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# Psychology

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## FACULTY

\*Year of initial appointment at Binghamton

Babb, Harold, *Professor Emeritus*, PhD, 1953, Ohio State University: Learning, motivation. (1971)\*

Burright, Richard G., *Professor*, PhD, 1966, University of Illinois: Sensory processes, gene-environment coactions, quantitative methods. (1963)

Connine, Cynthia M., *Professor and Coordinator of Cognitive Psychology Graduate Area*, PhD, 1986, University of Massachusetts at Amherst: Psycholinguistics, speech perception. (1987)

Connor, Jane M., *Associate Professor and Director of Undergraduate Studies*, PhD, 1971, University of Wisconsin: Cognition, statistics, developmental. (1973)

Deane, George E., *Professor Emeritus*, PhD, 1959, University of Connecticut: Learning, autonomic processes. (1961)

DiLorenzo, Patricia, *Professor*, PhD, 1981, University of Rochester: Neurophysiology of the chemical senses. (1985)

Donovick, Peter J., *Professor*, PhD, 1966, University of Wisconsin: Physiological, comparative neuropsychology. (1966)

Friedman, Alice, *Associate Professor*, PhD, 1985, Virginia Polytechnic Institute: Behavioral medicine. (1988)

Gerhardstein, Peter, *Assistant Professor*, PhD, 1993, University of Minnesota: Perception, memory, development. (1999)

Heyman, William, *Professor Emeritus*, PhD, 1954, New York University: Discrimination, perception. (1954)

Inhoff, Albrecht W., *Professor and Graduate Studies Director*, PhD, 1983, University of Massachusetts: Reading, eye-hand coordination, oculomotor control. (1987)

Isaacson, Robert, *Bartle Distinguished Professor*, PhD, 1958, University of Michigan: Limbic system, mechanisms of cell death and brain damage. (1978)

Klin, Celia, *Assistant Professor*, PhD, 1993, University of Massachusetts at Amherst: Cognitive psychology. (1994)

Levis, Donald J., *Professor*, PhD, 1964, Emory University: Behavior therapy, learning theory. (1972)

Lisman, Stephen A., *Professor and Director of Clinical Training and Director of the Psychological Clinic*, PhD, 1972, Rutgers University: Alcohol and behavior, psychopathology, behavior therapy. (1973)

Lynn, Steven J., *Professor*, PhD, 1976, Indiana University: Hypnosis, memory, suggestibility. (1996)

Miller, Ralph R., *Professor*, PhD, 1969, Rutgers-The State University: Information processing in animals. (1979)

Pastore, Richard E., *Professor*, PhD, 1969, Purdue University: Audition, psychophysics, speech perception. (1969)

Payne, David G., *Professor and Department Chair*, PhD, 1984, Purdue University: Memory, attention, human factors. (1984)

Pepper, Carolyn M., *Assistant Professor*, PhD, 1995, State University of New York at Stony Brook: Depression, trauma, behavior therapy, psychopathology. (1997)

Romanczyk, Raymond G., *Professor*, PhD, 1974, Rutgers-The State University: Autism, learning disabilities, behavior therapy. (1974)

Romero, Maria-Teresa, *Assistant Professor*, PhD, 1987, City University of New York: Neural plasticity, transplantation and biological rhythms. (1993)

Savage, Lisa, *Assistant Professor*, PhD, 1992, University of Minnesota: Animal models of memory. (1995)

Scobie, Stanley R., *Bartle Associate Professor*, PhD, 1970, Princeton University: Classical and instrumental learning, motivation. (1970)

Smotherman, William, *Professor*, PhD, 1974, Northern Illinois University: Developmental psychobiology. (1988)

Spear, Linda P., *Distinguished Professor and Coordinator of Behavioral Neuroscience Graduate Area*, PhD, 1975, University of Florida: Developmental psychobiology, psychopharmacology. (1976)

Spear, Norman E., *Distinguished Professor*, PhD, 1963, Northwestern University: Memory processing, developmental psychobiology. (1974)

Strouthes, Andrew, *Associate Professor Emeritus*, PhD, 1960, Temple University: Motivation, animal learning. (1963)

Westerman, Deanne, *Assistant Professor*, PhD, 1998, Case Western Reserve University: Human memory, human factors psychology. (1998)

Witt, Diane, *Assistant Professor*, PhD, 1989, University of Maryland: Hypothalamic neuropeptides: localization and function. (1996)

## Adjunct Faculty

Brandon, Karen O., *Adjunct Assistant Professor*, PhD, 1994, Indiana University: Behavior genetics, alcohol usage, personality. (1994)

Brandon, Thomas H., *Adjunct Associate Professor*, PhD, 1990, University of Wisconsin: Addictive behaviors, smoking, behavioral medicine, treatment outcome. (1990)

Chen, Andrea, *Adjunct Associate Professor*, PhD, 1989, State University of New York at Binghamton.

Colletti, Gep, *Adjunct Associate Professor*, PhD, 1977, Rutgers-The State University: Behavior modification with children and adults. (1978)

Grasso, Frank, *Adjunct Assistant Professor*, PhD, 1994, University of Massachusetts at Amherst: Sensory-dynamic systems/computer models-neural networks. (1994)

Major, Leslie, *Clinical Associate Professor*, MD, 1971, Duke University: Psychobiology of alcoholism, schizophrenia and affective behavior. (1980)

Myers, Greta, *Adjunct Assistant Professor*, PhD, 1986, University of Cincinnati: Human factors engineering. (1989)

Thirer, Joel, *Professor and Director of Physical Education, Recreation and Athletics*, PhD, 1976, Florida State University: Sport psychology, sociology of sport. (1989)

**Adjunct Clinical Faculty and Clinical Field Supervisors:** Approximately 15 licensed professionals in the Binghamton area hold this appointment and provide supervision in clinical practicum courses.

## UNDERGRADUATE PROGRAMS

Students interested in majoring in psychology are advised to seek information directly from the department office no later than their fourth semester, and preferably earlier. It is very important for transfer students intending to major in psychology to contact the undergraduate program director when they arrive on campus, or before. In order to declare their major, students should first meet with an academic adviser at the Psychology Department office. A faculty adviser will be assigned to the student, and the major requirements will be discussed. The student will then meet with their faculty adviser. At this point, students will receive permission to formally declare their major at the Harpur academic advising office. For potential and declared psychology majors, several handouts are available from the

Psychology Department office discussing topics such as major requirements, honors in psychology, research opportunities and the Undergraduate Psychology Club and the Psi Chi chapter at Binghamton. Psychology majors receive a BA upon graduation.

## Psychology Major

The major program requires a minimum of 14 or 15 four-credit courses, depending on which meets the distribution specified in the third listing below, plus one two-credit lab. These courses must be distributed as follows:

1. PSYC 111, 243 (previously numbered 343) and 344.

2. Three courses from PSYC 351, 353, 356, 358 and 362, and one corresponding two-credit laboratory course from PSYC 352, 354, 357 and 359.

3. Two four-credit courses from PSYC 406, 465, 470, 473, 475, 476 and 477, except that two four-credit courses from PSYC 392, 397, 490 or 499 may be substituted for **one** of the aforementioned courses.

4. Twenty-four additional elective credit hours from the Division of Science and Mathematics, 16 of those credits to be taken outside the Psychology Department, and of those, at least eight must be taken from the same department. Courses that do not meet the all-college science requirement (as indicated in the *Bulletin* at the time the course was taken) cannot be used to fill this requirement.

Some additional stipulations:

1. No independent studies, supervised teaching or internships may count toward satisfaction of the four elective courses required outside of psychology in the Division of Science and Mathematics.

2. Not more than four credits of PSYC 392, 397, 490 or 499 may count toward the minimal elective course requirements for the major, or eight credits if they are used to substitute for one course in the requirement of two 400-level courses, and no more than a total of 24 credits from PSYC 392, 397, 490 and 499 will count toward graduation. Thus, students should plan accordingly if they intend to use PSYC 499 for department honors (see below).

3. Students may not take more than 16 credits of PSYC 392, 397, 490 and 499, combined, with the same faculty member.

4. All courses used to fulfill the requirements for the major, including courses in other departments, must be passed with a grade of C- or better, except that a pass grade will be accepted for four credits from PSYC 392, 397, 490 or 499, and for one of the four elective courses required outside of the department in the Division of Science and Mathematics.

5. Except under very special circumstances,

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the minimal number of two 400-level courses in psychology must be taken at Binghamton, and students must take both upper-level courses under the instruction of two different faculty members in the Psychology Department.

The major requirements outlined above represent the minimal number of courses for a major in psychology. This minimal requirement provides considerable flexibility to develop a course of study that reflects an individual student's interests, abilities and appropriate preparedness for postgraduate study, training or employment. Thus, students are strongly urged to plan their program of study at Harpur in consultation with their advisers and the Career Development Center.

The department does not offer a formal minor in psychology, but students majoring in other related disciplines or programs should consult their advisers, the psychology undergraduate program director and other faculty regarding inclusion of appropriate psychology courses as electives in their individual curriculum plans.

The Psychology Department, within the Division of Science and Mathematics in Harpur College, has a strong research orientation. A solid experimental background at the undergraduate level forms an essential basis for further postgraduate study and training in all areas of psychology and related fields. Undergraduate students have the opportunity to become involved in ongoing research with faculty in the department by taking PSYC 392, 397 or 490, and are strongly encouraged to do so. In addition, it is generally possible for a student to volunteer to serve as an undergraduate research assistant in a faculty member's research program. This kind of experience, whether for academic credit or not, can be extremely valuable. Information on the specific types of research experience available through such independent study coursework is contained in a booklet available at the Psychology Department office, Science IV, Room 230. Prior to advance registration, students should contact directly the faculty member(s) in whose research program(s) they are interested. Such contact is essential and provides detailed information about prerequisites, requirements, and availability of opportunities for the coming semester. PSYC 391, 392, 397, 490 and 499 may be taken only with the consent of the instructor.

Some laboratory work in psychology courses involves work with lower animals. That fact is noted in the course descriptions for PSYC 354 and 357. In addition, research work in PSYC 391, 392, 397, 490 and 499 may also involve work with animals, depending on the research projects of particular faculty members.

PSYC 111 is a prerequisite for all other

courses in the department; it should be taken in the freshman year by potential majors (who should not take it Pass/Fail). Ordinarily it should be followed by PSYC 243 and by PSYC 344, which are prerequisites for most subsequent courses. Course-related experience in research typically is obtained by participation as a subject in psychological experiments or through alternate research arrangements in a number of psychology courses.

Only those courses or sections so designated in any given semester will fulfill Harpur's writing requirement; such designations change from semester to semester.

## Honors Program

Outstanding students are urged to consider the honors program in psychology. To be graduated with honors in psychology, "Distinguished Independent Work in Psychology," the student must attain a 3.5 GPA for all courses attempted that count toward satisfaction of the psychology major requirement and for all psychology courses taken, as well as a 3.0 GPA for all courses necessary for graduation. Students in the psychology honors program must propose a research project in conjunction with a faculty adviser who will sponsor the work. An honors committee composed of at least three Psychology Department faculty members, selected by the student in consultation with the adviser, evaluates the senior honors thesis proposal, the completed written thesis and the oral defense of the thesis. Students doing honors thesis work must register for at least four credits of PSYC 499, preferably distributed over two semesters. Nonpsychology majors or exceptional students who lack one or more of the psychology major requirements may petition the undergraduate program director for acceptance into the Psychology honors program. Further information regarding the honors program, procedures and deadlines may be obtained from the Psychology Department office. Questions about this program should be directed to the undergraduate program director in psychology.

## COURSE OFFERINGS/ UNDERGRADUATE

**NOTE: Unless otherwise noted, all undergraduate courses carry 4 credits and are offered every year.**

**PSYC 111. GENERAL PSYCHOLOGY** *every semester*  
The study of behavior—an overview of fundamental concepts, methods and results from major areas of psychological inquiry, including quantitative methods in the study of psychological phenomena, physiological bases of behavior, sensation, perception, motivation and emotion, learning, cognitive/symbolic processes, personality and social behavior. Exposure to methods of psychological research required either through direct participation

in research of department faculty, or by reading articles about psychological research and submitting written reports of methodology described in the articles.

**PSYC 112. LABORATORY IN GENERAL PSYCHOLOGY**  
*every semester, 1 credit*

Introduction to research in psychology through a series of experiments and demonstrations from a variety of subdisciplines, including learning, motivation, perception and cognition. Prerequisite or corequisite: PSYC 111.

**PSYC 220. DEVELOPMENTAL PSYCHOLOGY**

Human psychological growth and development. Selected lifespan issues from infancy, childhood, adolescence, adulthood and aging. Methods, results and theories considered. Prerequisite: PSYC 111.

**PSYC 223. BEHAVIOR DISORDERS**

Various criteria of behavior disorders compared and prevalent descriptive classifications considered in context of relationships between "normal" and "abnormal" behavior; implications concerning etiology of and therapy for behavior disorders sought from experimental evidence and current theories. Prerequisite: PSYC 111.

**PSYC 228. SOCIAL PSYCHOLOGY**

Psychological and biological bases of social behavior. Approaches to study of social behavior based on psychological data, concepts and methods are critically examined and exemplified by selected topics from contemporary research. Prerequisite: PSYC 111.

**PSYC 243. STATISTICAL ANALYSIS AND DESIGN**  
**(formerly PSYC 343)**

*every semester*  
Principles of experimental design and statistical analysis of psychological data: use and misuse of descriptive and inferential techniques from various areas of current psychological research considered. Emphasis on correlation, regression and analysis of variance related to factorial designs and the interactive influences of variables on psychological/behavioral measures. Prerequisite: PSYC 111.

**PSYC 327. COMPARATIVE PSYCHOLOGY**

Comparative and ethological study of how behavior is organized at various and representative levels of the animal kingdom. Behavioral patterns of individual organisms and/or groups considered in context of how these activities compare at different levels of phylogeny tree. Prerequisite: PSYC 111, PSYC 243 or junior standing in biology.

**PSYC 330. DRUGS AND BEHAVIOR**

How drugs affect behavior and the body. Psychoactive drugs are examined from pharmacological, physiological, psychological, medical, sociological, economic and historical perspectives. Topics include both currently licit and illicit drugs. Prerequisite: PSYC 111.

**PSYC 344. RESEARCH METHODS IN PSYCHOLOGY**

*every semester*  
Principles of research methodology and experimental design in psychological research with humans and animals. Research approaches used in various areas of modern scientific psychology will be considered. Emphasis will be on the design and execution of psychological research using observational, correlational and experimental methodologies. Sample demonstration procedures will be used in the class to illustrate the important

aspects of the conduct, analysis and reporting of psychological research. Students will also become familiar with the report writing style of the American Psychological Association. Prerequisites: PSYC 111 and 243.

**PSYC 351. EXPERIMENTAL PSYCHOLOGY (PERCEPTION)**

Experimental approaches to classical and modern topics in sensation, perception and cognition. Three hours of lecture/discussion per week. Prerequisite: PSYC 111. Prerequisite or corequisite: PSYC 243.

**PSYC 352. LABORATORY IN PERCEPTION** *2 credits*

Methodology and experiments in sensory, perceptual and cognitive processes. Prerequisites: PSYC 243 and 344. Prerequisite or corequisite: PSYC 351.

**PSYC 353. EXPERIMENTAL PSYCHOLOGY (MOTIVATION)**

Experimental procedures investigating drive and incentive functions. Three hours of lecture/discussion per week. Prerequisite: PSYC 111. Prerequisite or corequisite: PSYC 243.

**PSYC 354. LABORATORY IN MOTIVATION** *2 credits*

Methodology and experiments to study primary and secondary motivation in animals and humans. One 4-hour period per week. Prerequisites: PSYC 243 and 344. Prerequisite or corequisite: PSYC 353.

**PSYC 356. EXPERIMENTAL PSYCHOLOGY (LEARNING)**

Experimental approaches to understanding evidence and theoretical issues related to learning processes. Three hours of lecture/discussion per week. Prerequisite: PSYC 111. Prerequisite or corequisite: PSYC 243.

**PSYC 357. LABORATORY IN LEARNING** *2 credits*

Methodology and experiments in animal and human learning. Prerequisites: PSYC 243 and 344. Prerequisite or corequisite: PSYC 356.

**PSYC 358. EXPERIMENTAL PSYCHOLOGY (COGNITION)**

Experimental approaches to understanding evidence and theoretical issues related to problems in cognition such as attention, problem-solving and language/communication. An information-processing framework and computational models will be emphasized. Lecture format: 4 credit hours. Prerequisite: PSYC 111. Prerequisite or corequisite: PSYC 243.

**PSYC 359. LABORATORY IN COGNITION** *2 credits*

Methodology and experiments to study the nature and role of cognitive processes. Laboratory format. Prerequisite: PSYC 243 and PSYC 344. Prerequisite or corequisite: PSYC 358.

**PSYC 362. PHYSIOLOGICAL PSYCHOLOGY**

Structure and activity of nerve cells; functional anatomy of nervous system; data and theory concerning the physiological/neural bases of behavior and processes related to perception, learning and motivation of animals and humans. Prerequisite or corequisite: PSYC 243, or junior standing in biology or chemistry and consent of instructor.

**PSYC 382. PERSONALITY**

Selected theoretical and empirical approaches to examination of personality as dynamic component of behavior and thought processes. Prerequisite: PSYC 243.

### **PSYC 385. PSYCHOLOGICAL TESTS**

Basic methods, concepts and problems in development and use of psychological tests. Prerequisites: PSYC 111 and 243.

### **PSYC 391. PRACTICUM IN TEACHING COLLEGE**

**PSYCHOLOGY** *every semester, variable credit*  
Independent study involving teaching in particular course in psychology. Various assignments closely directed by course instructor, including development of syllabi and other course materials; construction and reading of examinations; lecturing and/or discussion leadership; laboratory supervision, academic counseling of students. May be repeated for total of no more than 8 credits. Credit may not be earned in conjunction with course in which student is concurrently enrolled. Does not satisfy major or all-college requirements. Prerequisites: successful completion of course in which you wish to be TA and permission of instructor. P/F only.

### **PSYC 392. INTRODUCTION TO PSYCHOLOGICAL RESEARCH**

*2 or 4 credits*  
An introduction to ongoing research in laboratory or applied settings for students not yet ready to undertake independent study (PSYC 397). Faculty-supervised exposure to the issues, phenomena, techniques and literature of a particular area of psychology. Students work on assigned research projects, individually or in small groups, to appreciate the nature of research in a particular program. Prerequisite: consent of instructor.

### **PSYC 397. INDEPENDENT STUDY**

*every semester, 2 or 4 credits*  
Exposure to literature, phenomena, problems and methods of a specific area through the student's development and conduct of a faculty/supervised research project. Specific student project must be agreed on by the faculty sponsor prior to registration. Prerequisite: consent of instructor.

### **PSYC 406. PSYCHOLINGUISTICS**

Survey of psycholinguistics. Theoretical issues, research methods and substantive findings in study of processes of language perception, production and acquisition. Models of language performance and its emergence in children. Prerequisite: PSYC 220, 351 or 358.

### **PSYC 465. HISTORY OF PSYCHOLOGY**

Historical background and development of contemporary thought and approaches in psychology. Origins, contributions and influences from philosophy and sciences; historical evolution of current psychological research and theory. Prerequisites: two courses from PSYC 351, 353, 356, 358 and 362.

### **PSYC 470 (also BIOL 470). EVOLUTION AND HUMAN BEHAVIOR**

Implications of evolutionary theory for understanding human nature, including: a) the relationship between human behavior and biological fitness in modern and premodern societies; b) evolutionary psychology; c) evolutionary ethics; and d) theories of culture as an evolutionary process. Prerequisites: junior or senior standing and an introductory course in BIOL, PSYC, ANTH or SOC.

### **PSYC 473. JUNIOR/SENIOR SEMINAR**

*every semester*  
Each seminar is designed to help the student integrate

knowledge of psychology through readings, discussions and assigned projects concerned with basic principles and enduring problems. Typically, several different topic sections of PSYC 473 are offered each semester. Examples of previous topics: medical genetics, psychology of aging, cognitive mapping, neurochemistry and behavior, psychology of aggression, biorhythms and behavior, psychology and technology, psychology of death and dying, psychology of eating and drinking, developmental neuropsychology. May be repeated for credit only under different topic with different instructor. Prerequisites: at least two courses from PSYC 351, 353, 356, 358 and 362, and at least one from PSYC 352, 354, 357 or 359, or consent of instructor.

### **PSYC 475. SELECTED TOPICS IN DEVELOPMENTAL PSYCHOLOGY**

Detailed consideration of selected issues (announced in advance) involving developmental lifespan psychology; i.e., all topics concern theme of age-related change. Phenomena, techniques, analysis, interpretations. Sample topics: perceptual learning/cognition in young and old; genetic factors in development; child development; experiential/nutritional influences and development; neural/behavioral plasticity and age; behavioral gerontology. May be repeated for credit if different topic offered. Prerequisites: at least two courses from PSYC 351, 353, 356, 358 and 362, and at least one from PSYC 352, 354, 357 or 359, or consent of instructor.

### **PSYC 476. SELECTED TOPICS IN CLINICAL PSYCHOLOGY**

In-depth examination of specific topic (announced in advance) concerned with behavior disorders. Problems and issues concerned with identification, treatment, assessment and interpretation. Sample topics: alcoholism; autism; eating disorders; phobias; schizophrenia. May be repeated for credit if different topic. Prerequisites: at least two courses from PSYC 351, 353, 356, 358 and 362, and at least one from PSYC 352, 354, 357 or 359, or consent of instructor.

### **PSYC 477. HUMAN FACTORS PSYCHOLOGY**

Review of the fundamentals of human perception, cognition and performance as they relate to the design of person/machine systems. Methodologies used to evaluate and develop person/machine systems are discussed, as well as engineering concepts relevant to the design and evaluation of person/machine systems. Prerequisites: PSYC 111, 243, 344 and 351 or 358.

### **PSYC 490. SELECTED PSYCHOLOGICAL METHODS AND TECHNIQUES**

*every semester*  
Supervised work in the ongoing research of a laboratory or applied program in psychology. Exposure to literature, problems and methods relevant to a specific, predetermined topic. Given the nature of research questions addressed in ongoing research programs, this exposure is accomplished by providing general, structured research training to groups of 10 or more students. Prerequisite: consent of instructor.

### **PSYC 499. ADVANCED INDEPENDENT STUDY**

*every semester, 2 or 4 credits*  
Individual student research under direct supervision of faculty member. Prerequisites: at least two psychology courses numbered 350 or above, strong academic record and, prior to registration, approval of a brief written prospectus on the nature and intent of work to be conducted. Prospectus must be submitted on a form avail-

able from the department office; requires approval by the faculty sponsor and the undergraduate program director. This course cannot be used to satisfy the upper-level psychology course requirement. While the course represents the curricular vehicle for students formally seeking "Distinguished Independent Study in Psychology" (see honors program), registration is not limited to students in this honors program.

## GRADUATE PROGRAMS

The program provides the student with a basic knowledge of the major areas of psychology and intensive training in theory and research in one of three areas: behavioral neuroscience/psychobiology, clinical psychology or cognitive psychology. There is a strong emphasis on direct laboratory experiences. The programs allow flexibility for individual students and encourage inter-area and interdisciplinary endeavors. Students also are required to receive formal training and experience in the teaching of psychology and ethical issues involved in research. Each student's faculty mentor and his or her MA, PhD advisory and dissertation committees are critical in helping the individual student to develop a program.

## Admission

Admission to the graduate program is open to qualified students with a bachelor's degree (or its equivalent) in psychology or a related discipline. Additional information, including a more extensive description of the regulations and requirements of the program, can be obtained from the director of graduate studies. Applicants are requested to submit a complete set of official transcripts, at least two letters of recommendation, a brief personal statement of their interest and goals, and scores from the Graduate Record Examination aptitude test and advanced test in psychology. The application form used to seek admission also serves as an assistantship application. Applicants to the clinical psychology program should have all credentials submitted by February 1; applicants to the behavioral neuroscience/psychobiology program and the cognitive program should complete their applications by February 15.

## TRANSFER STUDENTS

Transfer students, including those who enter with the MA degree, are required to satisfy qualitatively all core-course requirements. All MA theses presented to another institution must be reviewed at the time of admission by the departmental graduate committee, to ensure equivalence of work to that required at Binghamton.

The above review of transfer students' qualifications should be completed either prior to arrival or early during the first semester in residence.

## Master of Arts Program

Requirements:

1. A minimum of 32 credit hours approved by the departmental graduate committee and an overall GPA of B or better is required.

2. Regardless of area of specialization, all students receiving the MA enroute to the PhD in psychology must fulfill the core requirements. Currently, core requirements are satisfied by obtaining a B or better in each of the following three courses:

- a. PSYC 503. Statistics and Design I
- b. PSYC 523. Physiological Psychology
- c. PSYC 540. Psychopathology

and two of the following three courses:

- d. PSYC 508. Experimental Psychology: Sensation and Perception
- e. PSYC 509. Experimental Psychology: Conditioning and Learning
- f. PSYC 510. Experimental Psychology: Cognition and Memory

The intent of the core is to offer all students, regardless of area specialization, a broad and common background cutting across the discipline of psychology. In addition, two credit hours of PSYC 550 or PSYC 551, Ethics and Research, is required of all students.

Three of the core requirements should be completed by the end of the second semester, and the rest by the end of the fourth semester. Alternatively, students may satisfy core requirements by taking an equivalency examination. Equivalency examinations cover the same content with the same depth as the core courses and must be passed with a grade of B or better. Students do not receive course credit for the passing of equivalency examinations.

3. While the student is in residence, a minimum of one credit hour per semester of research (PSYC 596) is required during every semester to document the student's continuing involvement in ongoing research.

4. Active participation in psychology colloquia is expected.

5. Satisfactory completion of a thesis (PSYC 599) and a final oral examination administered by the student's MA advisory committee.

## Doctor of Philosophy Program

Requirements:

1. Successful completion of the MA thesis requirements.

2. Completion of PSYC 504, Statistics and Design II, with a grade of B or better. This course ordinarily is taken during the second semester of the first year. Details of other course

requirements are area dependent, and determined by the student's advisory committee.

3. While the student is in residence, a minimum of one credit hour per semester of research (PSYC 596, 698 or 699), to document the student's continuing involvement in ongoing research.

4. At the completion of formal coursework, a cumulative GPA of 3.0 or better must be obtained.

5. Completion of the department's teaching requirement by satisfactory completion of PSYC 590 (one credit hour), Teaching of Psychology, followed by teaching under supervision of department faculty.

6. Completion of the minor requirement, which consists of 12 credit hours in an area outside the department or within the department but outside the student's major area of specialization. A grade of B or better is required in each course taken.

7. In general, there is no minimum number of credit hours required for the PhD other than the course requirements for the MA and the minor. However, each student should check with his or her faculty adviser and area head about specific requirements.

8. Satisfactory completion of the PhD qualifying examination in the student's specialty field of concentration ("prelims").

Both the minor requirement and the qualifying exam are formulated by the student's PhD advisory committee in consultation with the student and may be reviewed by the Graduate Committee.

9. Satisfactory completion of the PhD dissertation (PSYC 699) and its defense.

## COURSE OFFERINGS/ GRADUATE

### \*PSYC 503. STATISTICS AND DESIGN I

Advanced statistical techniques in psychology, including small sample theory and analysis of variance. Required of all first-year students.

### \*PSYC 504. STATISTICS AND DESIGN II

Statistical techniques required in advanced psychological research. Prerequisite: PSYC 503 or equivalent.

### PSYC 505. STATISTICS AND DESIGN III

Advanced topics in statistics and design. Prerequisite: PSYC 504 or equivalent.

### +PSYC 508. EXPERIMENTAL PSYCHOLOGY: SENSATION AND PERCEPTION

A survey of fundamental methods, findings, principles and theories in the domains of sensation and perception.

### +PSYC 509. EXPERIMENTAL PSYCHOLOGY: CONDITIONING AND LEARNING

A survey of fundamental methods, findings, principles and theories in the domains of conditioning and learning.

### +PSYC 510. EXPERIMENTAL PSYCHOLOGY: COGNITION AND MEMORY

A survey of fundamental methods, findings, principles and theories in the domains of cognition and memory.

### PSYC 513. ADVANCED COGNITIVE PSYCHOLOGY

In-depth analysis of current research and theory in cognitive psychology. Prerequisites: PSYC 508, 509 and 510.

### PSYC 514. ADVANCED CONDITIONING AND LEARNING

Critical review of contemporary theories and phenomena in associative learning. Prerequisites: PSYC 508, 509 and 510.

### PSYC 515. ADVANCED SENSATION AND PERCEPTION

Explorations of modern research and theoretical literature in the areas of sensory and perceptual processes. Prerequisites: PSYC 508, 509 and 510.

### PSYC 516. MOTIVATION

Experimental methods, research findings and theory in psychology of motivation.

### \*PSYC 523. PHYSIOLOGICAL PSYCHOLOGY

Basic mechanisms of central nervous system activities, including neural and endocrine correlates of sensory and motor processes, attention, motivation, learning, memory.

### \*\*PSYC 537. SOCIAL PSYCHOLOGY

Major research, methods and theories in social psychology. Person perception, attitudes and persuasion, group processes, interpersonal communication.

### \*PSYC 540. PSYCHOPATHOLOGY

Examines models of abnormal behavior with special attention to sociocultural and biopsychological perspectives. Analyzes issues in classification, diagnosis and conceptualization of major categories of psychopathology, and reviews current research on the nature and etiology of psychological disorders.

### PSYC 541. ASSESSMENT THEORY (ASSESSMENT I)

Measurement theories of human behavior, including reliability, validity, generalizability and utility. Introduction to test development and item analysis for research and clinical purposes. Theoretical and practical issues related to assessment of cognitive abilities and personality. Recommended for first semester of first year.

### PSYC 542. CLINICAL ASSESSMENT (ASSESSMENT II)

Principles of behavior assessment, case conceptualization, hypothesis testing and functional analysis for the design and evaluation of treatment. Overview of methods of information gathering (direct observation, interviewing, analogue measurement, as well as psychological and developmental tests) in clinical decision making. Follows PSYC 541 in second semester of first year.

### PSYC 543. BEHAVIOR THERAPY APPROACHES

Theory, techniques and research behind behavioral therapy approaches, including Pavlovian conditioning techniques, operant conditioning approaches, systematic desensitization and related areas, implosive therapy, social learning approaches.

**PSYC 549. CHILD CLINICAL PSYCHOLOGY** *2 credits*

The psychological disorders of children and youth, focusing on theoretical issues, research and methodology, and clinical approaches to prevention and treatment. Highlights developmental issues, the psychobiology of childhood problems, and the role of family, school and peer influences. Pediatric psychology and coping with illness, stress and psychosocial disadvantage is emphasized.

**++PSYC 550. ETHICS, RESEARCH AND PROFESSIONAL ISSUES—CLINICAL** *2 credits*

Scientific and historical foundations of clinical psychology; ethical issues confronting researchers and practitioners; evolving aspects of training and practice. Required of all students not currently enrolled in research.

**++PSYC 551. ETHICS AND RESEARCH—EXPERIMENTAL AND PSYCHOBIOLOGY** *2 credits*

Practical experience through supervised work and training in department's research laboratories. Required of all students.

**\*\*PSYC 555. HISTORY AND SYSTEMS** *2 credits*

Survey of historical background and development of contemporary psychology including origins and influences of theories, development of systems within psychology, underlying philosophies of science. Prerequisites or corequisites: PSYC 503, 508, 509, 510 and 540, or permission of instructor.

**PSYC 561. SEMINAR IN SPECIAL TOPICS** *2-4 credits*

When course is offered, specific title is listed. Intended primarily for graduate students in Psychology Department, but other students with appropriate background may be admitted with consent of department or instructor.

**PSYC 570 (also BIOL 570). EVOLUTION AND HUMAN BEHAVIOR**

Despite the fact that Darwin's theory is more than 130 years old, attempts to understand human behavior in terms of evolutionary theory remain controversial. This course will critically examine the latest developments, including: a) human sociobiology; b) theories of culture as an evolutionary process; c) evolutionary approaches to psychology; and d) evolutionary approaches to morality. Three hours of lecture per week. No prerequisites. A brief tutorial of evolutionary theory will be offered at the beginning of the course for nonbiology graduate students.

**PSYC 571. NEUROANATOMY**

Functional neuroanatomy of human central nervous system. Three hours lecture per week. Prerequisite: course in physiological psychology or comparative anatomy or embryology.

**PSYC 572. NEUROPHYSIOLOGY**

Nervous activity and function. Membrane potential, initiation and propagation of impulses, synaptic and ephaptic communication, neuromuscular junction, spinal reflexes. Techniques for measurement and analysis of neural events. Two hours lecture, two hours laboratory per week.

**PSYC 573. NEUROCHEMISTRY**

Elements of neurochemistry; behavioral correlates. Synaptic transmission, hormonal influences, nutritional and genetic deficiencies. Simple technical procedures.

Prerequisites: PSYC 523 and one year of college chemistry.

**PSYC 574. PSYCHOPHARMACOLOGY**

Effects of chemical compounds on behavior. Drugs affecting learning, memory, emotional states, higher cognitive processes. Techniques for evaluation of drug effects and experimental design.

**\*PSYC 590. TEACHING OF PSYCHOLOGY** *2 credits*

Curriculum planning, instructional methods and evaluation, as applied to teaching of psychology at college level.

**PSYC 593. PSYCHOTHERAPY PRACTICUM**

*2 credits/semester*

Psychotherapy treatment under close supervision of clinical faculty. Increases integration of clinical and research skills. May be repeated. Prerequisites: PSYC 540, 541, 542 and enrollment in clinical training program. Begins first semester of second year and continues through conclusion of fourth year. Subsequent enrollment may be considered.

**PSYC 596. INDEPENDENT RESEARCH** *variable credit*

Independent laboratory research. Consent of instructor required prior to registration.

**PSYC 597. INDEPENDENT STUDY**

*2 or 4 credits/semester*

Areas of psychology not covered by other courses. Prerequisites: 12 hours of approved graduate credit and prior consent of instructor.

**PSYC 598. COMMUNITY PSYCHOLOGY PRACTICUM**

*1 credit*

Provides skills in community mental health procedures and practices. Individual supervision under direction of adjunct and clinical faculty. May be repeated. Prerequisites: enrollment in clinical training program and approval of director of clinical training. Recommended after completion of first-year clinical curriculum.

**PSYC 599. THESIS RESEARCH** *variable credit*

Consent of instructor required prior to registration.

**PSYC 603. CURRENT PROBLEMS IN LEARNING**

*2 credits/semester*

**PSYC 607. SEMINAR IN MEMORY AND COGNITIVE PROCESSES**

*2 credits/semester*

**PSYC 609. CURRENT PROBLEMS IN PHYSIOLOGICAL AND COMPARATIVE PSYCHOLOGY**

*2 credits/semester*

**PSYC 612. TECHNIQUES OF BEHAVIOR CHANGE**

*2 credits*

Current conceptual and practical knowledge of major specific therapy techniques, their appropriateness given different forms of psychopathology. Lectures, demonstrations, in-class practice, discussion. Recommended for first semester of second year.

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**PSYC 613. CURRENT PROBLEMS IN CLINICAL PSYCHOLOGY**

*2 credits*

Seminar topics vary according to needs and interests of students and faculty. Emphasis is on contemporary research and theory relating to major problems in psychopathology as well as a wide variety of intervention techniques; examples include alcoholism and addictions, autism and mental retardation, health psychology and primary prevention, physical and sexual abuse of children, family therapy, clinical neuropsychology and behavior genetics.

**PSYC 696. CLINICAL PSYCHOLOGY INTERNSHIP**

*variable credit*

Degree requirement for graduate students enrolled in clinical psychology program is to complete one year of full-time (about 40 hours per week) training or equivalent in internship program approved by American Psychological Association or by director of clinical graduate training of Psychology Department. Training usually received off campus. Taking this course reflects that student is currently enrolled in approved psychology internship program.

**PSYC 698. PREDISSENTATION RESEARCH**

*variable credit*

Independent reading and/or research in preparation for comprehensive examinations for admission to PhD candidacy, and/or preparation of dissertation prospectus. Graded on S/U basis only.

**PSYC 699. DISSERTATION RESEARCH**

*variable credit*

Research for and preparation of dissertation. Consent of instructor prior to registration.

**PSYC 700. CONTINUOUS REGISTRATION**

*1 credit/semester*

Required for maintenance of matriculated status in graduate program. No credit toward graduate degree requirements.

**PSYC 707. RESEARCH SKILLS**

*1-4 credits*

Development of research skills required within graduate programs. May not be applied toward course credits for any graduate degree. Prerequisite: approval of relevant graduate program directors or department chairs.

*\*Courses required of all students, regardless of area of specialization.*

*\*\*Required of all clinical students.*

*+Cognitive psychology students must take all three; clinical and behavioral neuroscience students must take two of the three.*

*++Either PSYC 550 or PSYC 551 is required of all students, as appropriate, regardless of area of specialization.*