

Psychology's Graduate Course List for 2009-2010

Key: Fall = Sept-Dec, Winter=Jan-April, Summer=May-August. See weights at the end of each description.

Department

CANCELLED! **Psychology 9010. (Fall 2009). Applied Behavior Analysis. TBA.** This graduate course focuses on behavioral principles and their application to diverse populations. You will read about the philosophy of behaviorism and experimental and applied behavior analysis. There is a unique technical language to this course; an undergraduate course would help in your understanding of behavioral principles but is not prohibitive to taking the course. Students can expect to read textbooks and articles related to this topic; class discussions will focus on the readings and students understanding. There will be number of tests and short papers. Half course (0.5); one term.

Developmental

Now a Fall Course! **Psychology 9431. (Fall, 2010). Research in Developmental Psychology. X. Chen.** This course will focus on conceptual, design, and analytic issues in research on behavioural development. The topics will include observation in laboratory and naturalistic settings, interviews and standardized tests, developmental changes and differences, longitudinal studies, applications of HLM and SEM, qualitative methods, and cross-cultural research. Data presentation and publication will also be discussed. Half course (0.5); one term. **Tuesdays, 1:00-4:00, WH 20E. Start date: Tuesday, September 15, 2010.**

Psychology 9438. (Winter 2010). Neuropsychological Foundations of Social and Cognitive Development. B. Morton. The course will focus on developmental origins of and changes in patterns of brain activity related to core aspects of cognitive and social functioning including (but not limited to) emotion processing, mother-infant attachment, executive functioning, and theory of mind. Discussions and readings will be multi-disciplinary in nature and will touch on genetic, experiential, and evolutionary influences on the development of human brain function. Half course (0.5); one term. **Mondays, 9:00 am to 12:00 noon, WH 36. Start date: Monday, January 4, 2010.**

Psychology 9499. Directed Research in Developmental Psychology. Developmental PhD students who have successfully completed their PhD Comprehensive Examinations must take this half course over two consecutive terms, usually in the PhD II year. The purpose of the course is to expose students to theory and research in substantive areas that they normally would not cover in work with their PhD supervisor. Students must find a willing supervisor from among the faculty in the Psychology Department, and with that supervisor, develop a plan of activity for the course. At a minimum, the course should entail attending the supervisor's research group meetings, participating in data collection and analysis for ongoing studies, and writing a research report on some aspect of the data. If time allows, students also may participate in designing and running short studies or experiments. The written product normally will be due during the exam period of the second semester, and should take the form of a journal manuscript. The course supervisor will provide a grade of PASS or FAIL for the course. Half course (0.5); two terms.

Personality and Measurement

Psychology 9540 (Fall 2009 & Winter 2010 terms). Research Design. R. C. Gardner. This course serves as a general survey and introduction to statistics at the graduate level, stressing a conceptual understanding and appreciation of major analytic procedures. Topics covered include the logic of inferential statistics, correlation and regression, univariate analysis of variance (both traditional and

regression approaches), multivariate analysis of variance, multiple regression, discriminant function analysis, canonical correlation, factor analysis and causal modelling. Most applications of the procedures focus on SPSS. Full course (1.0); two terms. **Wednesdays, 9:00 am to 12:00 noon, SSC 7409/7405. Start date: Wednesday, September 16, 2009.**

Psychology 9550. (Fall 2009). Multivariate Analysis. A. Klein. This graduate-level half-course provides in-depth coverage of major topics for the analysis of data sets with multiple dependent variables. The topics are part of a classic methods curriculum and applicable to a wide range of research questions. Topics will include introduction to matrix algebra, screening of multivariate data, MANOVA, profile analysis, repeated measures designs, basic random and mixed effects models, discriminant analysis, and exploratory factor analysis. The 9540 course (Research Design) is required as a prerequisite, unless otherwise negotiated with the instructor. SPSS will be used for data analysis. Textbook information will be available from the instructor two months ahead of the course's starting date. Half course (0.5); one term. **Wednesdays, 9:00 am to 12:00 noon, SSC 8438/8440. Start date: Wednesday, September 16, 2009.**

Psychology 9542. (Winter 2010). Multilevel Modeling and Factor Analysis. A. Klein. This advanced methods course delivers a more in-depth coverage of two of the most relevant techniques for psychological and social-science research. The use of multilevel models becomes important when, beyond individual-level characteristics, contextual factors are critical determinants of individual human behavior. The course will provide an introduction to mixed effects models and hierarchical models which are suited to separate individual-level from group-level effects in settings where groups (e.g., families, work teams) randomly occur. In the second part of the course, factor analysis models will be covered, including topics such as factorization, rotation, factor scores, factor-based reliability, and factor-based clustering of items. The Psych 9540 course (Research Design) is required as a prerequisite, unless otherwise negotiated with the instructor. The previous attendance of either Psych 9550 (Multivariate Analysis) or Psych 9555 (Intro to Structural Equation Modeling) is highly recommend. SPSS will be used for data analysis. Textbook information will be available from the instructor two months ahead of the course's starting date. Half course (0.5); one term. **Wednesdays, 9:00 am to 12:00 noon, SSC 8438/8440. Start date: Wednesday, January 6, 2010.**

Psychology 9580. (Fall 2009). Research in Personality Assessment. R. Goffin. (cross-listed with undergraduate course Psychology 3580.) Addresses reliability and validity issues as well as several contemporary topics in assessment such as multitrait-multimethod analysis, personality testing in personnel selection, and control of dissimulation or "faking" of personality test responses. The course includes a hands-on research component. Half course (0.5); one term. **Tuesdays and Thursdays, 9:30-11:30am, in WL257.**

Cognition and Perception

Psychology 9199. Advanced Research in Cognition. Area Faculty. This is an independent study course that is required for all PhD students in the Cognition Area. Once the two stages of the written comprehensive examination have been completed successfully, a student will choose a faculty member other than their primary supervisor and conduct a research project with them leading to a report in the form of an article. The goal of the course is to allow the student to gain knowledge and conduct research in an area of Cognition that is not their primary topic of study. Half course (0.5); two or more terms.

Psychology 9100. (Fall 2009) Fundamental Issues in Cognition/Perception. P. Minda. This course aims to provide graduate students with exposure to classic and current research in cognitive psychology. We will read and discuss articles on the major topics in the field, including high-level perception, categorization, attention, working memory, knowledge, language, and thought. The readings will encompass theoretical approaches, behavior research, computational modeling, and cognitive neuroscience research related to the central topics. Meetings will follow a seminar format, in which students will discuss

the readings for each class. To frame the discussion for each meeting, the instructor will provide background and any needed tutorials. Marks will be based on participation and written work. This course is limited to 12 students and preference will be given to students in Cognition and Perception. Half course (0.5); one term. **Thursdays, 9:30 - 12:30, SSC 8440. Commencing Thursday, September 16, 2009.**

Psychology 9120. (Fall 2009). Sentence Comprehension. K. McRae. People's ability to understand language is central to functioning in today's society. In concert with this, researchers have intensively studied the mental processes underlying this ability. Sentence comprehension lies basically at the "middle" of the types of processes required to understand language (i.e., given a continuum that goes from recognizing individual sounds of the language up to being able to represent the meaning or gist of stories or discourses). This course will introduce students to important concepts, issues, theories, and models that play central roles in current approaches to how people understand sentences. Grades will be based on participation and written work. Half course (0.5); one term. **Mondays, 1:00 - 4:00 pm, SSC 8409. Start date: Monday, September 14, 2009.**

Psychology 9112. (Winter 2010). Reading. D. Jared. This course will cover theories and research on reading with a focus on the cognitive processes involved in word recognition. Topics will include orthographic coding, phonological and morphological processing, eye movements in reading, reading development, and dyslexia. Grades will be based on participation and written work. It is expected that students will have taken Psychology 9101- Language and Concepts. Half course (0.5); one term. **Thursdays, 9:00 am to 12:00 noon, SSC 8409. Start date: Thursday, January 7, 2010.**

Social

Psychology 9702. (Winter 2010). Research Methods in Social Psychology. L. Campbell. This course will acquaint students with the major research designs and procedures in social psychology, as well as explore recent methodological innovations that were designed to address issues unique to social psychological research. The objectives are to develop a firm grasp of the research methods available, including the application of these methods in research settings, and statistical considerations of these methods. Topics to be covered include, but are not limited to, validity and reliability, mediation and moderation, field research, modelling interdependence (data from groups of 2 or more), multi-level modelling, methods for the study of social cognition, structural equation modelling, and meta-analysis. Half course (0.5); one term. **Tuesday afternoons, 1:00 - 4:00 pm, SSC 8438/8440. Start date: Tuesday, January 5, 2010.**

Psychology 9710. (Fall 2009). The Psychology of Morality. C. Seligman. The course will examine the extent to which empirical investigation and subsequent theorizing of social behaviour can explain (and perhaps justify) our moral positions and behaviour. The course will consider the origin, development, and social expression of morality, primarily from a social psychological perspective. The class format will be lectures and discussions, jointly and/or sequentially taught by the instructor and students. Evaluation will consist of class participation, 15-20 page final paper, presentation(s) and six or seven 2-page thought papers regarding the weekly readings. Half course (0.5); one term. **Wednesdays, 1:30 - 4:30 pm, SSC 8409, starting Wednesday, September 16, 2009.**

Psychology 9729. (Fall 2009). Group Dynamics. R. Sorrentino. This course will consider concepts and research findings related to groups and their properties. Among the topics to be considered are: social interaction and communication in groups, the basis of group influence, group cohesiveness, group norms and the conformity process, group structure and leadership, and intragroup and intergroup effect. Half course (0.5); one term. **Tuesday afternoons, 1:30 to 4:30 pm, SSC 8409. Start date: Tuesday, September 15, 2009.**

Industrial/Organizational

CANCELLED! Psychology 9601. Foundations in Industrial and Organizational Psychology. The purpose of this course is to provide a broad overview of core topics in industrial and organizational (I/O) psychology. This course is intended as an entry-level course for new students to the I/O psychology program and is designed to prepare students for more advanced courses in job analysis and personnel selection, criterion development and performance appraisal, work attitudes, leadership and motivation, and group processes and teamwork. Students will be required to complete assigned readings in advance and be prepared to discuss the material in class. Faculty within the I/O area will take responsibility for guiding discussion in areas of relevance to their interests and expertise. This is an "extra" course restricted to first year I/O graduate students and typically meets for about one hour every other week. May be offered. Details to follow in September, 2009. Zero weighted course (0.0); one term.

Psychology 9621. (Fall 2009). Work Attitudes and Behaviour. N. Allen. This seminar is designed to familiarize students with theory and research on work attitudes and behaviour. The course begins with an overview of construct development and measurement issues as they pertain to work attitude research. We will then focus on the two most widely studied work attitudes -- job satisfaction and work commitment -- and discuss their development, correlates, and consequences. Particular consideration will be given to withdrawal intentions / behaviour, organizational citizenship behaviour, and workplace deviance behaviour. Throughout the course, emphasis will be placed on the critical evaluation of theory and research as well as on their implications for practice in applied settings. Half course: one term. **Tuesday afternoons, 1:30 - 4:30 pm, SSC 8438. Start date: Tuesday, September 15, 2009.**

Psychology 9612. (Winter 2010). The Psychology of Personnel Selection, Recruitment, and Job Analysis. R. Goffin. This course will cover the application of psychological theory and methods for the purpose of insuring that the particular individuals hired by an organization are likely to be successful employees. Job analysis and competency modeling provide the starting point for recruitment and selection by determining required employee attributes and alligning employee attributes with organizational goals. Additionally, the course will cover employee recruitment, and a variety of approaches to personnel selection. Cost/benefit considerations in personnel selection will be covered under the rubric of utility analysis. Half course; one term. **Tuesdays, 1:00 - 4:00 pm, SSC 8409. Start date: Tuesday, January 5, 2010.**

Clinical

Psychology 9300. (Fall 2009). Professional Foundations of Clinical Psychology. I. Nicholson. The course serves as an orientation to professional issues relevant to all areas of clinical psychology. Ethics, standards of practice, legislation, and other professional issues will be considered. This course is restricted to Clinical Students. Half course (0.5); one term. **Monday afternoons, 1 to 4 pm, starting September 14, 2009, in Rm 1, 357 Westminster Rd. (yellow brick house in front of WH).**

Psychology 9301. (Winter 2010). Clinical Skills Pre-practicum. N. Kuiper This course is designed to provide clinical psychology students with an initial orientation to fundamental issues and skills that underlie assessment, intervention, and evaluation. Substantial practice in basic interviewing techniques, using a programmed micro-skills approach, will be one of the major components of this course. Students may also receive some preliminary practice using several standard cognitive-behavioral techniques. Examples of other topics that may be covered include therapist issues, the therapeutic relationship, client issues, assessment, and goal-setting procedures. The course will focus on helping each student developing a framework for understanding practical concerns and issues relating to clinical work. Pre-requisites: Successful completion of Psychology 9300 and current enrolment in the clinical psychology graduate program. Half course (0.5); one term. **Thursday afternoons, from 1 to 4pm, starting Jan 7/10, in Rm 1, 357 Westminster Rd. (yellow brick house in front of WH).**

Psychology 9310. (Fall 2009). Child Psychopathology and Diagnosis. E. Hayden. This course will familiarize students with current concepts and research on the major psychological disorders of childhood,

including issues of classification, phenomenology, course, and major etiological theories. A developmental psychopathology perspective will be taken throughout, with an emphasis on lifespan continuities and discontinuities of psychopathology and factors linking typical development to psychopathological processes. Current approaches and methods in psychopathology research will be examined. Class size is limited to 15 students. In the case that student demand exceeds course capacity, enrollment preference will be given to clinical program students. Half course (0.5); one term. **Tuesdays, 1:00 - 4:00 pm, WH36. Start date: September 15, 2009.**

Psychology 9320. (Winter 2010). Psychotherapy Approaches. D. Dozois. This course will introduce students to important concepts, issues, and theories in contemporary psychotherapy. The course will examine the theoretical rationales, goals, therapeutic techniques, and efficacy of several different therapeutic approaches, broadly subsumed under psychodynamic, cognitive, behavioral, humanistic, and experiential modalities. This course will also address various issues in psychotherapy such as investigating effectiveness and assessing psychotherapy outcome. Through lectures, class presentations, readings, videos, class discussions, and experiential class exercises, students will critically evaluate the theories and techniques of major approaches to psychotherapy. Enrolment is restricted to clinical psychology students. This course is intended to serve as an overview course for more junior clinical students. Half course (0.5); one term. **Mondays, 1:00 - 4:00 pm, WH 20. Start date: Monday, January 4, 2010.**

CANCELLED! Psychology 9322. (Winter 2010). Intervention with Children. G. Reid. This course offers an overview of interventions for psychosocial problems in children. The focus will be on individual therapeutic interventions with children with a systems perspective. Exposure to parent and family interventions will be provided along with an understanding of environmental systems that impact on interventions with children (e.g., schools, physicians, mental health system). Major types of interventions, and treatments for most common disorders of children will be covered. Knowledge of developmental factors in intervention and empirical support for interventions will be highlighted throughout. Prerequisite or Co-requisite: Psychology 621a/9310: Child Psychopathology. Also, course enrolment is strictly limited to no more than 10 students and preference will be given to senior clinical students. If the pre-registration figure exceeds 10, the instructor will make the final decision about the students in the class. The instructor will notify students by late June about who will be allowed to enroll. Half course (0.5); one term.

Psychology 9343. (Winter 2010). Quantitative Clinical Cognitive Science and Assessment. R. W. J. Neufeld. Emphasis is on analytic modeling and assessment of cognitive dysfunction, where predictions emanate from closed-form derivations, over and above computer simulation. Scheduled topics include: formal-modeling redress of psychometric issues in the study of differential cognitive deficit; epistemic advantages of formal modeling of clinical phenomena; principal methods of model selection, parameter estimation, recovery and sensitivity analysis; mixture-model provision for individual differences; Bayesian mediation of group-level findings to assessment of individual clients; cognitive- and statistical-science principled evaluation of treatment-regimen efficacy; connectionist-modeling extensions of stochastic analytic modeling; contributions of formal clinical cognitive science to clinical cognitive neuroscience, entailing vascular- and electro-neurophysiological measurement (notably fMRI); nonlinear-dynamical-systems (chaos-theoretic) implementations; and quantitative approaches to appraising prominent clinical hypotheses. Students present seminars on prominent contemporary topics (e.g., clinical-science Markov Chain Monte Carlo applications), or on applications to their own research domain. Primary resources include 2 special sections of *Psychological Assessment*, an APA-publications volume (each edited by the course instructor), and a special issue of the *Journal of Mathematical Psychology* (co-edited by the course instructor). Undergraduate first courses in calculus and linear/matrix algebra are required, with advanced calculus being desirable, though not essential; students wishing to access preparatory resources may contact the instructor, and/or consult chapter 1 of his edited "Advances in Clinical Cognitive Science: Formal Modeling of Processes and Symptoms", 2007, APA Pubs. The course is open to all students, however clinical-program students have priority, in deference to their "Advanced Clinical Research Methods" requirement. Half course (0.5); one term. **Fridays, 11:00 am to 2:00 pm. Room 1, 357 Windermere Road (Westminister Hall). Start date: Friday, January 8, 2010.**

Psychology 9344. (Fall 2009). Theory and Practice of Clinical Science. P. Hoaken. This course meets the clinical program requirement for a course in clinical research methods. Clinical psychology is a discipline that is made challenging and exciting by the vast number of contentious issues that continuously exist. For instance, can psychologists diagnose "abnormality"? Does "alcoholism" exist? Does psychotherapy work? This course is designed to assist students to critically assess the diverse and often opposing viewpoints so frequently encountered in clinical psychology, and moreover to explore what methodological approaches might profitably be brought to bear to reconcile these controversies. Half course (0.5); one term. **Wednesdays, 1:00 - 4:00 pm, WH 36. Start date: Wednesday, September 16, 2009.**

Psychology 9370. History and Systems of Psychology. N. Kuiper. The purpose of this course is to provide clinical psychology graduate students with an opportunity to obtain credit for completing a course in the area of history and systems of psychology. As such, this course is restricted to clinical area students only. Psychology 9370 is designed as a reading course and consists of a series of individualized weekly written assignments. Each weekly assignment is to be handed in to the instructor on or before the due dates indicated in the course outline. **Please note that there are no extensions or exemptions from these due dates** . The course will be graded on a PASS/FAIL basis. Each weekly assignment must be handed in by the due date and receive a passing grade, in order to receive a PASS for this course. Spring, 2010.

Psychology 9380. Clinical Psychology Proseminar 2009-2010. N. Kuiper. This proseminar course consists of a series of workshops, brownbags and two clinical program meetings (1 in the fall and 1 in the spring). Typically, there are two workshops and six brownbags per year. Presentations focus on various clinically relevant topics, and are made by adjunct clinical faculty, core faculty, or other guest speakers. Workshops are typically a half-day or day-long, with each providing in-depth coverage of a specific topic of interest to clinical students. The proseminar series is a requirement of the clinical program, with all students (except those completed or on internship) expected to attend all of the events that are part of the proseminar series. This course is limited to clinical students. Zero weighted course; three terms. **Thursdays, 12:00 - 1:00 pm, Room TBA, September 10, 2009 until August 31, 2010.**

Clinical Practica

Psychology 9800. (Fall 2009& Winter 2010). Clinical Assessment Practicum. I. Nicholson and R.W.J. Neufeld. This course is designed to provide clinical students with basic skills in the administration, scoring, interpretation, and integration of several major psychological assessment instruments currently used in clinical practice with adults and children. Supervised practical experience assessing adults and children in clinical settings is included. Emphasis is also placed on the integration of assessment data and report writing. There will also be discussions of current issues in clinical assessment including basic issues of psychometrics. Prerequisites: Limited to clinical students who have already taken Psychology 9300, 9301. A course in psychopathology, either Psychology 9310 or 9311 are required as either prerequisites or corequisites. Full course (1.0); two terms. **Wednesday mornings, 9:30 am to 12:30 pm. Start date: September 16, 2009, in Rm 1, 357 Westminster Rd. (yellow brick house in front of WH).**

Psychology 9805, 9806, 9807, 9808, 9809, 9810, 9811, 9812, 9813 or 9814. Clinical Practicum. L. Swartzman. This clinical practicum involves placement of clinical students with an adjunct clinical faculty supervisor in one of our clinical settings (adult or child). Prerequisites: For clinical students who have completed Psychology 9300, 9301, 9800, and 9310 or 9311. Clinical students will complete 9805 before using 9806 for the next practicum placement, complete 9806 before using 9807 for the subsequent practicum placement and so on. Half-course (0.5 or 180 hours)=9805 to 9819; two or more terms. Quarter-course (0.25 or 90 hours)=9820 to 9839; two or more terms. **Thursday afternoons, 1:30 - 4:30 pm, WH 36.**

Psychology 9850, 9851, 9852, 9853 or 9854. Applied Research Practicum. L. Swartzman. This applied research practicum involves placement of clinical students in any one of a range of local service delivery settings (including physical and mental health delivery settings, community agencies, etc.) where they

undertake and/or serve as consultants for on-site research projects. "Research" in this context is broadly defined. Students work under the supervision of the course instructor and, when appropriate, may also be co-supervised by an on-site psychologist or other researcher. Those interested in taking this course are encouraged to speak with the course instructor as soon as possible, so that their particular interests, abilities and time constraints can be matched with the research needs of the service setting. NOTE: Enrolment in this course is limited to PhD clinical students. Prerequisites: Permission of instructor, and, preferably, successful completion of a graduate level applied research course or its equivalent (e.g., Program Development, Evaluation, and Marketing (9341); Psychotherapy Research (9342); Clinical Research Methods (9340)). Clinical students will complete 9850 before using 9851 for the next practicum placement, complete 9851 before using 9852 for the subsequent practicum placement and so on. Half-course (0.5 or 180 hours)=9850 to 9854; two or more terms. Quarter-course (0.25 or 90 hours)=9855 to 9859; two or more terms. **Thursday afternoons, 1:30 - 4:30 pm, WH 36.**

Psychology 9890. Clinical Internship. N. Kuiper. This course is a full-year (2000-hour) internship for clinical students who have completed all course and practicum requirements, and have made substantial progress on their dissertation. Typically, students are expected to submit a first draft of their dissertation prior to leaving on internship. The internship must be carried out at an approved setting, and written permission is required from both the supervisor and the Director of the Clinical Psychology Program.

Behavioural and Cognitive Neuroscience

Psychology 9202. (Fall 2009 & Winter 2010). Research Seminar in Behavioural and Cognitive Neuroscience. K.-P. Ossenkopp. Faculty and students in Behavioural and Cognitive Neuroscience and related areas meet every week for one hour to report on ongoing research. Some didactic topics are also covered. Half course (0.5); two terms. **Wednesdays, 12:30 - 1:30 pm, SSC 8440. Start date: Wednesday, September 16, 2009.** (to be confirmed in May 2009).

Psychology 9222. (Fall 2009). Cognitive Neuroscience of Memory. S. Kohler. The past 20 years of academic research have led to an interesting and powerful amalgamation of cognitive psychology and neuropsychology that is now captured within the discipline of cognitive neuroscience. In this field, the focus of interest is on understanding the relationship between the brain, cognitive processes (i.e, the mind), and observable behaviour. The rise of cognitive neuroscience has benefited enormously from the advent of new technologies, such as functional brain imaging in humans. The goal of the present course is to review current knowledge in cognitive neuroscience that relates to memory processing. Emphasis will be placed on studies in humans, although research in non-human primates may also be considered. The course will start with a brief review of neuroanatomy and of the methods used in cognitive neuroscience. Subsequently, we will do an in-depth survey of the relevant theories and related research by examining various types of memory, including working memory, episodic memory, and semantic memory among others. This course assumes a good working knowledge of upper undergraduate-level biological and cognitive psychology. Half course (0.5); one term. **Wednesdays, 2:00 - 5:00 pm. Start date: Wednesday, September 16, 2009. SSC 8438-8440.**

Psychology 9223. (Winter 2010). Neuroimaging of Cognition. J. Culham. Brain imaging, particularly functional magnetic resonance imaging (fMRI), has become a common tool to study specialized human brain regions involved in cognitive functions. The course will be comprised of a combination of lectures and tutorials using Brain Voyager software. The lectures will cover brain imaging technology, current techniques for experimental design and analysis, and a discussion of the merits and limitations of neuroimaging as a tool for cognitive neuroscientists. The tutorials will cover fMRI data structure, preprocessing, and analysis. The course will emphasize the development of skills that are important for a career in academia: grant-writing, oral presentations, critical thinking, and peer reviewing. By the end of the class, students should be able to read, understand, and critique papers in brain imaging. Half course (0.5); one term. **Mondays, 1:00 - 4:00 pm, SSC 7405 & SSC 7409. Start date: Monday, January 4, 2010.**

Neuroscience 9519. (Fall 2009). Computational Neuroscience I: Data Analysis. P. Gribble. The goal of this one-semester graduate course is to provide students with a basic set of skills using a number of different data analysis techniques that are commonly used in Neuroscience research. Students will build up a "toolbox" of useful computational techniques that they can use in their own research using [Matlab](#), which will be used throughout the course. No previous experience in Matlab or in programming is required. Half course (0.5); one term. **Fridays, 9am to 12 noon.**

Neuroscience 9506. (Winter 2010). Statistics for Neuroscience. P. Gribble. The goal of the seminar is to provide students with the opportunity to gain a deeper understanding of the logic behind inferential statistics, and to learn a common base of standard multivariate statistical techniques. There will be a practical aspect to the course, namely learning to use R for statistical computation and graphical display of data. Topics covered in the course include: logic of statistics & experimental design; t-tests; the General Linear Model; type-I error & post-hoc tests; Analysis of Variance (ANOVA); Analysis of Co-Variance (ANCOVA); Multivariate ANOVA (MANOVA); correlation & regression; Multiple regression; model benchmarking; Chi-Square; non-parametric statistics; statistical issues in fMRI analysis. Although it is listed as a Neuroscience course, Psychology graduate students are welcome to take it. Half course (0.5); one term. **Fridays, 9am to 12noon.**