

Graduate Course List for 1996-1997

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.

DEPARTMENT

692a. Mathematical Methods in Applied Cognitive Psychology. R. W. J. Neufeld. Basic concepts and quantitative techniques involved in developing formal models of cognitive-task performance will be discussed. Emphasis will be on stochastic models of continuous dependent variables, such as response latency. There will be some discussion, however, of discontinuous variables, involving response categories. As well, some consideration will be given to deterministic models, including those of nonlinear dynamic interactions ("chaos theory"). Issues of model testability and identifiability will be addressed. Focus here will be on detectability of changes in model structure and/or parameter values stemming from influences on cognitive functioning found in applied settings (e.g., effects of psychopathology; effects of stress). Previous experience with calculus is required. Half course; one term.

LEARNING AND ANIMAL BEHAVIOR

501. Advanced Seminar in Learning. Area Faculty. The purpose of this weekly seminar is to review current research topics in learning and animal behavior at an advanced level and to present current research findings of area graduate students and faculty. All students in learning and animal behavior are expected to attend and participate. Second and Third Year students may wish to take the course for credit. Full course; two terms.

504b. Comparative Cognition. W. A. Roberts. A number of cognitive abilities in animals will be discussed within a comparative framework. We will particularly be concerned with the extent to which cognitive processes found in people may be found in animals. Some of the topics to be covered will be language in animals, human-ape communication, working memory, reference memory, spatial cognition, timing, serial learning, counting, concept formation, and problem solving. The course will run on a mixed lecture-seminar format. The instructor will present some of the information in introductory lectures. Each student will be asked to present some articles in class and to write and present a paper on a topic chosen in consultation with the instructor. Half course; one term.

SENSATION AND PERCEPTION

512b. Seminar in Sensation and Perception: Vision and Consciousness. K. Humphrey. In the past decade or so there has been a rapidly growing interest among researchers working in disciplines as diverse as neuroscience, cognitive science, psychology, and artificial intelligence in the nature of consciousness. The course will examine some of this research, particularly that concerned with 'visual awareness'. We will discuss neuropsychological research as well as studies of neuropsychology patients, and normal subjects that has attempted to elucidate the mechanisms underlying visual awareness. In addition to examining the findings and theoretical claims of researchers, we will be concerned with methodologies employed in such research. Half course; one term.

DEVELOPMENTAL

539a. Attachment Theory: Developmental, Affective, Cognitive and Clinical Perspectives. D.

Pederson. Attachment theory was founded in clinical practice and object relations theory. John Bowlby recognized the empirical limitations of psychoanalytic theory and turned to ethology for a conceptual framework. Mary Ainsworth followed Bowlby's lead by providing observational procedures that were particularly sensitive to individual differences in the organization of infant-caregiver relationships. This ethological orientation and the assumption that attachment was based upon the infant's need for security fostered an explosion of research on early relationships in the 1980s. More recently the psychoanalytic roots have shown new vitality with a focus on the roles of representations and affect regulation. In this course we will first survey the history of attachment theory and some of the classic studies. The role of representation will be introduced by considering research on the Adult Attachment interview. This will serve as a segue into a review of social cognitive development, especially on reflective self and theory of mind. The function of affect and of affect regulation in developing relationships will be examined in the context of functionalist and discrete emotion theories. We will conclude with an investigation of the implications for understanding and intervention in clinical populations such as individuals with depression or conduct disorders; special populations such as adolescent mothers; and circumstances such as loss and abuse. Half course; one term.

538b. Peer Relationships in Childhood. X. Chen. The focus of the course will be on theoretical and empirical issues in the study of qualitative and quantitative aspects of children's peer relationships. We will also pay attention to contextual factors that may be associated with children's difficulties in social interactions and relationships. The topics that will be discussed in this course include theories and measurement of peer relationships, function and structure of friendship, developmental origins of children's social difficulties, aggression and social withdrawal, and psychopathological outcomes of peer rejection. The roles of the family and social-cultural contexts in the development of interpersonal competence and skills will also be discussed. Given the particular interests of the students in this course, topics may be deleted, added, or expanded. 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. Extensive use is made of SPSS/PC+. Full course; two terms.

541a. "Hands on" Introduction to Matrix methods and Basics of Factor and Principal Component Analysis. R. Harshman. This course has two complementary objectives: (a) introducing students to working with matrices for data analysis and modelling, and (b) introducing students to factor/component analysis of data (and the closely related technique of multidimensional scaling or MDS). **Martices.** Students will use the PC (or Mac) based MATLAB program, which makes manipulation and decomposition of matrices, and graphical display of data, quick and easy. This gives students a concrete "hands-on feel" for such things as a matrix product, inverse, SVD, eigenvalue, etc. Students will also become more skilled at graphic display of data and simple programming. **Factor Analysis.** The study of factor analysis and MDS provides an ideal application for these matrix methods, and shows how one can use them to build powerful yet simple models for multivariate data. By the end of the course, students will write their own factor/component analysis program (really! and it will take less than 1 page in MATLAB!) and apply it to real data. Lecture and class discussion will also cover issues like the number of factors problem, oblique and orthogonal rotation factors, Principal Components vs Common Factor analysis, communalities, factor scores, interpretation and comparison of factor (and MSD) solutions. For students who are interested in conceptual or perceptual maps or spaces (of attitudes, pain, values, publications...), we will show how to apply one's factor analytic expertise to multi-dimensional scaling. The texts are: (1) McDonald, *Factor analysis and Related Methods*, Lawrence Erlbaum (2) Student Edition of *Matlab* (version that includes the program on floppy and a manual), (3) Kim, *Introduction to Factor Analysis* (the Sage volume). Half course; one term.

542b. Individual Differences in Intelligence and Mental Abilities. P. A. Vernon. This course will provide a broad overview of the main issues and controversies that have arisen in the development of theories about the nature of intelligence. Topics to be discussed will include major theories of intelligence from Galton to present day; theories about the growth and modifiability of intelligence; evidence concerning environmental and genetic explanations of individual differences in intelligence; recent cognitive and biological approaches to the study of intelligence; and issues related to the measurement of intelligence. This course will consist of a combination of lectures, seminar presentations, and discussion of material covered in the readings. Half course; one term.

881b. Selected Topics in Quantitative Research Methods. R. Harshman. The content of this course will be determined by student interests, but presumably will be based in some combination of the following: **Flexible statistical methods (randomization tests, bootstrapping, nonparametric tests).** This section would introduce recently developed statistical methods that are based on comparing your observed results with those obtained by randomly resampling or reshuffling your data (in a computer). These are simpler to understand than the classical methods because they substitute the number crunching power of modern PCs for classical mathematics. As a result, they are not dependent on the assumptions of normality, or even (in some cases) random sampling. These methods are known as permutation tests, randomization tests, and bootstrapping. The more familiar distribution-free statistical tests ("nonparametric statistics") will also be discussed, and compared with these newer methods.

Use of computer graphics for exploration and presentation of relationships. This section would show students how to exploit the capabilities of MATLAB or other powerful graphics software for data exploration and analysis, and presentation of results. For example, students could explore 2D and 3D scatterplots, response surface plots, spectral plots, "volume" plots of 3D functions, etc. Interested students could also explore the related area of analysis and manipulation of images (brain scans, microphotographs, etc.). In PCs with sound cards, it would also be possible to experiment with auditory representation of data patterns or relationships and auditory assessment of the effects of various data manipulations.

Simulations and Monte Carlo studies. Modern PCs make it possible to explore and test theories by means of computer stimulation of a phenomenon. Simulation also can be used to assess the implications or the significance of observed features of "real" data. In a Monte Carlo study, one generates multiple sets of artificial data obeying the theoretical constraints but with appropriate kinds of random error added, and then analyzing the data sets, comparing them to theoretically expected data characteristics or to known properties of real data. In addition, one can use them to study the observable implications of the theory underlying the simulations. METLAB provides a powerful and easy to use tool for setting up and running such stimulation studies on one's own PC. In this optional section, principles of data and random error construction would be considered, and some example situations done, preferably in the area of the student's own research.

"Hands on" exploration of some standard multivariate methods. This optional section of the course would briefly review the unified basis for, and approach to, the family of common multivariate methods including correlation, multiple regression, ANOVA/MANOVA, discriminate and canonical analysis, in a way designed to give an intuitive understanding of their common basis and intimate relationships. Students would write some simple MATLAB programs to do these analyses by manipulating dummy-coded canonical correlations (the MATLAB programs should be less than a page long per method, at least without statistical tests). Here one would "learn by doing".

Student Research/Thesis Related issues. In-class discussion or individual student exploration of interesting special problems/issues that arise from student research activities. Half course; one term.

PERSONALITY

583a. Contemporary Topics in Personality and Person Perception. S. Paunonen. In this course, we

will evaluate critically some issues and controversies prominent in research in personality and perception. The general focus of the course will be on the situational and personal factors that determine the perceptions people have of themselves and of others. Specific topics will include current thinking about accuracy and bias in person perception, issues involving stranger ratings of personality, the semantic determination of personality ratings and self-reports, and the search for moderators of behavior consistency and predictability. We will also study some of the recent research on facial features of people, and discover how those cues influence our thinking about others. In addition, contemporary issues surrounding the so-called Five Factor Model of personality will be evaluated, especially as they relate to the area of personal perception. Half course; one term.

COGNITION

576a. Controversies in Cognition. P. Brown. A number of controversial issues that cross traditional boundaries within the discipline will be examined. Each issue will have two strongly-presented but opposing points of view. Issues may include development of expertise cognitive modelling of schizophrenia, free will, and localization vs distributed models of mental function. Actual list of issues will be selected in accordance with students' interests. Evaluation will involve some combination of seminar presentation, essay, and exam, and will be discussed at the first meeting. Half course; one term.

575a. Cross-Cultural Cognition. P. Denny. Recent research and theory concerning the ways in which cognitive processes differ in gathering, hunting, agricultural, industrial, and post-industrial societies. Topics may include contextualization, integrative thinking, universality of logic, language relativity, mathematical concepts, school achievement, and the cognitive effects of literacy. Half course; one term.

SOCIAL

561b. Research Methods in Social Psychology. R. Sorrentino. This course will acquaint students with the major research designs and procedures in social psychology. The objectives are to develop the ability to evaluate critically the research literature, to gain practical experience in answering research questions by experimentation, and to gain practice in the writing of research proposals and reports. Half course; one term.

586b. The Psychology of Human Sexuality. W.A. Fisher. This course will provide a graduate level introduction to the psychological study of human sexual behavior, and will involve lectures, textbook readings, and journal article readings that focus on the history, methodology, theoretical approaches, and content areas (e.g., anatomy, physiology, sexual behavior, sexual health behavior, effects of pornography on behavior, sex differences in sexual behavior) that are important in this domain of study. Evaluation will be based on a mid-term and final essay examination, each worth 50% of student's final marks. Half course; one term.

INDUSTRIAL/ORGANIZATIONAL

841a. Topics in Industrial Organizational Psychology: Performance Appraisal and Related Issues. R. Goffin. As a topic within the area of industrial/organizational psychology, this course will cover research relevant to the application of psychological theory and methods for the purpose of appropriately measuring a key criterion variable within work-settings, that is, job performance. A variety of approaches to the measurement of performance will be discussed in detail and some of the more prominent topics will be the evaluation of performance ratings, and attempts to improve performance ratings. Half course; one term.

844b. Topics in Industrial Organizational Psychology: Motivation and Leadership. J. Meyer. This seminar course is designed to familiarize students with theory and research on motivation and leadership in a work context. We will discuss classic and modern theories of motivation and leadership and critically evaluate the research that has been conducted to test them. Implications for the design of motivation

systems and for the assessment and selection of managers will also be discussed. Half course; one term.

EDUCATIONAL

603b. Teacher Effectiveness. H. Murray. An examination of empirical research on characteristics that contribute to teaching effectiveness, and the application of this research to the training and evaluation of teachers. All methodological approaches to teacher effectiveness will be considered, including recent qualitative and constructivist models. Half course; one term.

CLINICAL

627a. Adult Psychopathology. D. Evans. 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.

634b. Intimate Violence: Children, Youth, and Family. D. Wolfe. This course will look at the causes and consequences of violence and abuse that originate in the context of intimate relationships. Beginning with parental abuse, we will look at the developmental implications of physical abuse, sexual abuse, and neglect across the lifespan. For adolescents we will also examine the nature of dating violence and its relationship to women abused in young adulthood and marriage. Theory, assessment, and treatment methods will be thoroughly discussed. Half course; one term.

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

636b. Pre-practicum in Clinical Skills. D. Evans. 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 several exercises focusing on basic cognitive-behavioral techniques. Arrangements will be made for students to attend case presentations relating to other clinical practica courses. Finally, if possible, some interviewing with patients in a clinical setting may also be arranged. Pre- or Co- requisites: for clinical students who have taken Psychology 635a, and 621a/b or 627a/b. Half course; one term.

610. Clinical Assessment Practicum. R. Martin and L. Swartzman. This 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. Full course; two terms.

615y. Advanced Assessment Practicum in Clinical Psychology. R. Martin. 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 610. Half course; two terms.

641y. Clinical Intervention Practicum. R. Martin. 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 covering psychometric theory. Half course; two terms.

649y. Advanced Intervention Practicum in Clinical Psychology I. R. Martin. 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. R. Martin. 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. R. Martin. 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.

619y. Health Psychology: Practicum. R. Martin. This intervention practicum involves placement of clinical students with an adjunct faculty supervisor in a clinical health psychology setting. Specific experience varies across settings. Students will meet with other intervention practicum students on a biweekly basis. Prerequisite: For clinical students who have already completed 641y. It would be advantageous but not essential for **Psychology 618a/b - Health Psychology: Theory** to have been completed prior to this practicum. Half course; two terms.

693. Clinical Internship. R. Martin. 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 advisor and the Director of the Clinical Psychology Program.

PSYCHOBIOLOGY AND CLINICAL NEUROPSYCHOLOGY

526a. 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 a part of the instructional content. Prerequisite: The equivalent of an advanced undergraduate Psychobiology course. Half course; one term.

709b. 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.

752y. Research Seminar in Psychobiology. C. Vanderwolf. Faculty and students in Psychobiology and related areas meet every week for one hour to report on ongoing research. Some didactic topics are also covered. Half course; two terms.

743b. Advanced Topics in Psychobiology: Hormones and Behavior. E. Hampson. Many different hormones are active in the vertebrate nervous system. This course will survey some of the putative interactions between brain, endocrine system, and behavior, in humans and other species. The hormones of the pituitary, adrenals, thyroid, gonads and pancreas will be emphasized, but other hormones may be included depending on enrollment. Topics to be covered will tentatively include: basic neuroendocrine relations, hormones and brain development, effects of various endocrine disorders on behavior and intellectual abilities in humans, pheromones, role of hormones in depression, eating disorders, stress, premenstrual syndrome, and maternal behavior. The course will have a seminar format. Some background in psychobiology or neuroscience will be assumed. Half course; one term.

PRACTICA

725a or y. Practium in Clinical Neuropsychology I. E. Hampson. 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 intelligence and memory on neurological 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 or two terms.

726b or y. Practicum in Clinical Neuropsychology II. E. Hampson. As above, 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 or two terms.
