

**11.26 Psychiatry (555)**

Department of Psychiatry  
Research & Training Building  
1033 Pine Avenue West  
Montreal, QC H3A 1A1  
Telephone: (514) 398-4176

*Chair* — Joel Paris

*Professors*

Frances V. Abbott; B.Sc.(Trent), M.Sc., Ph.D.(McG.)  
Roberta Palmour; B.A.(Texas W.), Ph.D.(Texas)  
Joel Paris; M.D.(McG.)  
Gilbert Pinard; M.D.(Montr.)  
Simon Young; B.A.(Oxon.), M.Sc., Ph.D.(Lond.)

*Associate Professors*

Patricia Boksa; B.Sc., Ph.D.(McG.)  
Bernardo Dubrovsky; M.D.(Buenos Aires)  
Kathryn Gill; Ph.D.(C'dia)  
Alain Gratton; Ph.D.(C'dia)  
Judes Poirier; B.Sc., Ph.D.(Montr.)  
Joseph Rochford; B.Sc., Ph.D.(C'dia)  
Lalit Srivastava; B.Sc., Ph.D.(J. Nehru)

*Assistant Professors*

Satyabrata Kar; Ph.D.(Lond.)  
Dominique Walker; B.Sc., Ph.D.(Geneva) (*joint appt. with Anatomy & Cell Biology*)

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

□ Denotes limited enrolment

□ **555-199A MENTAL ILLNESS AND THE BRAIN.** (3) (1 hour lecture and 2 hours seminar weekly) (FYS - for first year students only, maximum 25. No prerequisites.) This course will introduce the student to the fundamentals of neuroscience, and then use these principles to illustrate recent advances made on the biological causes of, and treatments for, mental disorders with a strong biological component: schizophrenia, depression, mania, anxiety disorders, obsessive-compulsive disorder, Alzheimer's and Parkinson's diseases and alcohol and drug abuse.

**Professors Boksa and Rochford**

**555-301B ISSUES IN DRUG DEPENDENCE.** (3) (3 hours) (Prerequisites: 552-201A or 552-209A or 552-210B or 204-100A or 177-201B or permission of instructor.) (Not open to students who have taken 576-301B.) The phenomenology and epidemiology of the use and abuse of alcohol, nicotine, opiates, stimulants, sedatives and psychotomimetic agents are discussed in relation to current theoretical and experimental issues. The perspective is multidisciplinary and the intention is to develop an understanding of the nature of the issues surrounding drug dependence. **Professor Gill**

**555-500B 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). Methods and strategies in research on genetic, physiological and biochemical factors in mental illness will be discussed. Discussion will also focus on the rationale for present treatment approaches and on promising new approaches. **Professors Boksa, Srivastava and Staff**

**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**

**11.27 Psychology (204)**

Stewart Biological Sciences Building, Room W8/1  
1205 Avenue Docteur Penfield  
Montreal, QC, H3A 1B1  
Telephone: (514) 398-6100  
Fax: (514) 398-4896  
Email: info@hebb.psych.mcgill.ca  
Website: [www.psych.mcgill.ca](http://www.psych.mcgill.ca)

*Chair* — A.A.J. Marley

*Emeritus Professors*

Albert S. Bregman; M.A.(Tor.), Ph.D.(Yale)  
Virginia I. Douglas; B.A.(Qu.), M.A., M.S.W., Ph.D.(Mich.)  
George A. Ferguson; B.A.(Dal.), M.Ed., Ph.D.(Edin.), F.R.S.C.  
Wallace E. Lambert; M.A.(Colgate), Ph.D.(N.Carolina), F.R.S.C.  
Ronald Melzack; M.Sc., Ph.D.(McG.), F.R.S.C. (*E.P. Taylor Emeritus Professor of Psychology*)  
Peter M. Milner; B.Sc.(Leeds), M.Sc., Ph.D.(McG.)

*Professors*

Frances E. Aboud; B.A.(Tor.), M.A., Ph.D.(McG.)  
Irving M. Binik; B.A.(N.Y.U.), B.H.L.(Jewish Theological Seminary), M.A., Ph.D.(Penn.)  
Maggie Bruck; B.A.(Wheaton), M.A., Ph.D.(McG.)  
Keith B.J. Franklin; B.A., M.A.(Auck.), Ph.D.(Lond.)  
Fred H. Genesee; B.A.(W.Ont.), M.A., Ph.D.(McG.)  
A.A.J. Marley; B.Sc.(Birm.), Ph.D.(Calif.)  
Debbie S. Moskowitz; B.S.(Kirkland), M.A., Ph.D.(Ct.)  
David J. Ostry; B.A.Sc., M.A.Sc., Ph.D.(Tor.)  
Laura Ann Pettitto; B.S.(Ramapo St.), M.A.(N.Y.U.), Ph.D.(Harv.)  
Michael Petrides; B.Sc., M.Sc.(Lond.), Ph.D.(Cantab.)  
Robert O. Pihl; B.A.(Lawrence), Ph.D.(Ariz.)  
James O. Ramsay; B.Ed.(Alta.), Ph.D.(Prin.)  
Barbara B. Sherwin; B.A., M.A., Ph.D.(C'dia)  
Thomas R. Shultz; B.A.(Minn.), Ph.D.(Yale)  
Yoshio Takane; B.L., M.A.(Tokyo), Ph.D.(N.Carolina)  
Donald M. Taylor; B.A., M.A., Ph.D.(W.Ont.)  
Norman M. White; B.A.(McG.), M.S., Ph.D.(Pitt.)  
David C. Zuroff; B.A.(Harv.), M.A., Ph.D.(Conn.)

*Associate Professors*

A.G. Baker; B.A.(U.B.C.), M.A., Ph.D.(Dal.)  
Mark Baldwin; B.A.(Tor.), M.A., Ph.D.(Waterloo)  
Avi Chaudhuri; B.Sc., M.Sc.(Tor.), Ph.D.(Berk.)  
Blaine Ditto; B.S.(Iowa), Ph.D.(Ind.)  
Don C. Donderi; B.A., B.Sc.(Chic.), Ph.D.(C'nnell)  
Kevin Dunbar; B.A., M.A.(University College of Dublin), Ph.D.(Tor.)  
Richard F. Koestner; B.A., Ph.D.(Roch.)  
John Lydon; B.A.(Notre Dame), M.A., Ph.D.(Wat.)  
Morton J. Mendelson; B.Sc.(McG.), A.M., Ph.D.(Harv.)  
Matthew Lewis Shapiro; B.A., M.A., Ph.D.(Johns H.)  
Frances E. Wilkinson; B.A.(McG.), M.A., Ph.D.(Dal.)

*Assistant Professors*

John R.Z. Abela; B.A.(Brown), M.A., Ph.D.(Penn.)  
Jess H. Gropen; B.A.(Pomona), Ph.D.(M.I.T.)  
Daniel J. Levitin; A.B.(Stan.), M.S., Ph.D.(Oregon)  
Gillian A. O'Driscoll; B.A.(Wellesley), M.A., Ph.D.(Harv.)

*Lecturers*

Nicole Allard; B.A.(W.Ont.), M.A.(Guelph), M.Ed.(McG.)  
Rhonda Amsel; B.Sc., M.Sc.(McG.)

*Associate Members*

Clinical Research Institute of Montreal: Terrance J. Coderre;  
Douglas Hospital: Howard Steiger;  
Family Medicine: Vilma Patel;  
Montreal Neurological Institute: Barbara Jones, Marilyn Jones-Gotman, Brenda Milner, Robert Zatorre;  
Psychiatry: Frances Abbott; Sharon Welner  
Vision Research Unit (Ophthalmology): Curtis Baker, Robert Hess, Frederick A.A. Kingdom, Kathleen Mullen



*Part-time Appointments*

Ian F. Bradley; B.Sc., M.Sc.(Tor.), Ph.D.(Wat.)  
 James C. Macdougall; B.A.(Car.), M.A., Ph.D.(McG.)  
 Zbigniew Pleszewski; M.A., Ph.D.(U. of Poznan)  
 Zeev Rosberger; B.Sc.(McG.), M.A., Ph.D.(Conc.)  
 Yuriko Oshima-Takane; B.A., M.A.(Tokyo), Ph.D.(McG.)  
 Carol Schopflocher; B.A.(W.Ont.), M.A.(Queen's)  
 Y. Steinert; B.A.(Hebrew), Ph.D.(Montr.)  
 Camilo Zacchia; B.A.(McG.), M.S.(Florida State), Ph.D.(McG.)  
 Philip R. Zelazo; B.A.(Amer.Int'l.Coll.), M.S.(N.Carolina),  
 Ph.D.(Wat.)

**The Department of Psychology offers programs in both Arts and Science. Students planning to do a B.A. Honours, Major or Minor Concentrations should refer to the Faculty of Arts section 11.38 for B.A. program information.**

Psychology is the scientific study of mind and behaviour. It is both a social and a biological science. As a social science, psychology studies social interactions. As a biological science, it regards humans as the product of evolution and so studies them in biological perspective, comparing and contrasting human behaviour with that of other species.

The data of psychology are collected within the psychological laboratory by the use of experimental methods in the study of behaviour, and outside the laboratory by systematic observation of the behaviour of humans and animals. The aim is to formulate general principles of perception, learning, motivation, cognition and social psychology that are relevant to different aspects of human life. Experimentation, laboratory techniques, observational procedures, measurement, and statistical methods are important tools of the psychologist.

Psychology has many interdisciplinary aspects. The study of psychological problems often involves knowledge drawn from other disciplines such as biology, physiology, linguistics, sociology, philosophy, and mathematics. For this reason a student with varied interests can frequently find a place for these in psychology.

Psychology is a young science so that explanations of the processes underlying observed phenomena are often theoretical and speculative. The major objectives of psychological study are to reduce the discrepancy between theory and fact and to provide better answers about why humans think and behave as they do.

Although a number of undergraduate courses in psychology have applied implications, applied training is not the purpose of the undergraduate curriculum. Its purpose is to introduce the student to an understanding of the basic core of psychological knowledge, theory, and method, regardless of questions of practical application.

The B.Sc. or B.A. with a Major or Honours degree in psychology is not a professional qualification. It does not qualify the individual to carry on professional work in psychology. In the Province of Québec the minimum requirement for membership in the Order of Psychologists, the professional association governing the work of psychologists in the province, is an M.A. or M.Sc. degree, or other equivalent degree. All students planning to practise in the Province of Québec will be examined on their proficiency in French before being admitted to the professional association. Undergraduate courses in psychology may prove of considerable value to students planning careers in professional fields other than psychology. These include but are not restricted to medicine, education, social work, human communication sciences, or business and industry.

Students who are interested in psychology as a career must pursue graduate studies. Persons who hold graduate degrees in psychology, usually the Ph.D., may find employment in universities, research institutes, hospitals, community agencies, government departments, large corporations, or may act as self-employed consultants. At the graduate level, psychology has many specialized branches including social psychology, physiological psychology, experimental psychology, clinical psychology, child psychology, industrial psychology, community psychology, educational psychology, and others.

Although requirements for admission to graduate studies in psychology vary from one university to another, both the Honours and

Major degrees in psychology may qualify the student for admission to many graduate schools, provided that sufficiently high grades are obtained.

The essential differences between the Honours and the Major program are an emphasis on research methodology courses and practice in the Honours program, and that higher academic standards are required of Honours students. Honours students also have an opportunity to work in small groups closely with staff members.

### INFORMATION MEETINGS FOR NEW STUDENTS

All new students entering the Psychology undergraduate program are required to attend an Information Meeting prior to registration. Students who have been accepted into a Bachelor of Science program in Psychology must attend the meeting on August 28, 2000 at 13:00. The meeting will be held in Room S1/3 of the Stewart Biological Sciences Building. Students accepted into a Bachelor of Arts program must attend a separate information meeting. For details, consult the Psychology program listing in the Faculty of Arts section. At this meeting, Nicole Allard, the Academic Adviser, will explain the requirements of the Department's programs. Incoming students will have an opportunity to ask questions and receive advice on how to plan their courses. After this meeting students will make appointments for individual advising sessions, during which they will fill out their Study Plan form for registration.

(For students entering the Psychology program in the winter term 2001, there will be an Information Meeting on December 14 at 11:30 in Room N2/2D of the Stewart Biology Building).

Entering students must bring their letter of acceptance and a copy of their collegial transcript(s). They will also need this Calendar and a preliminary Timetable. Students will also find the Psychology Department Handbook helpful. This Handbook contains more detailed descriptions of Psychology courses, as well as providing guidelines for how students might pursue particular areas of interest.

The Psychology Department Handbook can be purchased for \$3.00 (including tax) in Room N7/9, Stewart Biological Sciences Building. Out-of-town residents may have a copy mailed to them upon receipt of \$3.00. Requests should be mailed to the Department of Psychology Adviser's Office, 1205 Avenue Docteur Penfield, Montreal, QC H3A 1B1. This handbook is also available on the Psychology department website, at <http://www.psych.mcgill.ca/ugrad/ugradm.htm>

### MINOR PROGRAM IN PSYCHOLOGY (24 credits)

[MARS Program Code 6-810000]

A Minor program in Psychology is available to students registered in any B.Sc. program (other than Psychology). This program is intended to complement a student's primary field of study by providing a focused introduction to specialized topics in psychology. Students may declare their intent to follow a Minor program at the beginning of their U2 year. They must then consult with the Chief Academic Advisor of the Department of Psychology in order to obtain approval for their course selection. A separate Minor program exists for students registered in a program in the Faculty of Arts. Please consult the Psychology listing in the Faculty of Arts section for more information.

The Minor program for Science students requires the completion of 24 credits, of which no more than 6 may overlap with the primary program. All courses in the Minor program must be passed with a minimum grade of C. A prerequisite to the program is Psychology 204-204 or equivalent, see "Course Overlap" on page 345.

### Complementary Courses (24 credits)

at least 3, but no more than 6, credits selected from:

204-211	(3)	Learning and Motivation
204-212	(3)	Perception
204-213	(3)	Cognition
204-215	(3)	Social Psychology

18-21 credits selected from among Psychology courses at the 300 level or above

**FACULTY, MAJOR, HONOURS PROGRAMS IN PSYCHOLOGY****Recommended Background**

It is expected that most students who enter a Major, Honours or Faculty Program in Psychology will have taken introductory psychology, biology and statistics at the collegial level. Recommended CEGEP courses include: Psychology 350-101 or 350-102, Biology 101-301 or 101-401, Mathematics 201-307 or 201-337. Students must obtain a minimum grade of 75% in their CEGEP level statistics course. In the first year those students who have not taken the recommended collegial level statistics course, or those who have obtained a grade below 75%, must take Psychology 204-204. Those who have not taken the recommended collegial level biology must take 177-111A or 112B, and those who have not taken Introductory Psychology in college must take 204-100A.

**Areas of Specialization:**

The study of psychology covers many fields. To develop a breadth of understanding in psychology, students are expected to obtain knowledge beyond the introductory level in several areas of psychology. To ensure this requirement is met, Psychology courses are divided into six areas of specialization in the lists below:

**Cognitive Psychology**

- 204-310 (3) Human Intelligence
- 204-316 (3) Psychology of Deafness
- 204-334 (3) Computer Simulation - Psych. Processes
- 204-335 (3) Formal Models of Psych Processes
- 204-340 (3) The Psychology of Language
- 204-341 (3) Psychology of Bilingualism
- 204-352 (3) Laboratory in Cognitive Psychology
- 204-401 (3) Theories of Cognition
- 204-413 (3) Cognitive Development
- 204-428 (3) Human Communication and its Disorders
- 204-437 (3) Reading Ability and Disability
- 204-472 (3) Scientific Thinking and Reasoning
- 204-501 (3) Auditory Perception
- 204-513 (3) Seminar on the Mental Lexicon
- 204-530 (3) Applied Topics in Deafness
- 204-532 (3) Cognitive Science

**Health Psychology and Psychopathology**

- 204-337 (3) Intro: Abnormal Psychology 1
- 204-338 (3) Intro: Abnormal Psychology 2
- 204-408 (3) Principles of Cognitive Behaviour Therapy
- 204-412 (3) Deviations in Child Development
- 204-429 (3) Health Psychology
- 204-436 (3) Human Sexuality and its Problems
- 204-491 (6) Advanced Study in Behavioural Disorder
- 204-533 (3) International Health Psychology
- 204-534 (3) Community Psychology

**Behavioural Neuroscience**

- 204-308 (3) Behavioural Neuroscience I
- 204-311 (3) Human Cognition and the Brain
- 204-318 (3) Behavioural Neuroscience II
- 204-342 (3) Hormones and Behaviour
- 204-353 (3) Laboratory in Human Perception
- 204-410 (3) Special Topics in Neuropsychology
- 204-427 (3) Sensorimotor Behaviour
- 204-431 (3) Environment and the Developing Brain
- 204-470 (3) Memory and Brain
- 204-505 (3) The Psychology of Pain
- 204-522 (3) Neurochemical Basis of Behaviour
- 204-526 (3) Advances in Visual Perception

**Social and Personality**

- 204-331 (3) Inter-Group Relations
- 204-332 (3) Introduction to Personality
- 204-333 (3) Personality and Social Psychology
- 204-351 (3) Research Methods in Social Psychology
- 204-354 (3) Interpersonal Relationships
- 204-471 (3) Human Motivation
- 204-473 (3) Social Cognition and the Self
- 204-535 (3) Advanced Topics in Social Psychology

**Developmental**

- 204-304 (3) Child Development
- 204-343 (3) Language Acquisition in Children
- 204-414 (3) Social Development
- 204-416 (3) Advanced Topics in Child Development
- 204-438 (3) The Child Witness
- 204-511 (3) Infant Competence
- 204-561 (3) Methods in Developmental Psycholinguistics

**Research and Measurement**

- 204-336 (3) Measurement of Psych. Processes
- 204-400 (3) Contemporary Psychology Theory
- 204-403 (3) Modern Psychology in Historical Perspective
- 204-406 (3) Psychological Tests and Measurements
- 204-450 (6) Research Project and Seminar
- 204-451 (3) Human Factors Research and Techniques
- 204-492 (3) Seminar in Special Topics
- 204-493 (3) Seminar in Special Topics
- 204-495 (3) Psychology Research Project
- 204-510 (3) Statistical Analysis of Tests
- 204-531 (3) Structural Equation Models
- 204-536 (3) Correlational Techniques

**B.Sc. FACULTY PROGRAM IN PSYCHOLOGY (54 credits)**  
[MARS Program Code 4-810000]

**NOTE:** Students in the Faculty of Science who select Arts courses must have a total of at least 54 credits in Science courses among the 90 credits for the B.Sc. degree. Students are expected to have whatever prerequisites are described in this Calendar.

A Faculty Program in Psychology is a sequence of courses which represents a lesser degree of specialization than a Major or an Honours program. A minimum grade of C is required in all 54 program credits.

**U1 Required Courses (12 credits)**

- 204-211 (3) Learning and Motivation
- 204-212 (3) Perception
- 204-213 (3) Cognition
- 204-215 (3) Social Psychology

Note: 204-100A may be taken as a co-requisite with these basic courses.

**Complementary Courses (42 credits)**

12 credits of Psychology courses:  
select 6 credits from each of two of the six areas of specialization

12 credits of Psychology courses, selected from:  
courses at the 300 level or above, at least 6 of which must be at the 400 level or higher

18 credits, 9 of which must be at the 300 level or higher, selected from any departments within the University other than Psychology, consistent with regulations of the Faculty of Science.

**B.Sc. MAJOR PROGRAM IN PSYCHOLOGY (54 credits)**  
[MARS Program Code 1-810000]

Students majoring in Psychology must obtain a minimum grade of C in all 54 credits of the program. A grade lower than C may be made up by taking another equivalent course (if there is one), by successfully repeating the course, or by successfully writing a supplemental examination (if there is one).

A course can be considered to fulfill only one requirement. For example, if 204-413B is taken to satisfy part of the requirement for 9 complementary credits in psychology at the 400 level, it may not also be counted towards the completion of 6 credits in the Cognitive Psychology area of specialization.

**U1 Required Courses (12 credits)**

- 204-211 (3) Learning and Motivation
- 204-212 (3) Perception
- 204-213 (3) Cognition
- 204-215 (3) Social Psychology

Note: 204-100A may be taken as a co-requisite with these basic courses.

**U1 or U2 Required Course (3 credits)**

- 204-305 (3) Statistics for Experimental Design

**Complementary Courses (39 credits)**

18 credits of Psychology courses: select 6 credits from each of three of the six areas of specialization.

9 credits of Psychology courses, selected from courses at the 400 or 500 level.

12 credits at the 300 level or higher, selected from Psychology, Anatomy, Biology, Biochemistry, Chemistry, Computer Science, Mathematics, Physiology, Psychiatry.

**B.Sc. HONOURS PROGRAM IN PSYCHOLOGY (54 credits)**  
[MARS Program Code 2-810000]

Honours in Psychology prepares students for graduate study, and so emphasizes practice in the research techniques which are used in graduate school and professionally later on. Students are accepted into Honours at the beginning of their U2 year, and the two-year sequence of Honours courses continues through U3. Admission to Honours is selective. There is normally room for 25-30 new Honours students each year. Students with a cumulative grade point average of 2.80 or better are eligible to apply; however during the past several years it has been possible to accept a maximum of 30 students with averages above 3.50 based on a 27-30 graded credit program over 2 terms. Once in the Honours program, the student must obtain a GPA of 3.00 in the U2 year in order to continue in the program for U3. Students in the Honours program are required to complete a minimum of 27 graded credits per academic year (Fall and Winter semesters).

Applications can be obtained from the Undergraduate Office of the Department of Psychology, Room N7/9A, Stewart Biological Sciences Building. The applications must be completed and returned to the Undergraduate Office by August 17, 2000. Candidates will be advised of the Department's decision through a notice posted in front of the Undergraduate Adviser's Office, N7/9, before classes begin in September.

Students should note that awarding of the Honours degree will depend on both cumulative grade point average and a minimum grade of B on 204-380D, 480D, 481D. "First Class Honours" is awarded to students who obtain a minimum cumulative grade point average of 3.50 and a minimum CGPA of 3.50 in the three Honours courses of which 12 out of 18 credits (2 courses) received at least an A- grade. "Honours" is awarded to students with a minimum cumulative grade point average of 3.00 and a minimum CGPA of 3.00 on each of the three honours courses. Moreover, the awarding of the Honours degree normally requires completion of two full years of study, U2 and U3, in the Psychology Department. Exceptionally good students may be admitted for the U3 year only on the basis of their marks and research experience, however these students must complete 6 credits in each of three areas of specialization.

**U1 Required Courses (12 credits)**

204-211 (3) Learning and Motivation  
204-212 (3) Perception  
204-213 (3) Cognition  
204-215 (3) Social Psychology

Note: 204-100A may be taken as a co-requisite with these basic courses.

**U1 or U2 Required Course (3 credits)**

204-305 (3) Statistics for Experimental Design

**U2 Required Course (6 credits)**

204-380D (6) Honours Research Project and Seminar

**U3 Required Courses (12 credits)**

204-480D (6) Foundations of Modern Psychology  
204-481D (6) Honours Thesis Research

**Complementary Courses (21 credits)**

12 credits of Psychology courses:  
select 6 credits from each of two of the six areas of specialization

9 credits at the 300 level or higher selected from:  
Psychology, Anatomy, Biology, Biochemistry, Chemistry, Computer Science, Mathematics, Physiology, Psychiatry

**MINOR IN COGNITIVE SCIENCE**

Students following a Major or Honours program in Psychology with an interest in cognition may want to consider the Minor in Cognitive Science.

**COURSE DESCRIPTIONS**

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

● Denotes courses not offered in 2000-01.

**NOTE:** Prerequisites: A basic introductory course in psychology is a prerequisite for all Psychology courses with the following exceptions: 204-100A, 204-204, 204-211, 204-212, 204-213, 204-215, 204-305. All courses are open to students other than Major and Honours students in Psychology provided the prerequisites are met and unless otherwise specified. Due to sabbatic leaves and other considerations some courses may not be given in a particular year.

For more detailed information about courses and programs in Psychology consult the Department's Website or the Psychology Undergraduate Handbook which is on sale in the Departmental Advising Office, N7/9 Stewart Biological Sciences Building.

**204-100A INTRODUCTION TO PSYCHOLOGY.** (3) (2 lectures; 1 conference) (Not open to students who have passed Psychology 101 or 102 in CEGEP.) Introduction to the scientific study of mind and behavior. Learning, perception, motivation and thinking are explained in a way which emphasizes the continuity of human behavior and the behavior of other species, and which emphasizes the role of the central nervous system in organizing and regulating behavior. **Staff**

**204-204A,B INTRODUCTION TO PSYCHOLOGICAL STATISTICS.** (3) (2 lectures, 1 conference) (Not open to students who have passed one of the following courses in CEGEP with a minimum grade of 75%: Mathematics 307, 337 or the combination of Quantitative Methods 300 with Mathematics 300.) (Note: This course is a prerequisite for 204-305, 204-406, 204-310, 204-336.) (Credit for other statistics courses may preclude credit for this course and conversely. See "Course Overlap" on page 345.) The statistical analysis of research data; frequency distributions; graphic representation; measures of central tendency and variability; elementary sampling theory and tests of significance.

**Professor Amsel (A)**  
**Professor Mendelson (B)**

**204-211B LEARNING AND MOTIVATION.** (3) (2 lectures) (Prerequisite: 204-100A or equivalent.) An introduction to contemporary research on learning, memory and motivation, from behavioural, biological and evolutionary perspectives. Topics include: internal and external influences on behaviour, biological constraints on motivation and learning, conditioning and cognitive processes. Much of the material will be drawn from the experimental literature on research with animals. (Revisions Awaiting University Approval) *Section 01 Limited to Psychology Major and Honours students*  
*Section 02 Limited to Psychology Minor students (CAPPED)*  
*Section 03 Limited to non-Psychology students (CAPPED)*

**Professor White**

**204-212A PERCEPTION.** (3) (2 lectures, 1 conference) Perception is the organization of sensory input into a representation of the environment. Topics include: survey of sensory coding mechanisms (visual, auditory, tactile, olfactory, gustatory), object recognition, spatial localization, perceptual constancies and higher level influences. *Section 01 Limited to Psychology Major and Honours students*  
*Section 02 Limited to Psychology Minor students (CAPPED)*  
*Section 03 Limited to non-Psychology students (CAPPED)*

**Professor Chaudhuri**

**204-213B COGNITION.** (3) (2 lectures, 1 conference) The study of human information processing. What is the nature of thought? How does it arise in the mind and brain? How can empirical research inform these questions? This course presents a survey of

major topics and controversies in the study of cognition, emphasizing interdisciplinary approaches.

*Section 01 Limited to Psychology Major and Honours students*

*Section 02 Limited to Psychology Minor students (CAPPED)*

*Section 03 Limited to non-Psychology students (CAPPED)*

**Professor Levitin**

**204-215A SOCIAL PSYCHOLOGY.** (3) (3 lectures) (Not open to students who have taken 204-330A, 280-221 or 166-216) The course offers students an overview of the major topics in social psychology. Three levels of analysis are explored beginning with individual processes (e.g., attitudes, attribution), then interpersonal processes (e.g., attraction, communication, love) and finally social influence processes (e.g., conformity, norms, roles, reference groups).

*Section 01 Limited to Psychology Major and Honours students*

*Section 02 Limited to Psychology Minor students (CAPPED)*

*Section 03 Limited to non-Psychology students (CAPPED)*

**Professor Taylor**

**204-304A CHILD DEVELOPMENT.** (3) (2 lectures, 1 conference) (Prerequisites: two courses from 204-211, 204-212, 204-213, and 204-215 or permission of the instructor.) (**Note:** This course is a prerequisite for 204-412, 204-413, 204-414, 204-416, 204-431, 204-438.) A basic introduction to developmental psychology. Various aspects of psychological development in children are considered, including prenatal development and infancy, perceptual and cognitive development, language acquisition, social and personality development and social interaction.

*Section 01 Limited to Psychology Major and Honours students*

*Section 02 Limited to Psychology Minor students (CAPPED)*

*Section 03 Limited to non-Psychology students (CAPPED)*

**Professor Shultz**

**204-305A,B STATISTICS FOR EXPERIMENTAL DESIGN.** (3) (2 lectures; 1 conference) (Prerequisite: 204-204A,B or equivalent) (**Note:** This course is required of all students who propose to enter an Honours or Major program in Psychology.) (Credit for other statistics courses may preclude credit for this course and conversely. See "**Course Overlap**" on page 345.) An introduction to the design and analysis of experiments, including analysis of variance, planned and post hoc tests and a comparison of anova to correlational analysis.

*Section 01 Limited to Psychology Major and Honours students*

*Section 02 Limited to Psychology Minor students (CAPPED)*

*Section 03 Limited to non-Psychology students (CAPPED)*

**Professor Oshima-Takane (A term)**

**Staff (B term)**

**204-308A BEHAVIOURAL NEUROSCIENCE I.** (3) (2 lectures, 1 conference) (Prerequisite: CEGEP Human Biology 101-921 or equivalent.) (Not open to students who have taken or are taking 504-321 or 177-306 or 552-314.) The neural basis of mammalian behavior. Basic neuroanatomy, neurophysiology and neurochemistry. Sensory and motor systems. How the nervous system acquires and integrates information and uses it to produce behavior. **Staff**

● **204-310B HUMAN INTELLIGENCE.** (3) (2 lectures) (Prerequisite: 204-204 or any equivalent course.)

**204-311A HUMAN COGNITION AND THE BRAIN.** (3) (2 lectures, 1 conference) The course is an introduction to the field studying how human cognitive processes, such as perception, attention, language, learning and memory, planning and organization, are related to brain processes. The material covered is primarily based on studies of the effects of different brain lesions on cognition and studies of brain activity in relation to cognitive processes with modern functional neuroimaging methods. (Revisions Awaiting University Approval).

*Section 01 Limited to Psychology Major and Honours students*

*Section 02 Limited to Psychology Minor students (CAPPED)*

*Section 03 Limited to non-Psychology students (CAPPED)*

**Professor Petrides**

● **204-314B THINKING AND CONCEPTS.** (3) (2 lectures) (Prerequisite 204-213)

**204-316A PSYCHOLOGY OF DEAFNESS.** (3) (2 lectures; 1 conference) (Prerequisite: 204-100 or equivalent or permission

of instructor.) (Not open to students who have taken 204-457B.) Basic introduction to the field of deafness from a psychological perspective. Topics include effect of deafness on sensory, perceptual, cognitive, intellectual and linguistic processes. Impact of deafness on children and families. Opportunity to learn basic concepts in American Sign Language (ASL) in the context of deaf culture.

*Section 01 Limited to Psychology students*

*Section 02 Limited to non-Psychology students (CAPPED)*

**Professor MacDougall**

**204-318B BEHAVIOURAL NEUROSCIENCE II.** (3) (2 lectures, 1 conference) (Prerequisite: 204-308 or 204-311 or 504-321 or 177-306 or 552-314.) Physiological bases of motivation including feeding and drinking, sexual and parental behaviour. Physiological processes in reinforcement and learning. **Staff**

**204-331B INTER-GROUP RELATIONS.** (3) (2 lectures) (Prerequisite: 204-215) The course focuses on the social psychology of societal groups such as racial minorities, aboriginal groups and women. The ideological biases of current theories is first established. This is followed by a review of current theories and finally current controversies are explored including new forms of racism and affirmative action.

*Section 01 Limited to Psychology Major and Honours students*

*Section 02 Limited to Psychology Minor students (CAPPED)*

*Section 03 Limited to non-Psychology students (CAPPED)*

**Professor Taylor**

● **204-332B INTRODUCTION TO PERSONALITY.** (3) (3 lectures) (Prerequisite: 204-100A)

**204-333A PERSONALITY AND SOCIAL PSYCHOLOGY.** (3) (2 lectures) (Prerequisite: 204-215A) Human behavior is a product of both factors residing within the person and factors residing in one's environment (other individuals, relationships, groups, and momentary situations). The course will consider traditional approaches to person-situation interactions and a more dynamic approach based on recent research on goals and social cognition.

*Section 01 Limited to Psychology Major and Honours students*

*Section 02 Limited to Psychology Minor students (CAPPED)*

*Section 03 Limited to non-Psychology students (CAPPED)*

**Professor Lydon**

● **204-334A COMPUTER SIMULATION - PSYCH. PROCESS.** (3) (3 hour lecture) (Prerequisites: 204-212, 204-213 and 308-202A,B; or permission of instructor.) (Limited enrolment.)

● **204-335A FORMAL MODELS OF PSYCH. PROCESSES.** (3) (3 hour lecture) (Prerequisites: A basic understanding of mathematics, e.g. the contents of 189-112A,B, and of computer science, e.g. the contents of 308-202A,B or permission of instructor.)

**204-336A MEASUREMENT OF PSYCH. PROCESSES.** (3) (3 lectures) (Prerequisites: 204-204 and Introductory Calculus) The properties of measurements and techniques for the measurement of psychophysical variables such as brightness and loudness and of attitudinal variables such as similarity, preference, and utility. Data analysis tools of value to experimenters. Emphasis on current problems in experimental psychology. **Professor Takane**

**204-337A INTRO: ABNORMAL PSYCHOLOGY 1.** (3) (2 lectures, 1 conference) (**Note:** This course is prerequisite for 204-338B.) A survey of the genetic, physiological and environmental origins of intellectual and emotional disorders.

*Section 01 Limited to Psychology Major and Honours students*

*Section 02 Limited to Psychology Minor students (CAPPED)*

*Section 03 Limited to non-Psychology students (CAPPED)*

**Professor Pihl**

**204-338B INTRO: ABNORMAL PSYCHOLOGY 2.** (3) (2 lectures, 1 conference) (Prerequisite: 204-337A) (**Note:** This course is prerequisite for 204-491D.) An introduction to psychotic behaviour problems, character disorders and behaviour modification.

*Section 01 Limited to Psychology Major and Honours students*

*Section 02 Limited to Psychology Minor students (CAPPED)*

*Section 03 Limited to non-Psychology students (CAPPED)*

**Professor Pihl**

● **204-340A THE PSYCHOLOGY OF LANGUAGE.** (3) (2 1½ hour lectures) (Prerequisite: An introductory course in Psychology or Linguistics.)

**204-341B PSYCHOLOGY OF BILINGUALISM.** (3) (2 lectures) (Prerequisites: Introductory Psychology, and 204-340 or introduction to linguistics; or permission of instructor.) This course will examine issues in bilingualism, including second language acquisition in children and adults, critical period hypothesis, cognitive consequences and correlates of bilingualism, social psychological aspects of bilingualism, and bilingual education.

*Section 01 Limited to Psychology Major and Honours students*

*Section 02 Limited to Psychology Minor students (CAPPED)*

*Section 03 Limited to non-Psychology students (CAPPED)*

**Professor Genesee**

**204-342B HORMONES AND BEHAVIOUR.** (3) (2 lectures) (Prerequisite: 177-111A, 177-112B, 177-115B or equivalent) The role of hormones in organization of CNS function, as effectors of behaviour, in expression of behaviours and in mental illness.

*Section 01 Limited to Psychology Major and Honours students*

*Section 02 Limited to Psychology Minor students (CAPPED)*

*Section 03 Limited to non-Psychology students (CAPPED)*

**Professor Sherwin**

**204-343B LANGUAGE ACQUISITION IN CHILDREN.** (3) (2 lectures plus conference) This course will examine the human capacities that make the profound feat of language acquisition possible. Topics will include analyses of empirical, methodological, and theoretical issues in language acquisition and will draw upon evidence from the cognitive neuroscience, psycholinguistic, linguistic and philosophical literatures.

*Section 01 Limited to Psychology Major and Honours students*

*Section 02 Limited to Psychology Minor students (CAPPED)*

*Section 03 Limited to non-Psychology students (CAPPED)*

**Professor Petitto**

**204-351A RESEARCH METHODS IN SOCIAL PSYCHOLOGY.** (3) (1 hour lecture, 6 hour lab and/or field work) (Prerequisite: 204-215A. Pre- or Co-requisite: 204-305. U2 level and above, and permission of instructor. Password required.) Designed to introduce students to the issues, strategies, and applications of various research methodologies in social psychology. Through demonstrations, exercises, and pilot studies, students will gain experience with lab and field methods using both correlational and experimental procedures. Classic and contemporary approaches will be examined. **Note:** Students will be admitted on the basis of a written application on forms available from the Department (Room N7/9). Applications must be submitted by August 17.

**Professor Baldwin**

**204-352B LABORATORY IN COGNITIVE PSYCHOLOGY.** (3) (1 hour lecture, weekly lab) (Prerequisite: 204-213 and permission of instructor. Password required.) This course will introduce students to the experimental techniques that are used in Cognitive Psychology. Different cognitive methodologies will be taught: reaction time, techniques for investigating recognition and recall, analyzing verbal protocols, and comparing subject performance to that of computer models. **Note:** Students will be admitted on the basis of a written application on forms available from the Department (Room N7/9). Applications must be submitted by August 17.

**Professor Dunbar**

**204-353B LABORATORY IN HUMAN PERCEPTION.** (3) (1 hour lecture plus 3 hour lab) (Prerequisites: 204-212, U2 level or above, and permission of instructor. Password required.) Students will be introduced to standard psychophysical procedures and data analysis techniques, and will have the opportunity to design and carry out their own experiments. Research topics include: visual acuity, form and motion perception, and visual search. Evaluation based on individually written reports on lab experiments. **Note:** Students will be admitted on the basis of a written application on forms available from the Department (Room N7/9). Applications must be submitted by August 17.

**Professor Chaudhuri**

● **204-354B INTERPERSONAL RELATIONSHIPS.** (3) (Prerequisite: 204-215A and 204-204, 204-333 highly recommended.)

**204-380D HONOURS RESEARCH PROJECT AND SEMINAR.** (6) (3 hour seminar) (For U2 honours students only. Password required.) Students prepare reports on various experimental areas. They also carry out research under the direction of staff members. Students present reports on progress and write a final research report.

**Professors White and Sherwin**

● **204-401B THEORIES OF COGNITION.** (3) (2 lectures) (Prerequisite: 204-213 or permission of instructor.)

**204-403A MODERN PSYCHOLOGY IN HISTORICAL PERSPECTIVE.** (3) (2 lectures) A survey of the social and ideological influences on psychology from its philosophical beginnings through the period of the schools to its modern situation.

*Section 01 Limited to Psychology students*

*Section 02 Limited to non-Psychology students (CAPPED)*

**Professor Pleszewski**

● **204-406B PSYCHOLOGICAL TESTS AND MEASUREMENT.** (3) (2 lectures, 1 conference) (Prerequisites: 204-204 or equivalent.)

**204-408A PRINCIPLES OF COGNITIVE BEHAVIOUR THERAPY.** (3) (2 lectures) (Prerequisites: 204-337A and 204-211 or permission of instructor.) An introduction to the theory, research and practice of cognitive behaviour therapy. The experimental approach to understanding human behaviour is used to follow basic principles of learning and their clinical application. Certain psychiatric disorders such as alcoholism and depression are highlighted to illustrate how a behaviour therapist conceptualizes problems and formulates treatments.

**Professor Bradley**

**204-410B SPECIAL TOPICS IN NEUROPSYCHOLOGY.** (3) (2 lectures, 1 conference) (Prerequisites: 204-311 or 204-308. Knowledge of basic neuropsychology at the level covered in 204-311A is assumed.) This course will trace developments in human brain mapping and in cognitive neuroscience via readings from primary sources. Topics include the neural bases for perception, language, and memory, and their relationship to structural and functional brain organization. Emphasis is placed on integrating knowledge from behavioral lesion experiments and functional activation studies.

**Professor Zatorre**

**204-412A DEVIATIONS IN CHILD DEVELOPMENT.** (3) (2 lectures, 1 conference) (Prerequisite: 204-304 or 204-337 or permission of instructor.) This course focuses on deviations in the perceptual, cognitive, social, and emotional development of children. Emphasis is placed on research exploring constitutional and environmental causes and symptoms associated with such disorders as depressive spectrum disorders, anxiety disorders, conduct disorder, autism, schizophrenia, attention deficit hyperactivity disorder, eating disorders, and substance abuse.

*Section 01 Limited to Psychology students*

*Section 02 Limited to non-Psychology students (CAPPED)*

**Professor Abela**

● **204-413A COGNITIVE DEVELOPMENT.** (3) (3 hours) (Prerequisite: 204-304A or 204-213 or equivalent.)

● **204-414A SOCIAL DEVELOPMENT.** (3) (Prerequisites: 204-304A and 204-305)

● **204-416B ADVANCED TOPICS IN CHILD DEVELOPMENT.** (3) (3 lectures) (Prerequisite: 204-304 or permission of instructor.)

**204-427A SENSORIMOTOR BEHAVIOUR.** (3) (2 lectures) (Prerequisite: 204-308A or permission of instructor.) A systematic examination of motor control, drawing on models and data from both behavioural and physiological studies. Topics include: mechanical properties of muscles, motor unit properties and force production; proprioceptors, spinal reflex organization, motor cortex, cerebellum, basal ganglia.

**Professor Ostry**

**204-429B HEALTH PSYCHOLOGY.** (3) (2 lectures, 1 conference) (Prerequisite: 204-337A or, in the case of advanced undergraduates, permission of instructor.) A survey of health psychology including a review of psychological factors involved in the development of physical illness. Assessment and intervention

strategies for problems such as cardiovascular disease, cancer, diabetes, and headaches.

*Section 01 Limited to Psychology students*

*Section 02 Limited to non-Psychology students (CAPPED)*

**Professor Ditto**

- **204-431A THE ENVIRONMENT AND THE DEVELOPING BRAIN.** (3) (two 1½ hour lectures) (Prerequisite: 204-212 or 204-311 or 204-308 or 204-304)

**204-436A HUMAN SEXUALITY AND ITS PROBLEMS.** (3) (Prerequisite: either 204-337A or permission of the instructor.) This course will deal with typical sexual behavior and its variations. Topics will include the history of sex research, the sexual response cycle, sexual dysfunction, gender identity, sexual orientation, etc. Current research and theory will be emphasized.

*Section 01 Limited to Psychology students*

*Section 02 Limited to non-Psychology students (CAPPED)*

**Professor Binik**

- **204-437B READING ABILITY AND DISABILITY.** (3) (Prerequisites: 204-213 and 204-340)

- **204-438A THE CHILD WITNESS.** (3) (Prerequisites: 204-213 and 204-304)

**204-450D RESEARCH PROJECT AND SEMINAR.** (6 credits) (Prerequisites: 204-204, 204-305 and permission of instructor. Password required) (Only for Major or special students in U3 who intend to proceed to graduate school.) Under supervision of an advisor approved by the Department, students design and carry out a research project. Students report their research in seminars throughout the year and in a final written report. **Note:** Students will be admitted on the basis of a written application on forms available from the Department (Room N7/9). Applications must be submitted by August 17.

**Professors Levitin and O'Driscoll**

- **204-451A HUMAN FACTORS RESEARCH AND TECHNIQUES.** (3) (2 lectures; 1 lab) (Prerequisites: 204-204, 204-211, 204-212, 204-213, 204-215 and 204-305 or permission of instructor.)

- **204-470A MEMORY AND BRAIN.** (3) (3 hour lectures) (Prerequisites: 204-308 and 204-318 or 552-311 or 177-306)

**204-471B HUMAN MOTIVATION.** (3) (3 hour lectures) (Prerequisite: 204-215) The course focuses on integrating current goal-based and need-based theories of human motivation. Particular attention will be given to Cziksentmihalyi's (1990) Theory of Optimal Experience and Deci and Ryan's (1991) Self-Determination Theory. The relevance of course material to applied issues in the domains of education, sports, and management is highlighted.

*Section 01 Limited to Psychology students*

*Section 02 Limited to non-Psychology students (CAPPED)*

**Professor Koestner**

**204-472B SCIENTIFIC THINKING AND REASONING.** (3) (2 lectures, 1 conference) (Prerequisites: U3 students only; 177-210 or at least 2 courses in the Faculty of Science at the 200 level.) (Open to Arts and Science students.) How do scientists think and reason? Are there strategies scientists use to make discoveries? Are there cognitive principles underlying science? Using research on the cognitive processes that scientists use, we will explore issues such as: hypothesis generation, conduct of experiments, linking theory to data, representing data, making errors, and women in science.

**Professor Dunbar**

**204-473B SOCIAL COGNITION AND THE SELF.** (3) (2 lectures) (Prerequisites: 204-215 and 204-331 or 204-333 or 204-354) (Not open to students who have taken 204-411B) This course examines the social psychological literature emphasizing a) social cognition – how people think about and make sense of their social experiences; and b) self theory – how people create and maintain a sense of identity. These frameworks will be applied to social psychological topics including close relationships, attitudes and self-esteem.

*Section 01 Limited to Psychology students*

*Section 02 Limited to non-Psychology students (CAPPED)*

**Professor Baldwin**

**204-480D FOUNDATIONS OF MODERN PSYCHOLOGY.** (6) (2 lectures) (For Honours students only.) Critical examination of the assumptions, concepts, ethics, empirical methods, and integrative ideas of modern psychology. Lectures, student presentations, and discussions.

**Professor Genesee (A term)**

**Professor Petitto (B term)**

**204-481D HONOURS THESIS RESEARCH.** (6) (9 hours. Research) (U3 Honours students only) (Please see regulations concerning Project Courses, [section 2.6.2](#) in the Faculty Degree Requirements section.) Under the supervision of an advisor approved by the Department, students design and carry out a research project and report their results in the form of an undergraduate thesis.

**Professor Baker**

**204-491D ADVANCED STUDY IN BEHAVIOURAL DISORDERS.** (6) (1-2 hours lecture or tutorial per week plus a field experience requirement.) (Prerequisites: 204-337A and 204-338B and permission of instructor. Password required) A critical examination of topics in abnormal and clinical psychology. Emphasis will be on analysis of theoretical positions and empirical findings as they relate to both etiology and treatment. **Note:** Students will be admitted on the basis of a written application on forms available from the Department (Room N7/9). Applications must be submitted by August 17.

**Professor Zacchia**

**204-492A/493B SEMINARS IN SPECIAL TOPICS.** (3 credits each) (Restricted to U3 students. Password required.) (Please see regulations concerning Project Courses, [section 2.6.2](#) in the Faculty Degree Requirements section.) These seminars are offered by special arrangement between interested Psychology staff and students. A student may not register in more than one of these seminars in an academic year. **Note:** A written proposal detailing the plans for the seminar must be approved by the Department Curriculum Committee before the student is permitted to register for this course. This proposal must be received by the Departmental Curriculum Committee well before the beginning of the term for which the seminar is proposed. Consult the Departmental Handbook for additional information.

**Staff**

**204-495B PSYCHOLOGY RESEARCH PROJECT.** (3) (Prerequisites: 30 credits of the Psychology program including 204-305A/B or equivalent statistics course and CGPA above 3.00. Password required.) (Restricted to U3 students.) (Not open to students registered in 204-380D, 204-481D or 204-450D.) (Please see regulations concerning Project Courses, [section 2.6.2](#) in the Faculty Degree Requirements section.) Under the supervision of Psychology faculty, students carry out a research project and write a paper describing their results and relating it to the relevant literature. Registration is by special arrangement with Psychology staff, and project proposals must be approved by the Department before registration. For more information see the Psychology Department Handbook. (Revisions Awaiting University Approval)

**A. Baker (Coordinator)**

- **204-501B AUDITORY PERCEPTION.** (3) (2 lectures) (Prerequisites: 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.

*Section 01 Limited to Psychology students*

*Section 02 Limited to non-Psychology students (CAPPED)*

**Professor Abbott**

**204-510A STATISTICAL ANALYSIS OF TESTS.** (3) (3 lectures) (Prerequisites: 204-305 or 204-435B, 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) (1, 3 hour seminar) (Prerequisites: 204-351 or 352 or 353 or 380D or 450D and permission of instructor.)

**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.

**Professor Franklin**

**204-526A ADVANCES IN VISUAL PERCEPTION.** (3) (2 lectures) We examine 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) (Prerequisite: 204-340 or 204-316 or equivalent. Co-requisite: 204-343 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. Rule-based and connectionist approaches.

**Professor Shultz**

**204-533A INTERNATIONAL HEALTH PSYCHOLOGY.** (3) (Prerequisite: 204-305 and 204-215 or 204-429 or 204-304 or 151-227 and permission of instructor) (Limited enrolment, password required.) The focus will be 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 will be discussed.

**Professor Aboud**

**204-534A COMMUNITY PSYCHOLOGY.** (3) (Prerequisites: 204-337 and 204-338 or permission of instructor) (Limited enrolment) (Open to Graduate students or U3 undergraduates in Psychology.) Community psychology aims to promote health in groups and communities rather than expending resources solely on relieving dysfunction in individuals. The course reviews the conceptual rationale for community psychology and explores examples of both successful and unsuccessful prevention programs. It also discusses crisis intervention, informal caregivers, self-help groups, and mental health education through the media. **Professor Koestner**

**204-535B ADVANCED TOPICS IN SOCIAL PSYCHOLOGY.** (3) (Prerequisites: 204-215, 204-333 and one additional course from the social and personality area of specialization, or 204-380D, and permission of instructor. Limited enrolment, password required.) Classic and contemporary readings in a specific content area within social psychology will be assigned in order to examine the sub-area 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.

**Professor Ramsay**

● **204-540A COMPUTATIONAL MODELLING OF REASONING.** (3) (3 hours) (Prerequisite: one course in cognitive psychology)

● **204-561B METHODS IN DEVELOPMENTAL PSYCHOLINGUISTICS.** (3) (3 hour lectures) (Prerequisites: 204-340, 204-343 and 204-305 or permission of instructor.)

## 11.28 Science for Teachers

Rutherford Physics Building  
3600 University Street  
Montreal, QC, H3A 2T8  
Fax: (514) 398-8434  
Email: bscbed@physics.mcgill.ca

*Coordinator - Science* — R. Harris

*Coordinator - Education* — B. Alters

The training and certification of school teachers has traditionally been the responsibility of the Faculty of Education and normally requires the completion of a Bachelor of Education. The program described in this section does not replace the existing teacher training programs but is intended as a very rigorous but rewarding alternative.

The Faculties of Education and of Science have introduced a program specifically aimed at forming teacher/scientists. The Concurrent B.Sc./B.Ed. Program is designed to provide students with the opportunity to obtain a Bachelor of Science degree and a Bachelor of Education degree after a minimum of 135 credits of study. The Science and Education components of the Concurrent program are rigidly structured and closely integrated so as to satisfy the academic requirements of both degrees.

Concurrency is an essential characteristic of this program: the Science and Education components cannot be taken separately and later combined. Normally students will be admitted to both components of the Concurrent Program simultaneously. Students who have completed more than 30 credits in a B.Sc. or a B.Ed. program, exclusive of the Freshman Year for out-of-province students, will not be allowed to opt into the Concurrent Program. Both components of the Concurrent Program must be taken simultaneously, and both degrees will be granted during the same convocation period. It will not be possible to receive one degree first, and the other subsequently.

Students in the Concurrent Program may apply to transfer to either a conventional B.Sc. or a conventional B.Ed program. To do so, they must submit a Faculty Transfer Application to the appropriate Student Affairs Office. The decision will be based on their grades in the relevant component of the Concurrent Program. Students who do transfer to a conventional program may not transfer back to the Concurrent Program.

Students who receive an F or J in an Education Field Experience course are placed in unsatisfactory standing. Although they may complete their semester, they are required to withdraw from the Concurrent Program. However, they may apply to transfer to a conventional B.Sc. program as outlined above.

To be admitted, candidates must satisfy the admission requirements of both faculties.

Students who wish to be registered in the Concurrent Program must contact one of the coordinators through the Student Affairs Office of either faculty.

### CONCURRENT B.SC./B.ED.PROGRAM (135 credits)

The two components of the Concurrent Program are the B.Ed. General Secondary Two-Subject Option Program and one of the B.Sc. Major Programs in Two Subjects for Teachers. These two components are described in what follows, including an identification of the elements that are counted towards the requirements of both degrees. These provisions are exceptional and apply exclusively to the Concurrent Program.

The following two-subject combinations have been approved for the Concurrent Program:



- biology and chemistry
- biology and geography
- biology and mathematics
- chemistry and physics
- mathematics and chemistry
- mathematics and physics.

#### **BACHELOR OF EDUCATION GENERAL SECONDARY TWO-SUBJECT OPTION PROGRAM (120 credits)**

The aim of the B.Ed. in Secondary Education is to prepare teachers for the secondary school level through a program of academic studies in two subject areas and professional studies centred on school-based practicum components supported by courses in pedagogy, curriculum and educational foundations. In the case of the Concurrent Program the two academic subjects must correspond to one of the six combinations listed above.

A full description of the B.Ed. Secondary Program can be found in the Faculty of Education [section 6.1.4](#). In summary, it consists of the following:

**Academic components (57 credits):** in the present case these courses will be selected from the lists of required and complementary courses in the B.Sc. component of the Concurrent Program, and will count towards both degrees.

**Professional components (57 credits):** these include professional seminars, field experiences, foundation courses, pedagogy courses, and pedagogical support courses. The following 18 credits can be included as electives in the B.Sc. component of the Concurrent program, and will count towards both degrees: 411-405, 414-309, 416-300, 423-400, 455-402, and 455-410.

**Electives (6 credits).**

#### **BACHELOR OF SCIENCE, MAJOR PROGRAM IN TWO SUBJECTS FOR TEACHERS (90 credits)**

These B.Sc. programs are designed specifically as the Science component of the Concurrent B.Sc./B.Ed. Program. Six combinations of two science subjects are approved for the Concurrent Program. These combinations are chosen to reflect compulsory subjects taught in secondary schools and common pairings of subjects taught by secondary school teachers. They also honour the requirement of the Ministère de l'éducation to train teachers in two subjects, with the possibility of a third subject which supports or is related to the other two, since mathematics is a necessary support for physics and chemistry.

The general structure of these B.Sc. programs is as follows:

**Required and complementary courses (64-67 credits).**

The details of these major programs are given below. Note that 57 of these credits can be counted towards the academic component of the B.Ed. program, but only for students in the Concurrent Program.

**Elective courses (23-26 credits).** These are electives from the B.Sc. perspective, but they must be suitably chosen if the student wishes to complete the Concurrent Program with the minimum of 135 credits. The following Education courses can count towards both the B.Sc. and the B.Ed. components of the Concurrent Program.

411-405	(3)	Policy issues in Quebec Education
414-309	(3)	Exceptional Children
416-300	(3)	Educational Psychology
423-400	(3)	Philosophical Foundations
or 415-398	(3)	Philosophy of Catholic Education
455-402	(3)	Media, Technology and Education
455-410	(3)	Multi-cultural/Multi-racial Class
or 423-464	(3)	Intercultural Education
or 433-441	(3)	First Nations and Inuit Education

#### **MAJOR PROGRAM IN BIOLOGY AND CHEMISTRY FOR TEACHERS (65 credits)**

**Required Science courses (53 credits)**

177-210	(3)	Perspectives of Science
189-222	(3)	Calculus III
189-203	(3)	Principles of Statistics I

Biology List A

Chemistry List A

**Complementary Science courses (12 credits)**

Biology List B

Geoscience List

#### **MAJOR PROGRAM IN BIOLOGY AND GEOGRAPHY FOR TEACHERS (67 credits)**

**Required Science courses (43 credits)**

177-210	(3)	Perspectives of Science
180-212*	(4)	Organic Chemistry
189-203	(3)	Principles of Statistics I

Biology List A

Geography List A

\*Students who have the CEGEP equivalent of this course must replace it with an additional course chosen from Biology List B.

**Complementary Science courses (24 credits)**

Biology List C

Geography List B

Geoscience List

#### **MAJOR PROGRAM IN BIOLOGY AND MATHEMATICS FOR TEACHERS (67 credits)**

**Required Science courses (49 credits)**

177-210	(3)	Perspectives of Science
180-212*	(4)	Organic Chemistry

Biology List A

Mathematics List A

\*Students who have the CEGEP equivalent of this course must replace it with an additional course chosen from Biology List B.

**Complementary Science courses (18 credits)**

6 additional credits in Biology or related disciplines, at 300-level or above, approved by the Biology Department.

Mathematics List C

3 additional credits in either Mathematics or related disciplines, approved by the Mathematics Department, or in Biology or related disciplines, approved by the Biology Department.

#### **MAJOR PROGRAM IN CHEMISTRY AND PHYSICS FOR TEACHERS (65 credits)**

**Required Science courses (62 credits)**

177-210	(3)	Perspectives of Science
---------	-----	-------------------------

Mathematics List B

Chemistry List A

Physics List A

**Complementary Science courses (3 credits)**

Geoscience List

#### **MAJOR PROGRAM IN MATHEMATICS AND CHEMISTRY FOR TEACHERS (64-65 credits)**

**Required Science courses (47 credits)**

177-210	(3)	Perspectives of Science
---------	-----	-------------------------

Mathematics List A

Chemistry List A

**Complementary Science courses (17-18 credits)**

Mathematics List C

Chemistry List B

**MAJOR PROGRAM IN MATHEMATICS AND PHYSICS FOR TEACHERS** (66 credits)**Required Science courses** (57 credits)

177-210 (3) Perspectives of Science

Mathematics List A

Physics List A and List B

**Complementary Science courses** (9 credits)

Mathematics List C

**COURSE LISTS USED IN THE VARIOUS OPTIONS****Biology List A:** (21 credits)

177-200 (3) Molecular Biology  
 177-201 (3) Cell Biology and Metabolism  
 177-202 (3) Basic Genetics  
 177-205 (3) Biology of Organisms  
 177-206 (3) Methods in Biology of Organisms  
 177-208 (3) Introduction to Ecology  
 177-301 (3) Cell and Molecular Laboratory

**Biology List B:** (9 credits)

to be selected from the following:

177-304 (3) Evolution  
 177-370 (3) Human Genetics Applied  
 552-201 (3) Human Physiology: Control Systems  
 or 552-209 (3) Mammalian Physiology I

**Biology List C:** (6 credits)

to be selected from the following:

177-365 (3) Conservation Biology  
 177-331 (3) Ecology / Behaviour Field Course  
 or 177-334 (3) Applied Tropical Ecology  
 or 177-336 (3) Marine Aquaculture  
 or 177-337 (3) Ecology and Behaviour of Fishes

**Chemistry List A:** (23 credits)

180-150 (3) World of Chem: Food  
 or 180-160 (3) World of Chem: Technology  
 or 180-170 (3) World of Chem: Drugs  
 or 180-180 (3) World of Chem: Environment  
 180-281 (3) Inorganic Chemistry I  
 180-381 (3) Chemistry of Transition Elements  
 180-212/222\* (4) Organic Chemistry  
 180-257 (4) Analytical Chemistry  
 180-203/213\* (3) Physical Chemistry  
 180-350 (3) Earth, Air, Fire, Water  
 or 180-307 (3) Environmental Analysis

\*students who have the CEGEP equivalent of any one of these courses must replace it with one course chosen from the block 180-273 through 507-404 in List B (for 180-203/213) or from the block 180-302 through 180-402 (for 180-212/222).

**Chemistry List B:** (8 or 9 credits)

to be selected from the following, subject to the requirement that at least one course must include a laboratory.

180-273 (1) Chemical Kinetics  
 180-345 (3) Molecular Properties & Structure I  
 180-355 (3) Molecular Properties & Structure II  
 180-365 (2) Statistical Mechanics  
 180-363 (2) Physical Chemistry Lab.  
 180-393 (2) Physical Chemistry Lab. II  
 180-556 (3) Advanced Quantum Mechanics  
 507-404 (3) Biophysical Chemistry  
 180-367 (3) Instrumental Analysis I  
 180-377 (3) Instrumental Analysis II  
 180-567 (3) Chemometrics: Analysis of Chemical Data  
 180-302 (3) Organic Chemistry III  
 180-362 (2) Advanced Organic Chemistry Lab.  
 180-402 (3) Advanced Bio-Organic Chemistry  
 180-531 (3) Chemistry of Inorganic Materials  
 180-455 (3) Polymer Chemistry  
 180-591 (3) Advanced Coordination Chemistry  
 180-543 (2) Chemistry of Pulp & Paper  
 180-392 (3) Integrated Inorganic/Organic laboratory  
 186-210 (3) Introduction to Mineralogy

or 186-220 (3) Principles of Geochemistry  
 or 186-580 (3) Aqueous Geochemistry  
 or 186-542 (3) Chemical Oceanography

**Geography List A:** (12 credits)

183-201 (3) Geographic Information Systems I  
 183-203 (3) Environmental Systems  
 183-216 (3) Geography of the World Economy  
 183-272 (3) Landforms & Environmental Systems

**Geography List B:** (15 credits)

to be selected from the following:

183-200 (3) Geographical Perspectives on World Environmental Problems  
 183-302 (3) Environmental Analysis and Management: Problems and Policy  
 183-305 (3) Soils and Environment  
 183-321 (3) Climatic Environments  
 183-322 (3) Environmental Hydrology  
 183-350 (3) Ecological Biogeography  
 183-372 (3) Running Water Environments  
 183-408 (3) Geography of Unequal Development  
 183-410 (3) Geography of Underdevelopment: Current Problems  
 183-306 (3) Geographic Information Systems II  
 or 183-308 (3) Principles of Remote Sensing  
 183-495 (3) Field studies - Physical Geography  
 or 183-398 (3) Field studies in Human Geography  
 or 183-494 (3) Urban Field Studies  
 or 183-496 (3) Regional Geographical Excursion: Barbados  
 or 183-497 (3) Field studies in Geography: Coastal Marsh Plant Ecology  
 or 183-499 (3) Subarctic field studies in Geography: Schefferville

**Geoscience List:** (3 credits)

to be selected from the following:

186-200 (3) The Terrestrial Planets  
 186-201 (3) Understanding Planet Earth  
 186-320 (3) Elementary Earth Physics  
 195-210 (3) Introduction to Atmospheric Science  
 195-220 (3) Introduction to Oceanic Sciences  
 195-315 (3) Water in the Atmosphere

**Mathematics List A:** (21 credits)

189-222 (3) Calculus III  
 189-235 (3) Algebra I  
 189-236 (3) Linear Algebra I  
 189-314 (3) Advanced Calculus  
 189-315 (3) Ordinary Differential Equations  
 189-323 (3) Probability Theory  
 189-324 (3) Statistics

**Mathematics List B:** (15 credits)

189-203 (3) Principles of Statistics I  
 189-222 (3) Calculus III  
 189-223 (3) Linear Algebra  
 189-314 (3) Advanced Calculus  
 189-315 (3) Ordinary Differential Equations

**Mathematics List C:** (9 credits)

to be selected from the following

189-242 (3) Analysis I  
 189-243 (3) Real Analysis  
 189-317 (3) Numerical Analysis  
 189-318 (3) Mathematical Logic  
 189-338 (3) History and Philosophy of Mathematics  
 189-348 (3) Topics in Geometry  
 308-202 (3) Introduction to Computing I  
 308-203 (3) Introduction to Computing II

**Physics List A:** (21 credits)

198-230 (3) Dynamics of Simple Systems  
 198-232 (3) Heat and Waves  
 198-241 (3) Signal Processing  
 198-259 (3) Lab in Mechanics, Heat & Optics  
 198-340 (3) Electricity and Magnetism

198-342 (3) Electromagnetic Waves  
or 198-434 (3) Optics  
198-446 (3) Quantum Physics

**Physics List B:** (12 credits)

198-240 (3) Computers for Physics  
198-342\* (3) Electromagnetic Waves  
or 198-434\* (3) Optics  
198-436 (3) Modern Physics  
198-439 (3) Laboratory in Modern Physics

\* Both of 198-342 and 198-434 are required for the Mathematics and Physics option.