of plant breeding, including reproduction of crop plants; plant hybridization; sources of genetic variation; selection methods used for self- and cross-pollinated crops and for clonally reproduced crops; breeding for disease and pest resistance; and applications of biotechnology in plant breeding.

Professor Mather

367-600A PLANT-MICROBE INTERACTIONS. (3) (3 hours lectures)

This course examines in detail the advances in several areas of plant-microbe research; signalling (recognition phenomena) and regulatory interactions between plants and microbes (including symbionts), biochemical and molecular plant response to biotic and abiotic stress and mechanisms of defense reactions.

Professor J. Hare

367-603A POMOLOGY. (3) The biology of pomological species, and the technology of orchard and small fruit production; major aspects, significant research, recent advances.

Professor Buszard

367-604A VEGETABLE CROPS. (3) Discussion and reading assignments on the application of plant physiology and other sciences to the production of vegetable crops.

Professor Stewart

367-614A,B ADVANCED PLANT BREEDING. (3) Directed readings and discussion on the application of genetics to the development of improved crop cultivars.

Professor Mather

367-619A,B CROP PHYSIOLOGY. (3) (3 hours conference)

Growth and development of crops, with emphasis on canopy structure and arrangement, light interception, temperature, water and salt stress.

Professor Stewart

367-622A,B BIOLOGICAL CONTROL OF UNDESIRABLE VEGETATION. (3) Directed reading and discussion on the use of plant-feeding organisms and disease to reduce the density of undesirable vegetation in favour of more useful plant species. **Professor Watson**

367-623A,B BIOCHEMISTRY AND PHYSIOLOGY OF HERBICIDES. (3) Mechanisms of penetration, translocation, selectivity and modes of action of herbicides and their interactions with the environment. **Professor Watson**

367-626A BIOCHEMISTRY AND PHYSIOLOGICAL ROLE OF PLANT LIPIDS. (3) (2 hours lectures) A detailed study of the current theories and models of the structure, biogenesis and function of plant membranes and lipids. **Professor Sparace**

367-628B HIGHER PLANT NITROGEN FIXATION AND MYCORRHIZAL ASSOCIATIONS. (3) A detailed examination of the chemistry, biochemistry, anatomy, physiology, ecology and agricultural application of biological nitrogen fixation and mycorrhizal associations in higher plants. **Professor Smith**

367-633A,B PLANT PATHOGENIC FUNGI. (3) Techniques to diagnose plant diseases based on culturing and identification of plant pathogenic fungi in the laboratory. Students will make a collection of fungi, and become familiar with monographs, host indices, taxonomic keys, and other literature for fungal identification. **TBA**

367-636B EPIDEMIOLOGY AND MANAGEMENT OF PLANT DISEASE. (3) Concepts and principles of plant disease epidemiology. Quantification of factors influencing epidemiological processes. Influence of host, pathogen and environmental factors on the rate of disease development. Disease forecasting and timing fungicide application. Management of crop diseases, including chemical and biological control. Immunological and molecular techniques to detect pathogens. **Professor Kushalappa**

367-650B ADVANCED SYSTEMATIC BOTANY. (3) This course deals with the literature and philosophy of plant classification, processes of speciation in higher plants, sources and interpretation of data, biosystematic methods and plant nomenclature. **Professor Waterway**

367-662A OR B LABORATORY RESEARCH INSTRUMENTATION. (3) (3 hours lab) Physical and chemical methods applied to biology. Students are required to perform a formal project centered around the use of one or more instruments covered and provide a written and/or oral report of the project. **Professor Sparace**

367-664A,B,C M.Sc. THESIS I. (12) Written and oral presentation of thesis proposal to the research supervisory committee.

367-665A,B,C M.Sc. THESIS II. (12) Oral presentation of a proposal to the department and progress report on the thesis research project to the supervisory committee.

367-666A,B,C M.Sc. THESIS III. (15) Preparation and submission of an acceptable thesis. Oral presentation of the thesis research to the department.

367-670A OR B SPECIAL TOPICS I. (3) Prescribed reading, conference and practical work on selected topics in the student's area of specialization. **Staff**

367-687A,B SEMINAR IN PLANT SCIENCE. (3) (2 hours seminar) This course is designed to develop seminar presentation skills in graduate students. The course consists of instruction on audio-visual preparation, speaking style, and organization of content, plus practice presentations by students.

367-690D,N AND 367-691D,N RESEARCH HORIZONS IN PLANT SCIENCE. A series of seminars presented by invited speakers, staff and senior graduate students. The topics are selected to integrate the many fields of plant science. **Staff**

367-701D,N DOCTORAL COMPREHENSIVE EXAMINATION.

367-766A,B,C PH.D. THESIS I. Written and oral presentation of thesis proposal to the research supervisory committee.

367-767A,B,C PH.D. THESIS II. Oral presentation of a proposal to the Department and progress report on the thesis research project to the supervisory committee.

367-768A,B,C PH.D. THESIS III. Preparation and submission of an appropriate final thesis. Oral presentation of the thesis research and thesis defense to the Faculty.

367-770A OR B SPECIAL TOPICS II. (3) Prescribed reading, conference and practical work on selected topics in the student's area of specialization.

67 Political Science

Department of Political Science
Stephen Leacock Building
855 Sherbrooke Street West
Montreal, QC H3A 2T7
Canada

Telephone: (514) 398-4800

Fax: (514) 398-1770

Website: <http://www.arts.mcgill.ca/programs/polisci>

Chair — Hudson Meadwell

Director of Graduate Program — Christopher Manfredi

67.1 Staff

Emeritus Professors

James Mallory; B.A., M.A.(UNB), LL.B.(Edin.), M.A.(Dal.)

Baldev Raj Nayar; B.A., M.A.(Punj.), M.A., Ph.D.(Chic.)

Professors

Mark R. Brawley; B.A., M.A., Ph.D.(Calif.)

Michael Brecher; B.A.(McG.), M.A., Ph.D.(Yale), F.R.S.C.

(on leave winter 2001)

Alain-G. Gagnon; B.A.(Que.), M.A.(S. Fraser), Ph.D.(Carl.)

Christopher Manfredi; B.A., M.A.(Calg.), M.A., Ph.D.(Claremont)

Filippo Sabetti; B.A.(McM.), Ph.D.(Ind.)

Richard Schultz; B.A.(York), M.A.(Manc.), Ph.D.(York)

Blema Steinberg; M.A.(C'nell), Ph.D.(McG.)

Harold M. Waller; M.S.(Northwestern), Ph.D.(Georgetown)

Associate Professors

Jerome H. Black; B.A.(Tor.), M.A.(Kent & Roch.), Ph.D.(Roch.)

Rex Brynen; B.A.(Vic.,B.C.), M.A., Ph.D.(Calg.)

Elisabeth Gidengil; B.A.(Lond.), M.A.(N.Y.), Ph.D.(McG.)

Barbara Haskel; A.M., Ph.D.(Harv.)

Antonia Maioni; M.A.(Carl.), Ph.D.(Northwestern)

Hudson Meadwell; B.A.(Man.), M.A., Ph.D.(Duke)

(on leave 2000-01)

Paul Noble; B.A.(Montr.), Ph.D.(McG.) (on leave 2000-01)

Samuel J. Noumoff; B.A.(Clark), M.A., Ph.D.(N.Y.)

Philip Oxhorn; B.A.(Redlands), M.A.(Cant.), Ph.D.(Harv.)

T. V. Paul; B.A., M.A.(Kerala), M.Phil.(J. Nehru U.), M.A., Ph.D.(Calif.)

Assistant Professors

Alan Patten; M.A., Ph.D.(Oxf.)

Narendra Subramanian; B.A.(Prin.), M.A., Ph.D.(M.I.T.)

67.2 Programs Offered

The Department offers programs leading to the M.A. (with or without thesis) and Ph.D. degrees. These programs combine depth of specialization in a particular field with breadth of knowledge in related fields. The staff offers courses and supervises research on most of the important areas of political science. Students may specialize in any of the following: Canadian Government and Politics; Comparative Politics of Developed or Developing Countries, Political Theory and International Relations.

The Department awards a number of teaching assistantships each year and students who are admitted to the graduate program are automatically considered for such an award. The announcements listing the positions expected to be available will be posted by October 15 for Winter Term courses and March 31 for Fall and Full Year courses.

Because this Calendar is prepared early in the year, changes may take place after it has been printed. Students are advised to

contact the Department Office for supplementary information which may be important to their choice of program.

67.3 Admission Requirements

All applicants, including those who have done their undergraduate work at McGill, must submit at least two letters of reference. Transcripts from all universities attended must be sent to the Department.

Master's

Students holding a B.A. degree may be eligible for admission to the M.A. program. Preparation equivalent to a McGill Honours Program in Political Science is desirable. Students who have inadequate preparation in Political Science but are otherwise judged to be qualified are admitted to a qualifying year, in which they undertake advanced undergraduate work.

Ph.D.

Students holding a Master's degree in Political Science may be eligible for admission to the Ph.D. program. In some instances, students may be admitted directly into the Ph.D. program without having completed an MA degree. They will be considered Ph.D.1 and some previous political science course work could be applied to the requirements of the program, provided that it did not count towards any other degree.

GRE and TOEFL Exams

GRE results are required for applications to the Doctoral Program; this includes McGill Master's students applying to the Doctoral Program. GRE results are not required for students applying to the Master's Program or Qualifying term or year.

Non-Canadian students from countries where English is not the first language and who have not studied at a university in which teaching is conducted in English must submit TOEFL scores. A minimum score of 600 is required for admission. Files will not be considered unless TOEFL scores are received before the application deadline.

GRE information booklets and, when appropriate, TOEFL information booklets are included in the application package mailed to prospective students.

67.4 Application Procedures

Applications will be considered upon receipt of:

1. application form;
2. transcripts;
3. two letters of reference;
4. \$60 application fee;
5. test results: TOEFL (if applicable) and GRE (for Ph.D. applicants).

All applications should be submitted to the Graduate Coordinator in the Department of Political Science.

The normal deadline for applications for admission to the Department is January 31. Applications must be received by that time in order to guarantee the fullest consideration. Later applications will be considered up to April 15.

67.5 Program Requirements

Requirements for the M.A. Degree (48 credits)

Students may select Option A (Thesis Option) or Option B (Research Project Option) in completing M.A. degree requirements. Students may switch from one option to the other while completing their coursework.

A. Thesis Option

There are two requirements:

1. Five one-semester courses (5 x 3 credits). Where special requirements of a student's area of concentration so warrant, the Director of Graduate Studies may allow one of these courses to be taken at the upper undergraduate level. The substitution of one course outside Political Science in related disciplines may also be allowed if it is appropriate to the program.

2. A thesis to demonstrate proficiency in research. The thesis is normally about 100 pages long, and is subject to evaluation by one examiner internal to the Department and one examiner external to the Department.

B. Research Project Option

1. Seven one-semester courses (7 x 3 credits). Where special requirements of a student's area of concentration so warrant, the Director of Graduate Studies may allow one of these courses to be taken at the upper undergraduate level. The substitution of up to two courses outside Political Science in related disciplines may also be allowed if appropriate to the program.
2. A research paper to demonstrate proficiency in research. The research paper is normally about 50 pages in length and involves revision of a paper written for one of the graduate courses completed in the program. The research paper is evaluated by two faculty members in the Department.

For both the above options a course in either the Philosophy of Social Sciences (160-616 or 160-617) or Empirical Methods (160-612), and preferably both, will be required.

Candidates for the M.A. degree follow a program approved on an individual basis by the Department. All students who wish to be considered for the Ph.D. program are evaluated on the basis of their M.A. program. Only a small number of students are permitted to go on for their doctorate and students currently enrolled in the M.A. program must formally re-apply for admission into the Ph.D. program. A pass for the M.A. degree does not necessarily imply permission to proceed to the doctorate.

Requirements for the Ph.D. Degree

Superior applicants, normally understood as students who are at least in the top 10 percent of their graduating class or who have a CPGA of at least 3.5 or its equivalent, will be eligible for admission into the Ph.D. track and receive a Ph.D. degree after successfully completing the requirements of the Ph.D. track. These are:

- A. Successful completion of 13 3-credit courses.
- B. Distribution of Courses:
 1. Two major fields in political science (satisfied by four courses and a written comprehensive examination in each field, as well as one integrated oral comprehensive examination covering both major fields).
 2. One minor field (satisfied by 2 courses). Minor fields can be in any one of the five fields offered by the Department. Students may also petition the Graduate Committee to approve as a minor some special combination of courses which is suitable to a particular student's planned course of study.
 3. An additional 3-credit course in either of the student's major fields or minor field, according to what best meets the particular student's needs.
 4. Students are required to take one 700-level Ph.D. Research Seminar in each major field, as part of the four course requirement. In each of these 700-level seminars, students are expected to complete a paper which focuses on a clearly defined research problem and is comparable in scope to an article in a professional journal. The papers should demonstrate the student's familiarity with the relevant scholarly work and his/her ability to carry out research and organize the results of the research. Each paper will be evaluated by two faculty members in the Department.
 5. Methodology Requirements: All students are required to complete a course in the Philosophy of Social Sciences (either 160-616 or 160-617) and a course on Methods (160-612). Students who are given an exemption from a methodology course requirement because of course work completed prior to entering the M.A.-Ph.D. program will still be required to complete 13 3-credit courses.
- C. Advanced Research Tools: The Department feels that it is essential that its Ph.D. students demonstrate a high level of proficiency in one of the two principal research tools of modern political science: languages or quantitative methods. Language

Requirement: Students must pass an advanced-level translation test from a language other than English. In selecting a language to fulfil this requirement, the student must demonstrate in writing how the chosen language is related to the research. Quantitative Methods: To fulfil this requirement, students must complete a course in advanced statistical methods. For additional information, students should consult the "Information Bulletin for Ph.D. Program".

- D. All students in the Ph.D. program are expected to take their written comprehensives and their oral comprehensive in the second semester of their third year in the program. Students are expected to have completed all of their required course work in their major and minor fields, as well as their methodology requirement (13 one-semester courses), by no later than the end of the first semester of their third year.
- E. Students are expected to submit dissertation proposals by the end of the second semester of their third year in the program.
- F. The student must write a doctoral dissertation which makes an original contribution to knowledge in the discipline.

Transfer students and students with Master's degrees from other universities: Transfer students will be treated as M.A. students who change tracks. Previous course work at the graduate level can be applied towards the requirements of the program, provided the Admission Committee is confident that the quality of such work is on par with McGill standards. Students transferring into the M.A.-Ph.D. track must fulfill a minimum residency requirement of two years, including a minimum of 6 courses and at least one 700-level Ph.D. research paper. All students will be required to pass the comprehensive written and oral exams.

67.6 Courses for Higher Degrees

Undergraduate Courses for Qualifying Program and Graduate Students When it is appropriate to their programs, graduate students may take an undergraduate course approved by the Director of Graduate Studies. These courses are listed in the Calendar of the Faculties of Arts and Science and in the annual course list prepared by the Department in the fall.

- Denotes not offered in 2000-01.
- Denotes limited enrolment.

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

160-521A SEMINAR: CANADIAN POLITICS AND GOVERNMENT. (3) (Open to graduate students, final year honours students, and other advanced undergraduates with the permission of the instructor.) (Prerequisite: at least one upper-level course in Canadian Politics.) Selected problems of Canadian socio-economic and political structures, political culture, constitutional development, and governmental structure. Topic for 2000-01: The Welfare State.
Professor Maioni

160-522A SEMINAR: THE POLITICS OF DEVELOPING AREAS. (3) (Open to graduate students, final year honours students, and other advanced undergraduates with the permission of the instructor.) (Prerequisite: at least one upper level course in the politics of developing areas.) Topic for 2000-01: TBA
Professor Brynen

160-524B SEMINAR: THE POLITICS OF DEVELOPED AREAS. (3) (Open to graduate students, final year honours students, and other advanced undergraduates with the permission of the instructor.) (Prerequisite: at least one upper level course in the politics of developed areas.) This seminar deals with various aspects of the politics of developed areas. Topic for 2000-01: Collective Action Dilemmas in North American and European Development.
Professor Sabetti

160-561B SEMINAR: POLITICAL THEORY. (3) (Open to graduate students, final year honours students, and other advanced undergraduates with the permission of the instructor.) (Prerequisite: at least one upper level course in political philosophy.) A topic in political philosophy such as democracy, liberty, property or nationalism, or a political philosopher, is studied to enable students to

research a topic in depth, to present their papers to the seminar, and to engage in and profit from discussion and debate. Topic for 2000-01: Liberalism and Nationalism.
Professor Patten

160-575B SEMINAR: INTERNATIONAL POLITICS. (3) (Open to graduate students, honours students and to other advanced undergraduates with the permission of the instructor.) A research oriented seminar dealing with selected topics in the field of International Politics. Topic for 2000-01: The Politics of Nuclear Proliferation.
Professor Paul

160-599A/B PRACTICUM IN POLITICAL SCIENCE. (3) (Open, with permission, to final-year Honours and Joint Honours students, M.A. and Ph.D. students. The course does not count as a 500-level seminar under the Honours requirements.) The practicum shall consist of a minimum of 180 hours of work over a period of 12 weeks, plus a major research project based on the practicum. The major project will ordinarily consist of a major research paper, plus a substantial written record of the work conducted during the practicum.
Staff

160-099A,B TEACHING METHODS. (3) This registration is available to graduate students at the M.A. or Ph.D. level who have satisfactorily completed work as a Teaching Assistant for at least a two-thirds appointment over the course of two semesters.

160-612B EMPIRICAL METHODS. (3) Fundamental principles of empirical research, in which the emphasis will be placed on acquainting the student with the techniques most commonly used by political scientists. The topics include the design of research projects, procedure in carrying out research, problems of measurement, survey research, scaling, data processing, and data analysis.
Professor Black

● **160-613A SELECTED THEMES IN POLITICAL THEORY.** (3)

● **160-615A CLASSICAL POLITICAL PHILOSOPHY AND ITS CONTEMPORARY INTERPRETATION.** (3)

● **160-616A MODERN POLITICAL ANALYSIS.** (3)

160-617A PROBLEMS IN POLITICAL THEORY. (3) An introduction to central normative issues in the study of politics. The seminar consists of lectures, oral presentations, discussion and research papers.
Professor Patten

● **160-618A COMPARATIVE FEDERALISM.** (3)

160-619A IMMIGRATION AND MULTICULTURALISM. (3) A consideration of the different dimensions of politics associated with immigration and ethnoracial diversity. The course will emphasize the Canadian case in comparative perspective.
Professor Black

160-620B SOCIETY AND POLITICS IN CANADA. (3) A critical review of the theoretical and empirical literature in the areas of political attitudes and ideology, participation, parties and elections.
Professor Maioni

160-621A INTERPRETING THE CANADIAN POLITICAL PROCESS. (3) Strategies for studying the Canadian political process. Pluralist, Marxian and state autonomist approaches for analysing the relative significance and inter-relationships of basic components of the Canadian political system. Although one purpose of the course is to survey the literature on individual topics, a broader purpose is to employ individual research strategies to develop conclusions about the nature, distribution, and exercise of power in Canada.
Professor Schultz

● **160-622A TOPICS IN CANADIAN POLITICS.** (3)

160-623A JUDICIAL POLITICS AND THE CONSTITUTION. (3) A research-oriented introduction to selected theoretical and empirical works on Canadian constitutionalism and judicial politics. The substantive focus of the course concerns the politics of constitutional change and the political impact of constitutional decisions by Canadian courts.
Professor Manfredi

● **160-624B COLLECTIVE/RATIONAL CHOICE THEORY.** (3)

● **160-625A COMPARATIVE POLICY ANALYSIS.** (3)

160-628A APPROACHES TO COMPARATIVE POLITICS. (3) An introduction for graduate students to the sub-discipline of comparative politics. The logic of comparative analysis as well as a number of

alternative paradigms for analyzing and comparing political systems and processes. **Professor Sabetti**

● **160-629A APPROACHES TO THE STUDY OF SOVIET AND POST-SOVIET POLITICS.** (3)

160-630A TOPICS IN EUROPEAN POLITICS. (3) Examination of recent trends and current debates in the electoral politics, political economy and political sociology of Europe. The course will focus on developments at two levels: that of national political systems and that of the region as a whole, particularly as embodied in the European Union. **TBA**

160-635B THEORIES OF U.S. POLITICS. (3) A critical examination of some of the major theoretical analyses of U.S. politics. The course will focus on several key issues in the study of American political life, including distribution of power, the policy process, state and society, and bargaining and coalition building. **Professor Waller**

● **160-636A QUEBEC POLITICS AND SOCIETY.** (3) (This course will be conducted both in English and French; a reading knowledge and an ability to understand the two languages is recommended)

● **160-639A TOPICS IN THE POLITICS OF DEVELOPED AREAS.** (3)

160-640A MIDDLE EAST POLITICS. (3) Examination of political and socio-economic development in the Middle East, with particular emphasis on the Arab world. Topics to be addressed include state formation and consolidation; Arab nationalism; civil society and state-society relations; the politics of Islam; petro-politics; the political economy of economic liberalization; and future patterns of political change. **Professor Brynen**

160-641B POLITICAL CHANGE IN SOUTH ASIA. (3) This course examines major political and social changes in South Asia. Explores such topics as colonialism and nationalism; trends in mass mobilization and electoral politics; regime changes; economic policies and their impact; and conflicts over authority patterns, policy agendas, and national boundaries. **TBA**

● **160-642B AFRICAN POLITICS.** (3)

160-646B TOPICS IN THE POLITICS OF DEVELOPING AREAS. (3) A specific problem area in the Comparative Politics of Developing Areas. The topic for 2000-01 will be: Democracy and the Market. **Professor Oxhorn**

160-647A POLITICAL ECONOMY OF DEVELOPMENT: (3) Incorporation of subordinate groups into national systems in the developing countries of Africa, Asia, and Latin America. Specific topics include state formation, the emergence of civil society, modernization and dependency theories, alternative development models, democracy, authoritarianism, sustainable development and gender. **Professor Oxhorn**

160-648B LATIN AMERICAN POLITICS. (3) This course explores changing patterns of social, economic and political relations in Latin America, especially at the level of civil society. It examines such topics as state formation, institutional development, regime transformation and the insertion of Latin American countries in both the international capitalist economy and the inter-state system. **Professor Oxhorn**

160-649A THE MASS APPROACH TO POLITICAL DEVELOPMENT: CHINA. (3) The strategy of political and socio-economic development in contemporary China. Topics include: cultural and ideological foundations of socialization. The consequences of the disintegration of the USSR and the socialist countries of Europe, and the balance sheet of the post-1978 reform. **Professor Noumoff**

160-650B PEACEBUILDING. (3) An examination of transitions from civil war to peace, and the role of external actors (international organizations, bilateral donors, non-governmental organizations) in support of such transitions. Topics will include the dilemmas of humanitarian relief, peacekeeping operations, refugees, the demobilization of ex-combatants, transitional elections, and the politics of socio-economic reconstruction. **Professor Brynen**

160-651A,B THE EU & POLITICAL INTEGRATION. (3) Theories from both comparative and international politics will be drawn upon to analyze the development, politics, institutions and policies of the

EU. The internal political economy and external relations of the EU will be analyzed. **Professor Haskel**

● **160-670A TOPICS IN INTERNATIONAL RELATIONS.** (3)

160-671A INTERNATIONAL RELATIONS THEORY. (3) This course is designed to give students a thorough background in the basic theories and models used in International Relations. It emphasizes breadth, in order to ground students in the variety of approaches employed in the field of international politics. **Professor Brawley**

160-672A INTERNATIONAL POLITICAL ECONOMY. (3) For students in international and comparative politics, a course in IPE in two senses: 1) the use of the economic model of purposive behaviour to examine international phenomena; 2) the politics of global economic issues such as production, trade, finance, debt, technology transfer, economic coordination. Connections between domestic political economies and the IPE, alternative strategies of state adjustment to a changing IPE. **Professor Haskel**

160-673B THE INTERNATIONAL POLITICS OF NORTH-SOUTH RELATIONS. (3) This course examines the international political problems posed by economic relations between the economically advanced countries and the developing countries. Issues include theories of economic dependency, strategies of development utilizing international factors, the role of cartels and other international organizations in development, the importance of MNCs and the political impact of the NICs. **Professor Brawley**

● **160-674A COMPARATIVE FOREIGN POLICY.** (3)

● **160-675B INTERNATIONAL SYSTEMS.** (3)

160-676B POLITICS AND PSYCHOLOGY. (3); Prerequisites: No previous course work in psychology is required. In addition to political science graduate students who are specializing in international relations and, subject to limitations of class size, this seminar is open to other interested political science graduate students and third year honours undergraduates in political science, history and psychology.) A psychological approach to understanding political phenomena focusing primarily on international politics. Emphasis on the insights of cognitive psychology (how we process information/errors we make), group dynamics (psychological impact of group pressures/'group think') and dynamic psychology (how emotions, ego defenses, and character traits impact on political behavior). **Professor Steinberg**

160-677A INTERNATIONAL CRISIS, CONFLICT, WAR. (3) This seminar is designed to explore the literature on the concepts of international crisis, conflict and war. Discussions will focus on: research designs and methods; decision-making models; crisis/conflict management; bargaining in crisis; UN and superpower crisis intervention; deterrence and war prevention; theories of war; and polarity, war, crisis and stability. **Professor Brecher**

● **160-678A STATE BEHAVIOUR.** (3)

● **160-679B INTERNATIONAL SECURITY.** (3)

160-690A,B READING IN POLITICAL SCIENCE. (3) A graduate student may take a one-term reading course per academic year in a particular field and under the supervision of a member of staff.

160-693A,B M.A. RESEARCH PROPOSAL. (3)

160-694A,B RESEARCH PREPARATION I. (6)

160-695A,B RESEARCH PREPARATION II. (6)

160-696A,B RESEARCH PREPARATION III. (3)

160-697A,B RESEARCH PREPARATION IV. (3)

160-698A, B, D MASTER'S THESIS SUBMISSION. (12) A thesis to demonstrate proficiency in research. The thesis is normally about 100 pages long, and is subject to evaluation by one examiner internal to the Department and one examiner external to the Department.

160-699A, B, D MASTER'S RESEARCH ESSAY. (6) The Master's research paper should explore a clearly defined problem, show familiarity with the most important work previously done in the field, and demonstrate the ability to carry out research, organize results and present them in good literary style. Normally the paper will flow

out of a previous graduate seminar and will be approximately 50 pages in length.

160-701A,B, D PH.D GRADUATE GENERAL WRITTEN EXAMINATION. First Field.

160-702A, B, D PH.D GRADUATE GENERAL WRITTEN EXAMINATION. Second Field.

SEMINARS

● **160-715B ISSUES IN CONTEMPORARY POLITICAL PHILOSOPHY.** (3)

● **160-720B TOPICS IN CANADIAN POLITICAL ECONOMY.** (3)

● **160-727B ÉTUDES SUR LA SOCIÉTÉ QUÉBÉCOISE.** (3) (The seminar will be given both in French and English; a reading ability and understanding of both languages is required.) Le nationalisme et l'état québécois depuis 1960: interaction entre les deux, modèles explicatifs, les particularités de l'état québécois, les relations état-société. Recherche en profondeur sur un thème choisi.

● **160-728B RESEARCH SEMINAR IN COMPARATIVE POLITICS.** (3) (Suggested prerequisites: 160-612B and 160-628A.) A consideration of research on comparative politics in Western Europe and North America. Problems of research design and execution, the application of research methods, and the evaluation of findings. Selections from the literature will be examined critically. **TBA**

● **160-731A POLITICAL IDEOLOGIES.** (3)

● **160-747B DEPENDENCE AND DEVELOPMENT.** (3)

● **160-771B SECURITY AND DEVELOPMENT.** (3) (Prerequisites: A graduate-level course in international relations or comparative politics/developing areas.)

● **160-777A RESEARCH SEMINAR ON INTERNATIONAL CRISES.** (3)

● **160-778A SECURITY AND POLITICAL ECONOMY WORKSHOP.** (3) A workshop intended to help M.A. and Ph.D. students prepare their thesis proposals and chapters. Writing techniques and methodology will be covered. Students critique seminar presentations by leading scholars on their new works. **Professor Paul**

● **160-780A, 160-781B READING SEMINAR.** (3) A research seminar on a topic that is not covered in the regular seminars, but which is of interest to a group of students and a faculty member. The exact topic for the research papers will be determined by mutual agreement among students and faculty members involved. **Staff**

160-799A,B,D PH.D. ORAL COMPREHENSIVE EXAMINATION.

68 Psychiatry

Department of Psychiatry
1033 Pine Avenue West
Montreal, QC H3A 1A1
Canada

Telephone: (514) 398-4176

Fax: (514) 398-4370

E-mail: mstaudt@med.mcgill.ca

Website: <http://www.mcgill.ca/Psychiatry/mscprog.html>

Chair — J. Paris

Chair of Graduate Program — J. Rochford

68.1 Staff

Emeritus Professor

T.L. Sourkes; M.Sc.(McG.), Ph.D.(C'nell.)

Professors

L. Annable; B.Sc.(Liver.), Dipl. in Stat.(Edin.)

P. Blier; B.Sc.(Bishop's), M.Sc., Ph.D., M.D.(Montr.)

G. Chouinard; B.A., M.D.(Montr.), Dipl.Psych.(McG.)

H. Davanloo; B.Sc., M.D.(Tehran)

C. de Montigny; B.A., M.D., Ph.D.(Montr.)

M. Dongier; M.D.(Aix-Marseille), Dipl.Psych.(McG.)

F.R. Ervin; B.S.(Texas), M.D.(Tulane)

S. Gauthier; B.A., M.D.(Montr.)

A.M. Ghadirian; M.Sc.(Ohio), M.D.(Tabriz)

H.A. Guttman; M.D.(Geneva)

L.T. Hechtman; B.Sc., M.D., C.M.(McG.)

J. Henry; B.Sc.(Tor.), M.Sc., Ph.D.(W.Ont.)

L.J. Kirmayer; B.Sc., M.D., C.M., Dipl.Psych.(McG.)

S. Lal; M.B., B.S.(Lond.), Dipl.Psych.(McG.)

C. Laroche; M.D., C.M., Dipl.Psych.(McG.)

E.P. Lester; M.D. (Athens); Dipl.Psych.(McG.)

M.J. Meaney; B.A.(Loyola), M.A., Ph.D.(C'dia.)

K. Minde; M.D.(Munich), M.A.(Col.)

B.E. Murphy; M.D.(Tor.), Ph.D.(McG.)

V.N.P. Nair; M.B., B.S.(Kerala), D.P.M.(Mys.)

J.C. Negrete; M.D.C.M., (Tucuman) Dipl.Psych.(McG.)

J. Paris; M.D.(McG.); Chair

J.C. Perry; M.D.(Duke)

G. Pinard; B.A.(Loyola), M.D., Dipl.Psych.(Montr.)

R. Quirion; B.Sc., M.Sc., Ph.D.(Sher.)

J.J. Sigal; B.Sc., B.Ed.(Alta.), M.A., Ph.D.(Montr.)

A. Young; B.A., M.A., Ph.D.(Penn.)

S. Young; B.A.(Oxon.), M.Sc., Ph.D.(Lond.)

Associate Professors

F. Abbott; B.Sc.(Trent), M.Sc., Ph.D.(McG.)

C. Benkelfat; M.D.(Rabat)

P. Boksa; B.Sc., Ph.D.(Montr.)

E.E. Corin; Ph.D.(Louvain)

B.O. Dubrovsky; M.D.(Buenos Aires)

N. Frasure-Smith; B.A., Ph.D.(Johns H.)

C. Gianoulakis; B.Sc.(Sir G.Wms.), Ph.D.(Rutgers)

A. Gratton; Ph.D.(C'dia)

S. King; M.Ed., Ph.D.(Va.)

C. Mercier; B.A., M.Sc.(Laval), Ph.D.(Stras.)

R. Palmour; B.A., Ph.D.(Texas)

J. Poirier; Ph.D.(Montr.)

J. Rochford; M.A.(Queen's), Ph.D.(C'dia)

S. Steinberg; M.D., C.M.(McG.)

M. Zoccolillo; B.Sc.(New Orleans), M.D.(Norfolk)

Assistant Professors

L. Beauclair; B.Sc., M.D.(Laval)

P. Beaudry; M.D.(Sher.), Dipl.Psych.(McG.)

S. Beaulieu; M.D./Ph.D.(Laval)

D. Bloom; B.Sc.(Regina), M.D.(Queen's)

D. Boivin; Ph.D.(Montr.)

D. Charney; M.D.(McG.)

G. Debonnel; M.D.(Lyon)

J.B. Debruille; M.D.(Paris), Ph.D.(U Pierre et Marie Curie)

M. Elie; M.D.(McG.)

G. Galbaud du Fort; M.D., Ph.D.(Paris) (*joint appt. with
Epidemiology and Biostatistics*)

K. Gill; B.Sc.(Br.Col.), M.A., Ph.D.(C'dia)

S. Kar; Ph.D.(Lond.)

M. Leyton; Ph.D.(C'dia)

S. Lupien; Ph.D.(Montr.)

L.K. Srivastava; B.Sc., M.Sc.(Alld.), Ph.D.(New Delhi)

R. Tempier; M.D.(Aix-Marseille II)

C.-D. Walker; B.Sc., Ph.D.(Geneva)

S. Williams; Ph.D.(Montr.)

Adjunct Professors

L. Gaston; Ph.D.(Montr.)

S. Welner; Ph.D.(McG.)

Associate Members

R.G. Barr; M.A.(Tor.), M.D., C.M.(McG.)

R.O. Pihl; B.A.(Law.), M.A., Ph.D.(Ariz.)

68.2 Programs Offered

Master of Science (M.Sc.)

The M.Sc. program in Psychiatry is designed (1) to provide a mechanism for the training of medical scientists who intend to pursue a research career in psychiatry and (2) to provide a focus for basic science or social science students wishing to obtain

advanced training in areas particularly relevant to psychiatric research. Students in this program receive no clinical training in psychiatry.

68.3 Admission Requirements

A B.Sc., B.A., B.N. or M.D. degree.

A strong background in science and/or social science, as demonstrated by academic achievement equivalent to a GPA of 3.0 (on a 4 point scale).

A written statement of purpose, describing the specific reasons for seeking a Master of Science degree in Psychiatry.

An outline of the proposed thesis research, to be written by the prospective student in collaboration with an appropriate research supervisor.

Two letters of reference.

Proficiency in written English or French.

68.4 Application Procedures

Applications will be considered upon receipt of:

1. a completed application form;
2. two official transcripts;
3. two letters of reference;
4. Cdn \$60.00 application fee;
5. written agreement from the proposed research supervisor, and student's statement of purpose

All information is to be submitted directly to the Graduate Secretary at the address above.

Deadlines:

January term:

September 1 (August 15 for international students)

Summer term:

February 1 (January 15 for international students)

September term:

May 1 (April 15 for international students)

68.5 Program Requirements

Formal coursework: The M.Sc. in Psychiatry requires 45 credits, of which 36 are Thesis Research and 9 are to be taken in graduate level courses approved by the student's Supervisory Committee. These courses are selected on the basis of the area of research interest and the background of the student, and shall include a course in statistical analysis, if this is not presented upon admission.

Original research. Each student shall complete an original investigation of a scope appropriate to the presentation of a Master's Thesis. This thesis will be reviewed by the Supervisory Committee prior to its submission to the Graduate Faculty, and shall then be reviewed by external referees according to the usual regulations of the Faculty of Graduate Studies and Research.

Supervisory Committees. The M.Sc. in Psychiatry is administered by a the Graduate Training Committee, which meets with each student during the first term of residence to assign a Supervisory Committee composed of the research supervisor plus 2-4 other faculty who are knowledgeable about the student's research area and who can advise both on appropriate coursework and on the thesis research project. The student will meet with this committee at least once during each year of matriculation for the purpose of evaluating academic and research progress of the student. The Supervisory Committee will also act as a resource body for the student, both with respect to academic and administrative matters.

Residence. Three terms of full-time study. No part-time study available.

68.6 Courses

□ Denotes limited enrolment.

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

□ **555-500B ADVANCES IN THE NEUROBIOLOGY OF MENTAL DISORDERS.** (3) (3 hours) (Prerequisites: 507-212B and 507-311A, or 507-312B, or 177-200A and 177-210B, or 552-311A, or 204-422B, or 204-308A and an upper level biological science course with permission of the instructors, or equivalent. Basic knowledge of cellular and molecular biology is required. Open to U3 and graduate students only. Strongly recommended for M.Sc. students in Psychiatry.) Current theories on the neurobiological basis of most well known mental disorders (e.g. schizophrenia, depression, anxiety, dementia). **Professors Boksa and Srivastava**

555-502A BRAIN EVOLUTION & PSYCHIATRY. (3) (Prerequisites: 177-115B or equivalent as authorized by instructor.) The course will focus on the transcendental importance of evolution of nervous systems for normal and pathological behavior. Studies of allometric brain growth and recent evolutionary theories of brain organization as they relate to normal and abnormal behavior will be emphasized. **Professor Dubrovsky**

555-630B STATISTICS FOR NEUROSCIENCES. (3) Statistics needed for analysing the types of data generated in a laboratory setting, with emphasis on the neurosciences, will be covered. Hypothesis testing, parametric and non-parametric statistics will be studied with a practical approach, using data generated by the students. Computer analysis will be introduced. **Professor Rochford**

555-691A,B,D THESIS RESEARCH IN PSYCHIATRY I. (12)

555-692A,B,D THESIS RESEARCH IN PSYCHIATRY II. (12)

555-693A,B,D THESIS RESEARCH IN PSYCHIATRY III. (12)

555-696A,B,D SPECIAL TOPICS IN PSYCHIATRY. (3) Supervised reading and discussion of selected issues and topics in contemporary psychiatry. Students will be responsible for assigned readings and for preparation of a graded paper. **Professor Rochford and Staff**

555-711D CULTURAL PSYCHIATRY. (3) (Prerequisites: Knowledge of psychiatry and anthropology). Topics covered: cross-national epidemiological and ethnographic research of major and minor psychiatric disorders; culture-bound syndromes and idioms of distress; culture, emotion and social interaction; psychological and symbolic healing; mental health of immigrants and refugees; psychiatric theory and practice as cultural constructions; methods of cross-cultural research **Professor Kirmayer and Staff**

555-713C PSYCHIATRIC EPIDEMIOLOGY. (3) (Prerequisites: 513-606 or equivalent or permission of instructor.) An overview of the applications of epidemiology in psychiatry, including instruments and methods used in community studies; major recent population surveys of psychiatric disorders; study of treatment-seeking, pathways to care and use of services; interaction between psychological distress and physical health; methods used in specific populations; evaluation of treatment. **Professor Galbaud du Fort and Staff**

69 Psychology

Department of Psychology
Stewart Biological Sciences Building, Room W8/38
1205 Avenue Docteur Penfield
Montreal, QC H3A 1B1
Canada

Telephone: (514) 398-6124 / 398-6100

Fax: (514) 398-4896

E-mail: gradapp@psych.mcgill.ca

Website: <http://www.psych.mcgill.ca>

Chair — A.A.J. Marley

69.1 Staff

Emeritus Professors

A.S. Bregman; M.A.(Tor.), Ph.D.(Yale)

V. Douglas; B.A.(Qu.), M.A., M.S.W., Ph.D.(Mich.)

G.A. Ferguson; B.A.(Dal.), M.Ed., Ph.D.(Edin.), F.R.S.C.

W.E. Lambert; M.A.(Colgate), Ph.D.(N. Carolina), F.R.S.C.
 R. Melzack; B.Sc., M.Sc., Ph.D.(McG.) (*E.P. Taylor Emeritus
 Professor of Psychology*)
 P. Milner; B.Sc.(Leeds), M.Sc., Ph.D.(McG.)

Professors

F.E. Aboud; B.A.(Tor.), M.A., Ph.D.(McG.)
 I.M. Binik; B.A.(N.Y.U.), M.A., Ph.D.(Penn.)
 K.B.J. Franklin; B.A., M.A.(Auck.), Ph.D.(Lond.)
 F.H. Genesee; B.A.(W.Ont.), M.A., Ph.D.(McG.)
 A.A.J. Marley; B.Sc.(Birm.), Ph.D.(Penn.)
 D.S. Moskowitz; B.S.(Kirkland), M.A., Ph.D.(Conn.)
 D.J. Ostry; B.A.Sc., M.A.Sc., Ph.D.(Tor.)
 L.A. Petitto; B.S.(Ramapo State), M.A.(N.Y.U.), Ph.D.(Harv.)
 M. Petrides; B.Sc., M.Sc.(Lond.), Ph.D.(Cantab.)
 R.O. Pihl; B.A.(Lawrence), Ph.D.(Ariz.)
 J.O. Ramsay; B.Ed.(Alta.), Ph.D.(Prin.)
 B. Sherwin; B.A., M.A., Ph.D.(C'dia)
 T.R. Shultz; B.A.(Minn.), Ph.D.(Yale)
 Y. Takane; B.L., M.A.(Tokyo), Ph.D.(N. Carolina)
 D.M. Taylor; M.A., Ph.D.(W.Ont.)
 N. White; B.A.(McG.), M.A., Ph.D.(Pitt.)
 D.C. Zuroff; B.A.(Harv.), M.A., Ph.D.(Conn.)

Associate Professors

A.G. Baker; B.A.(Br.Col.), M.A., Ph.D.(Dal.)
 M. Baldwin; B.A.(Tor.), M.A., Ph.D.(Wat.)
 A. Chaudhuri; B.Sc., M.Sc.(Tor.), Ph.D.(U.C.Berk.)
 B. Ditto; B.S.(Iowa), Ph.D.(Ind.)
 D. Donderi; B.A., B.Sc.(Chic.), Ph.D.(C'nell.)
 K. Dunbar; B.A., M.A., (U.C.D.), Ph.D.(Tor.)
 R. Koestner; B.A., Ph.D.(Roch)
 J. Lydon; B.A.(Notre Dame), M.A., Ph.D.(Wat.)
 M.J. Mendelson; B.Sc.(McG.), A.M., Ph.D.(Harv.)
 M. Shapiro; B.A.(Colby Col.), M.A., Ph.D.(Johns H.)
 F.E. Wilkinson; B.A.(McG.), M.A., Ph.D.(Dal.)

Assistant Professors

J. Abela; B.A.(Brown), M.A., Ph.D.(Penn.)
 B. Knapper; Dr.phil.(Germany)
 D.J. Levitin; A.B.(Stan.), M.S., Ph.D.(Oregon)
 G. O'Driscoll; B.A.(Wellesley), Ph.D.(Har.)

Lecturers

N. Allard; R. Amsel

Associate Members

F. Abbott (*School of Nursing, Psychiatry*)
 C. Baker, F.A.A. Kingdom, K. Mullen (*McGill Vision Research
 Centre*)
 T. Coderre (*Clinical Research Institute of Montreal*)
 R. Hess, B. Jones, M. Jones-Gotman, B. Milner (*Montreal
 Neurological Institute*)
 V. Patel (*Centre for Medical Education*)
 H. Steiger (*Douglas Hospital Research Centre*)
 R. Zatorre (*Montreal Neurological Institute*)

Part-Time Appointments

I. Bradley; Ph.D.
 J. MacDougall; Ph.D.
 Y. Oshima-Takane; Ph.D.
 C. Schopflocher; M.A.
 Z. Rosberger; Ph.D.
 C. Zacchia; Ph.D.
 P. Zelazo; Ph.D.

Clinical Consultants

F. Cramer-Azima, S. Burstein, C. Garson, P. Gregoire,
 Z. Rosberger, D. Sookman, M. Spevack, H. Steiger, A. Surkis

69.2 Programs offered

M.A. and M.Sc. degrees may be awarded in Experimental Psychology, but only as a stage in the Ph.D. in Experimental Psychology program.
 Ph.D. in Clinical Psychology (there is no M.A. or M.Sc. program).

The aim of the Experimental program is to provide students with an environment in which they are free to develop skills and expertise that will serve during a professional career of teaching and research as a psychologist. Course work and other requirements are at a minimum. Success in the program depends on the student's ability to organize unscheduled time for self-education. Continuous involvement in research planning and execution is considered a very important component of the student's activities. Students are normally expected to do both Master's and Doctoral study.

The Clinical program adheres to the scientist-practitioner model and as such is designed to train students for careers in university teaching or clinical research, and for service careers – working with children or adults in a hospital, clinical, or educational setting. Most of our clinical graduates combine service and research roles. While there are necessarily many more course requirements than in the experimental program, the emphasis is again on research training. There is no Masters program in Clinical Psychology; students are expected to complete the full program leading to a doctoral degree.

Research interests of members of the Psychology Department include animal learning, behavioural neuroscience, clinical, child development, cognitive science, health psychology, psychology of language, perception, quantitative psychology, social psychology, and personality psychology.

Facilities for advanced research in a variety of fields are available within the Department itself. In addition, arrangements exist with the Departments of Psychology at the Montreal Neurological Institute, Allan Memorial Institute, Douglas Hospital, Jewish General Hospital, Lakeshore General Hospital, Lethbridge Rehabilitation Centre, MacKay Centre, Montreal Children's Hospital and the Montreal General Hospital, to permit graduate students to undertake research in a hospital setting.

For full information about all programs and financial aid, and for application forms, contact the Graduate Program Co-ordinator, Department of Psychology.

Ph.D. Option in Language Acquisition (LAO)

Information about this option is available from the Department and on the following website: <http://www.psych.mcgill.ca/lap/html>.

69.3 Admission Requirements

Admission to the graduate program depends on an evaluation of students' research interests and their aptitude for original contributions to knowledge and, if applicable, for professional contributions in the applied field.

The usual requirement for admission is an Honours or Majors degree (B.A. or B.Sc.) in Psychology. This usually includes an introductory course plus twelve courses in psychology (each equivalent to three semester hours). Courses in experimental psychology, the theoretical development of modern ideas in psychology, and statistical methods as applied to psychological problems (equivalent to an introductory course) are essential. Applicants' knowledge of relevant biological, physical, and social sciences is considered.

Applicants who hold a Bachelor's degree but who have not met these usual requirements should consult the Graduate Program Director to determine which (if any) courses must be completed before an application can be considered. Students with insufficient preparation for graduate work may register as special students in the Faculty of Arts or the Faculty of Science, and follow an appropriate course of study. Such registration requires the permission of the Department but carries no advantage with respect to a student's eventual admission to graduate studies.

69.4 Application Procedures

Applicants must submit to the Graduate Program Secretary in Psychology:

1. a completed application form;
2. two official copies and one photocopy of all university transcripts;

3. three letters of recommendation, preferably from professors of psychology;
4. a fee of \$60, in Canadian funds, by cheque or money order made payable to McGill University;
5. a completed application summary sheet for the Psychology Department;
6. a personal statement with their full name outlining their interests in psychology and their career goals; and
7. official reports and a photocopy of scores on the General and Subject Graduate Record Examination (GRE).

All applicants must take the GRE if they have studied at an English speaking University. Canadians who have not studied in English are not required to submit either GRE or TOEFL. Non-Canadians whose first language is not English and who have not studied at university in English must take the "Test of English as a Foreign Language" (TOEFL). Canadian citizens are not required to take the TOEFL.

Applicants should note that the deadline for many scholarships and fellowships is about four months earlier than the application deadline and that applications for fellowships and scholarships should be submitted through their home university.

The application deadline is January 15th.

69.5 Program Requirements

Master's (M.A. and M.Sc. Degrees – 45 credits each)

There is no M.A. or M.Sc. program in Clinical psychology. M.A. and M.Sc. degrees may be awarded in Experimental Psychology, but only as a stage in the Ph.D. program.

Candidates must demonstrate a sound knowledge of modern psychological theory, of its historical development, and of the logic of statistical methods as used in psychological research. Candidates will be expected to have an understanding of the main lines of current work in areas other than their own field of specialization. The primary concern of the candidate is research. Final standing for the degree is based mainly on the student's research progress and on the results of course work and other required assignments.

Ph.D.

All candidates for the Ph.D. degree must demonstrate broad scholarship, mastery of current theoretical issues in psychology and their historical development, and a detailed knowledge of their special field. Great emphasis is placed on the development of research skills, and the dissertation forms the major part of the evaluation at the Ph.D. level.

All Ph.D. 2 and 3 students must register for at least one graduate seminar each term (see course numbers 204-710A/B to 204-758A/B); the seminars are conducted by different staff members each year and their content changes accordingly.

A special (doctoral) comprehensive examination is written in one of the following areas of psychology: clinical, behavioral neuroscience, learning and motivation, personality and social psychology, development and language, perception and cognition, quantitative and individual differences, or any other appropriate area.

Ph.D. students in clinical psychology must fulfill similar requirements to Ph.D. students in the experimental program and must also take a variety of specialized courses which include practicum and internship experiences.

The Department of Psychology does not ordinarily require an examination in a foreign language. It should be noted, however, that all students planning to practice in clinical psychology in the province of Québec will be examined on their proficiency in French before being admitted to the professional association.

69.6 Courses

- Denotes not offered in 2000-01.

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

- **204-501B AUDITORY PERCEPTION.** (3) (2 lectures) (Prerequisite: 204-212 or equivalent, or permission of instructor.)

204-505A THE PSYCHOLOGY OF PAIN. (3) (2 lectures; 1 conference) (Prerequisites: any two of the following: 204-308, 204-311, 204-318, 204-422, 504-321, 177-306, 552-314 or permission of instructor). An introduction to pain research and theory, with emphasis on the interactions of psychological, cultural and physiological factors in pain perception. The role of these factors in clinical pain and its management by pharmacological and non-pharmacological means will be discussed. (revision Awaiting University Approval)

Section 01 Limited to Psychology students

Section 02 Limited to non-Psychology students (CAPPED)

Professor Abbott

204-510A 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.

Professor Ramsay

204-511B INFANT COMPETENCE. (3) (one 3-hour seminar) (Prerequisites: 204-351A or 352B or 353A or 380D or 450D and permission of instructor.) Basic research on the nature of infant competence – both the development of mental representations/operations and expressive/communicative ability – will be examined. Implications for clinical assessment and intervention including information processing procedures as an alternative to conventional tests and treatment procedures for developmental delays will be covered.

Professor Zelazo

204-522B NEUROCHEMICAL BASIS OF BEHAVIOR. (3) (2 lectures) (Prerequisites: any two of the following 204-308, 204-311, 204-318, 504-321, 552-314, 177-306) (Restrictions: Not open to students who have taken or are taking 549-562A.) Anatomical, biochemical and physiological aspects of neurotransmitter systems in the brain, current theories of the function of these systems in normal and abnormal behaviour, and the actions of psychotropic drugs. (revision Awaiting University Approval)

Professor Franklin

204-526A ADVANCES IN VISUAL PERCEPTION. (3) (2 lectures) Examines in detail the structure of the visual system, and its function as reflected in the perceptual abilities and behaviour of the organism. Parallels are also drawn with other sensory systems to demonstrate general principles of sensory coding.

Professors Mullen and Kingdom

- **204-530A APPLIED TOPICS IN DEAFNESS.** (3) (3 hour lectures) (Prerequisites: 204-304 or 204-316 or equivalent, and permission of instructor.) (Undergraduate enrolment limited.)

- **204-531B STRUCTURAL EQUATION MODELS.** (3) (one 2-hour lecture plus one lab) (Prerequisite: 204-435B, 204-651B, or equivalent, or permission of instructor.)

204-532A COGNITIVE SCIENCE. (3) (Prerequisites: Admission to the Cognitive Science Minor or permission of instructor. Students should ideally have some cognitive science background in at least two disciplines.) The multi-disciplinary study of intelligent systems. Problems in vision, memory, categorization, choice, problem solving, cognitive development, syntax, language acquisition, and rationality. Rulebased and connectionist approaches.

Professor Shultz

204-533A INTERNATIONAL HEALTH PSYCHOLOGY. (3) (Prerequisites: 204-305 and 204-215 or 204-429 or 204-304 or 151-227 or permission of instructor.) (Limited enrolment, password required.) Focus on health and illness in developing countries, in particular, on health problems (malnutrition, alcohol abuse, mental illness, family planning, and HIV) where psychosocial factors play a large role in the problem and the solution. Attempted solutions based on community participation, health education, non-governmental and international agencies.

Professor Aboud

204-534A COMMUNITY PSYCHOLOGY. (3) (Prerequisites: 204-337 and 204-338 and permission of instructor.) (Open to graduate students or U3 undergraduates in Psychology.) (Enrolment limited) Community psychology aims to promote health in groups and communities rather than expending resources solely on relieving

dysfunction. The course reviews the conceptual rationale for community psychology and explores examples of successful and unsuccessful prevention programs. It also discusses crisis intervention, informal caregiving, self-help groups, and mental health education through the media.

Professor Koestner

204-535B ADVANCED TOPICS IN SOCIAL PSYCHOLOGY. (3) (Prerequisites: 204-215 and 204-333 and one additional course from social and personality area of specialization or 204-380D and permission of instructor.) (Enrolment limited, password required.) Classic and contemporary readings in a specific content area within social psychology will be assigned in order to examine the subarea in depth. The focus will vary depending upon the speciality area of the instructor. These areas include interpersonal relationships, intergroup relations, the self, and social cognition.

Professor Lydon

204-536B CORRELATIONAL TECHNIQUES. (3) (Prerequisites: 204-204 and 204-305 or their equivalents, and 189-133 or equivalent and permission of instructor. Password required.) The statistical analysis of relations among a number of variables in situations common in psychology, ecology, and other fields. Methods include regression analysis, principal components analysis, and other techniques for modelling the structure of correlation matrices. (revision Awaiting University Approval)

Professor Ramsay

● **204-540A COMPUTATIONAL MODELLING OF REASONING.** (3) (3 hours) (Prerequisites: one course in cognitive psychology, and knowledge of LISP or a willingness to teach it to oneself. Not open for credit to students who have taken 308-426B, 304-625B, or a graduate course in Artificial Intelligence.)

● **204-561A METHODS IN DEVELOPMENTAL PSYCHOLINGUISTICS.** (3) (one 3-hour lecture) (Prerequisites: 204-340, 204-343 and 204-305A,B or permission of the instructor.) (Limited enrolment.)

204-601D GENERAL COMPREHENSIVE. (6) Reference number for comprehensive examination written by all first-year graduate students.

204-615D DIAGNOSTIC METHODS (CHILDREN). (3)

204-616D PRACTICUM – CHILD DIAGNOSTICS. (3)

204-617D DIAGNOSTIC METHODS (ADULTS). (3)

204-618D PRACTICUM – ADULT DIAGNOSTICS. (3)

204-620D PRACTICUM – PSYCHOTHERAPY. (6) A professional training course including dealing with patients under supervision, and a "case conference" seminar.

204-625G RESEARCH IN CLINICAL PSYCHOLOGY (3) (Summer)

204-630A PSYCHOPATHOLOGY. (4) Review of major types of psychopathology with emphasis on research findings.

204-641D BEHAVIOUR DEVIATIONS. (6) Appraisal and Modification. Psychotherapy, Theory and Research: traditional treatment modalities, cognitive therapy, family therapy, behaviour therapy, group therapy, etc.

204-650A ADVANCED STATISTICS I. (3) A course in advanced statistics with specialization in experimental design.

204-651B ADVANCED STATISTICS II. (3) A course in advanced statistics with specialization in multivariate techniques.

204-660D PSYCHOLOGICAL THEORY. (6) Professors representing the various research areas within the Department discuss critical issues and developments within their fields of expertise.

204-690D MASTER'S RESEARCH I. (15) Development of research topic, study and review of previous literature, preliminary experimental and/or theoretical thesis research.

204-699A/C MASTER'S RESEARCH II. (12) Continuation of 204-690D. Further experimental and/or theoretical research. Data analysis (as needed). Writing of thesis.

204-701D DOCTORAL COMPREHENSIVE EXAM. (6)

204-706G CLINICAL PRACTICUM. (15)

204-707H CLINICAL INTERNSHIP I. (15)

204-708H CLINICAL INTERNSHIP II. (15)

204-710A/B TO 715A/B BEHAVIORAL NEUROSCIENCE SEMINARS. (3)

204-716A/B TO 721A/B LEARNING AND MOTIVATION SEMINARS. (3)

204-722A/B TO 727A/B PERSONALITY AND SOCIAL PSYCHOLOGY SEMINARS. (3)

204-728A/B TO 733A/B CLINICAL PSYCHOLOGY SEMINARS. (3)

204-734A/B TO 739A/B DEVELOPMENT AND LANGUAGE SEMINARS. (3)

204-740A/B TO 745A/B PERCEPTION AND COGNITION SEMINARS. (3)

204-746A/B TO 751A/B QUANTITATIVE AND INDIVIDUAL DIFFERENCES SEMINARS. (3)

204-752D PSYCHOTHERAPY AND BEHAVIOUR CHANGE. (6) A practice-oriented course. Staff and students discuss current cases being treated with a variety of psychotherapeutic and behavioural change techniques.

204-753A/B TO 758A/B HEALTH PSYCHOLOGY SEMINARS. (3)

204-780D SPECIAL TOPICS IN CLINICAL PSYCHOLOGY (6)

204-797A/B TEACHING METHODS FOR PSYCHOLOGY I. (3) Development of teaching skills for graduate students in psychology under the supervision of academic staff. Relevant skills: stating objectives and sequencing content; preparation and delivery of lectures; running discussion and laboratory sessions; techniques for preparing, marking and assessing evaluation instruments; obtaining feedback on teaching skills.

204-798A/B TEACHING METHODS FOR PSYCHOLOGY II. (3) Continuation of 204-797A/B.

70 Quebec Studies/Études sur le Québec

Quebec Studies Program / Programme d'études sur le Québec
Peterson Hall, Room 314
3460 McTavish Street
Montreal, QC H3A 1X9
Canada

Telephone: (514) 398-3960

Fax: (514) 398-3959

Director — Alain-G. Gagnon; B.A.(Que.), M.A.(S. Fraser), Ph.D.(Carl.)

Visiting Professor Desjardins — TBA

In 1963-64 McGill University established a French Canada Studies Program. Some of the energies and resources of the Program are devoted to research on Quebec and French Canada. In 1992, the name of the program was changed to Quebec Studies to reflect its central focus.

The program is offered at the undergraduate level. Should their main field of study be Quebec, graduate students must apply to the relevant departments.

Graduate students taking courses dealing in whole or in part with Quebec, or who are studying Quebec as their special field of study, are welcome to make use of the facilities of the Quebec Studies Program.

En 1963-64, le programme d'études canadiennes-françaises fut créé à l'Université McGill. En collaboration avec les autres départements de l'Université, le programme a notamment pour but de développer la recherche sur divers aspects du Québec et du Canada français. Depuis 1992, l'appellation du programme a été modifiée pour celle de programme d'études sur le Québec afin de refléter clairement les objectifs poursuivis.

Les activités du programme se concentrent au premier cycle. Les étudiants qui désirent poursuivre des études en vue de l'obtention d'une maîtrise ou d'un doctorat portant sur le Québec ou le Canada français doivent s'adresser aux départements concernés.

Les étudiants dont les cours portent, en tout ou en partie, sur le Canada français ou qui se spécialisent dans ce domaine, sont toutefois invités à se prévaloir des services du programme d'études sur le Québec.