

## Graduate Course List for 1991-1992

Courses below are sorted by Area of Specialization: Clinical, Cognition, Developmental, Educational, Industrial/Organizational, Learning and Animal Behavior, Measurement, Personality, Psychobiology and Clinical Neuropsychology, Sensation and Perception, and Social.

Key: a=Sept-Dec, b=Jan-April, y=Sept-April, no letter=Sept-April. See weights at the end of each description.

### LEARNING AND ANIMAL BEHAVIOR

**501. Advanced Seminar in Learning. Area Faculty.** This weekly seminar, chiefly for students in the learning area, will be attended on a regular basis by several faculty members. The object will be to review current research topics in learning at an advanced level. All students in learning are expected to attend and participate. Second and Third Year students may wish to take the course for credit. Full course; two terms.

**502b. Evolution of Learning and Memory\*. D. Sherry.** Learning and memory, like all other biological processes, are subject to natural selection. Natural selection acts on heritable variation in structure and behavior to produce adaptations: traits with specific functions and design features. This course will draw on data from animals and humans to examine the evidence for heritable variation in learning and memory, and evidence that learning and memory possess adaptive properties. Adaptive specializations, multiple memory systems, and evolutionary costs and benefits of learning and memory will be examined. The role of learning and memory in solving problems in spatial orientation, foraging, and social behavior will be described, along with the effects of sexual selection on cognitive capacities. The neuroanatomical consequences of evolutionary change in learning and memory will be examined, as will the influence of learning and memory on the process of natural selection and evolutionary change in behavior. \*Also available as an Advanced Topic in Psychology. Half course; one term.

### SENSATION AND PERCEPTION

**508a. Seminar in Sensation and Perception. R. Gurnsey.** Faculty and students in Sensation and Perception and related areas will meet once a week to discuss ongoing research and contemporary issues in sensation and perception. Half course; one term.

**516b. Computational Perception. R. Gurnsey.** This course will focus on computational approaches to perception, particularly visual perception. Topics will include spatial filtering, perceptual organization, color perception, recovery of surface orientation, and object recognition. Emphasis will be placed on Marr's (1982) tripartite theory of early visual processing and his emphasis on three levels of theoretical analysis. Half course; one term.

### DEVELOPMENTAL

**658a. The Child in the Family. D. Pederson.** The purpose of this course is to consider the influence of family process and structural variables on children's development. Examples of process variables are parents' knowledge of and theories about child development, their own developmental histories, as well as the huge research literature on child rearing practices. Maternal employment, divorce, reconstituted families, parental age and education, siblings and sex of the child are examples of structural variables. We will start by considering traditional approaches to the study of the impact of the family on the child; spending a week reflecting on methodological and conceptual issues and then acquire some vocabulary from family systems theories. The middle part of the course will consider developmental issues and we will end by examining the family in the context of the community and broader society. Half course; one term.

**531b. Research Methods in Developmental Psychology. L. Zarbatany.** This course will focus on conceptual, design, and analytic issues in research on behavioral development. The topics will include age as an organizing variable; longitudinal, cross-sectional, and sequential designs; stage models and their analysis; reliability, change scores, and regression to the mean; observational and interview methods. Data presentation and publications will also be discussed. Half course; one term.

## MEASUREMENT

**540. Research Design. R. 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. Students are encouraged to become familiar with the major computer statistical packages. Full course; two terms.

**544a. Factor Analysis: Basics, Interpretation and Practical Application. R. Harshman.** Common Factor and principal components model, comparison of cluster analysis with factor analysis, introduction to working with matrices, algebraic and geometric interpretations of factor analysis, good and bad methods of determining the number of factors (and what happens when you get it wrong), orthogonal and oblique rotations, "simple structure" and its frequent misuse, factor loading vs factor score estimates, interpretations of factors in different contexts, rules of thumb that ain't necessarily so, testing factor loadings and factor loading differences for statistical significance, how factor analysis for test development differs from its use for data exploration and construct discovery, longitudinal factor analysis and brief introduction to three-mode factor analysis. Types of data for input to factor analysis (binary, n-ary, ordinal, etc.). The student will do several factor analyses using computer programs such as SPSS and/or BMPD and/or SAS, and the results will be discussed in class. Brief discussion of current methods and principles of cluster analysis will be present, time allowing, to clarify the distinct roles and advantages of each methodology. Half course; one term.

**545b. Factors, Clusters, and Model-making: A 2nd Course in Psychometrics. R. Harshman.** This course builds on the basic concepts and introductory matrix algebra of the Factor Analysis course. We consider two-way and three-way cluster analysis. INDSCAL-CANDECOMP, PARAFAC, and Tucker's Three-mode Factor Analysis will be discussed. If time permits, we will also look at analysis of asymmetries (such as in stimulus confusion matrices, migration or communication matrices, etc.) You will learn how to use factor analysis to develop or test theories. You will also be shown how to build your own multivariate models for data analysis and/or theory testing, and how to use Bootstrapping and/or Jackknifing as ways to provide statistical tests and confidence intervals for factor loadings, model parameters, fit values, etc. You will "get your hands dirty" (i.e., will be encouraged to do real research). For example, you could explore the application of three-way methods to real data of interest and/or explore some psychometric issues (e.g., number of cluster factors) by analyzing simulated data. You might try model building and testing in your area of psychology. It is recommended that you take the Introductory Factor Analysis course as a prerequisite (but those who can't and who know some matrix algebra, come talk with me). Personal computers will be the preferred working environment; the "Matlab" PC package will be used for quick and easy testing of ideas and matrix models with minimal programming. Half course; one term.

## COGNITION

**550a. Concept Theory. P. Denny.** Concepts are the building blocks of thoughts. We will review the recent explosion of new theories about concepts, emphasizing the work of Keil, Lakoff, Medin, and Brooks, among others. Half course; one term.

**553y. Cognitive Research. S. Lupker.** The purpose of this course is to give students an opportunity to acquaint themselves with some areas of Cognition that are unrelated to their main interests. Approximately five "hot" topics will be selected by the class and material on these topics will then be presented in a seminar format. A subset of the topics will then be selected and students (in pairs or triplets) will be asked to create a research proposal and carry out a study in the area. Half course; two terms.

## **SOCIAL**

**560a. Theories in Social Psychology. J. Olson.** This course presents an overview of the theories and content areas of experimental social psychology. Topics covered include learning approaches, attitudes, attribution, social cognition, social influence, and group processes. Readings come from a text on theory and from contemporary journal articles. The course is a combination lecture/discussion format, and evaluation will consist of one take-home exam and one research proposal. Half course; one term.

**561b. Research Methods in Social Psychology. C. Seligman.** A coverage of the major empirical designs and procedures in social psychology, illustrated with examples from the current literature. A goal of the course is the development of student research suitable for the M.A. thesis or an original study. Half course; one term.

**564a. Applied Social Psychology. C. Seligman.** The course will introduce students to current content areas and methods of applied social psychology. The first part of the course will discuss techniques and procedures common to most areas of applied social psychology (e.g., surveys, consultation, field research) and the second part of the course will emphasize the contributions social psychologists have made to a number of content areas (e.g., environment, law, health). Students will be evaluated on one exam, a term paper, and a class presentation. Half course; one term.

**566b. Social Psychology of Thought and Action. R. Sorrentino.** This course will consider concepts and research findings related to the interaction of motivation and cognition in determining social behavior. Topics to be discussed follow four dimensions: 1) the Self (e.g., self conflict and interpersonal behavior; the self, achievement, and personal goals); 2) Affect (e.g., affect and social cognition; affect, attribution, and empathy; emotion, cognition, and action); 3) Control (e.g., antecedents and implications of memory distortion; uncertainty, motivation and cognition); 4) Goals (e.g., applications of memory models to motivational phenomena; the role of goals and control in information processing; a theory of action emergence). The classes will be interactive in nature. Half course; one term.

## **PERSONALITY**

**582a. Current Controversies and Issues in Personality. J.-P. Rushton.** Topics might include: 1. Traits vs situations vs interactionism?, 2. Nature vs Nurture re. intelligence?, 3. Internal vs external causes of aggression?, 4. Why do people behave altruistically?, 5. What are emotions?, 6. Is the self-concept useful?, 7. Are there sex differences?, 8. Does psychotherapy work? Half course; one term.

## **INDUSTRIAL/ORGANIZATIONAL**

**591y. Practicum in Industrial/Organizational Psychology. J. Meyer.** This course offers students the opportunity to apply psychological theory to practical problems in industry and business. Teams of students working under faculty supervision, are assigned to projects with participating organizations. Although the nature of the projects will depend upon the needs of the organizations, typical projects include the development/evaluation of selection and performance appraisal procedures and the development and analysis of attitude surveys. This practicum is for Industrial/Organizational graduate students only. Half course; two terms.

**597a. Special Topics in Industrial/Organizational Psychology: Work Motivation and Leadership. J.**

**Meyer.** This course will provide a survey of the work motivation and leadership literature. We will begin with a discussion of theories of motivation and how these theories can be put into practice to improve productivity and reduce absenteeism and turnover. We will then turn our attention to the role of the manager as a leader (motivator) in organizations. Again we will discuss theory and research as well as practical application, including the selection and training of managers. Half course; one term.

## EDUCATIONAL

**606b. Educational Assessment. A. Corkill.** The course will provide an overview of theory, methods and issues in educational assessment. Particular emphasis will be placed on measures relevant to classroom teaching and learning, including readiness, intelligence, achievement, and diagnostic and prescriptive measures. Students will also consider the applicability of developments in instructional psychology to educational assessment. Half course; one term.

## CLINICAL

**621b. Child Psychopathology. D. Wolfe.** This course will familiarize students with theory, research and diagnosis in developmental psychopathology, ages 2-16. Coursework will cover the principle DSM-III-R categories for childhood disorders, with emphasis on etiology, diagnosis and course of each disorder. Half course; one term.

**626b. Clinical Research Methods. J. Neufeld.** The purpose of this course is to inform students about the clinical use of quantitative methods designed to answer immediate applied and research questions. Basic mathematical computations are discussed in terms of their uses for developing formal (quantitative) clinical hypothesis and for condensing clinical data. Half course; one term.

**627b. Adult Psychopathology. J. Neufeld.** This course is designed to familiarize students with theory and research in psychopathology. Seminars will focus on issues surrounding the construction and validity of major diagnostic systems and the disorder subsumed in these systems. Of particular concern will be issues related to the etiology, diagnosis, and prognosis of each disorder. Half course; one term.

**630b. Current Perspectives in Psychotherapy. T. B. A.** 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 effectiveness of several different approaches to therapy, including classical psychoanalysis, object relations, cognitive-behavioral, client-centered, and gestalt therapies. Half course; one term.

**635a. Professional Foundations of Clinical Psychology. D. Wolfe.** The course serves as an orientation to professional issues and skills relevant to all areas of clinical psychology. Ethics, standards of practice and service, consultation methods and other professional activities will be considered. Preference given to Clinical students. Half course; one term.

**636b. Pre-practicum in Clinical Skills. N. Kuiper.** This course is designed to provide clinical students with practice in fundamental clinical skills underlying assessment and intervention. Interviewing skills are taught with a clinical perspective. Students also complete a variety of exercises focusing on basic cognitive-behavioral intervention techniques. Some interviewing with patients in a clinical setting will be arranged. Students will also attend case presentations relating to other clinical practica courses. Pre- or Co-requisites: for clinical students who have taken Psychology 636a, and 621a/b or 627a/b, and a graduate half course in psychometric theory. Half course; one term.

**614y. Clinical Assessment Practicum. L. Swartzman.** The course is designed to provide clinical students with skills in the administration, scoring, interpretation, and integration of several major psychodiagnostic instruments currently used in clinical practice with adults and children. Supervised experience assessing adults or children in clinical settings is included. Emphasis is also placed on the

integration of assessment data and report writing. Prerequisites: For clinical students who have already taken Psychology 635a/b, 636a/b, 580a/b, and 621a/b or 627a/b. Half course; two terms.

**615y. Advanced Assessment Practicum in Clinical Psychology. L. Swartzman.** This advanced assessment practicum involves placement of clinical students with an adjunct faculty supervisor in one of our clinical settings (adult or child). Prerequisites: For clinical students who have completed Psychology 609y or 641y. Half course; two terms.

**641y. Clinical Intervention Practicum. N. Kuiper.** This intervention practicum involves placement of clinical students with an adjunct faculty supervisor in one of our clinical settings. Prerequisite: For clinical students who have already completed an assessment practicum, Psychology 635a, 636b, 621 a/b or 627a/b, and a graduate half-course in psychometric theory. Half course; two terms.

**649y. Advanced Intervention Practicum in Clinical Psychology I. N. Kuiper.** This advanced intervention practicum involves placement of clinical students with an adjunct faculty supervisor in one of our clinical settings. Prerequisite: For clinical students who have already completed an initial clinical intervention practicum. Half course; two terms.

**659y. Advanced Intervention Practicum in Clinical Psychology II. N. Kuiper.** This advanced intervention practicum involves placement of clinical students with an adjunct faculty supervisor in one of our clinical settings. Prerequisite: For clinical students who have completed 649y. Half course; two terms.

**769y. Advanced Intervention Practicum in Clinical Psychology III. N. Kuiper.** This advanced intervention practicum involves placement of clinical students with an adjunct faculty supervisor in one of our clinical settings. Prerequisite: For clinical students who have completed Psychology 659y. Half course; two terms.

## PSYCHOBIOLOGY AND CLINICAL NEUROPSYCHOLOGY

**526b. Clinical Neuropsychology.** This course focuses on those aspects of neuropsychology which are pertinent to a neurological setting. Topics include: the neurological examination, the cerebrovascular system, epilepsy; testing for disorders of perception, memory, visuospatial ability, constructional ability and language. Videotapes and detailed consideration of individual patients' test patterns will form an important part of the instructional content. Prerequisite: Psychology 525a or undergraduate physiological psychology. Half course; one term.

**709a. Structure of the Nervous System. C. Vanderwolf.** This course includes: demonstration and gross dissection of human and sheep brain; microscopic study of serial sections of the human brain; and a series of lectures and required readings. Student progress is assessed by oral examinations. Half course; one term.

**719y. Research Seminars in Psychobiology. M. Goodale.** Faculty and students in Psychobiology and related areas meet every two weeks to report on ongoing research. Some didactic topics are also covered. Half course; two terms.

**732a. Advanced Topics in Psychobiology I: Neuropsychology of Vision. M. Goodale.** In this course, we will discuss the brain structures and mechanisms involved in vision as revealed by the study of visual disorders in patients with brain damage. While the focus of the course will be on human neuropsychology, we will also discuss research on non-human primates and other animals where appropriate. Topics will include: a review of the anatomy and physiology of the primate visual system, cortical blindness, optic ataxia, visual agnosia, hemispheric differences in visual processing, visual neglect. Some recent models of the function architecture of the visual system will also be discussed. Half course; one term.

**733b. Advanced Topics in Psychobiology II: Vertebrate and Invertebrate Neuroethology. P. Cain.**

Neuroethology is a hybrid field that combines the approaches of laboratory and field ethology to determine the neural mechanisms of natural behaviors. This seminar course draw from neuroethological studies involving both vertebrate and invertebrate species. Topics to be covered may include the command neuron concept, neural control of behavior in aplysia, echolocation and prey detection in bats, visual processing and predatory behavior in amphibia, the neuroethology of birdsong and predatory aggression in cats, and brain graphing in neural circuits related to natural behavior. Students are expected to have completed an undergraduate or graduate course in biopsychology, physiological psychology, or neuroscience as a prerequisite. In the absence of this prerequisite, permission of the instructor is required. Half course; one term.

## **PRACTICA**

**723a. Practicum in Clinical Neuropsychology I.** This is an introduction to practical applications of Clinical Neuropsychology. The course of instruction includes attendance at the interdepartmental Neuropsychology rounds, as well as appropriate hospital rounds in the clinical setting. Typically there will be supervised practical experience in taking medical/neuropsychological histories, administering and scoring basic tests of intelligence and memory on neurological patients, and administering and scoring of specialized neuropsychological tests. Prerequisite: Psychology 526b. Half course; one term (first or second term).

**724b. Practicum in Clinical Neuropsychology II.** As for Clinical Neuropsychology I, but for advanced students in Clinical Neuropsychology. It will typically include supervised report writing on individual cases, reading pertinent literature, and learning special procedures. For senior students, it will include an introduction to ethical principles of practice as they are pertinent to Clinical Neuropsychology. Prerequisite: Psychology 526b. Half course; one term (first or second term).