

PSYCHOLOGY

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Courses given in Psychology have the subject code PSYCH. For a complete list of subject codes, see Appendix B

The courses and research opportunities in the Department of Psychology introduce students to the vast corpus of data on, and explanations of, human nature and human behavior. Through the study of abnormal behavior, aging, child development, cognitive processes, decision making, emotion, group behavior, infancy, language, learning and memory, personality, social perception, visual perception, and other related topics, students are introduced to the properties of sensory, cognitive, and affective systems, and of their interrelationships; to the reciprocal effects of one person on another; and to the effects on behavior of the physical, social, and cultural environment. The research programs of the faculty and students focus on the study of basic psychological mechanisms and, where appropriate, on relating basic research to the analyses and solutions of important societal problems.

The department, housed in Jordan Hall, maintains shop facilities and many computer-equipped laboratories. Bing Nursery School, located on campus at 850 Escondido Road, provides a laboratory for child observation, training in nursery school teaching, and research. It was constructed with funding from the National Science Foundation and a special grant from Mrs. Anna Bing Arnold and Dr. Peter Bing.

The department provides (1) courses designed for the general student, (2) a major program leading to the degree of Bachelor of Arts, including options for honors and a specialization in one of four content area tracks, (3) a minor program, (4) a coterminal master's degree program leading to the degree of Master of Arts, and (5) programs of graduate study and research leading to the degree of Doctor of Philosophy. Applications are not accepted for the master's degree except as noted below.

UNDERGRADUATE PROGRAMS

BACHELOR OF ARTS

Major Requirements—All students declaring a major in Psychology must complete a minimum of 55 units of course work in Psychology. All courses taken to satisfy the 55-unit requirement must be taken for a grade of 'C-' or better (except for courses offered only on a satisfactory/no credit basis). All majors must take PSYCH 1, Introduction to Psychology, and

PSYCH 10, Introduction to Statistical Methods, or a comparable Statistics course. Beyond these two required courses, students must complete at least five of the following ten core Psychology courses, with a minimum of two from each area A and B:

Area A Courses:

20. Introduction to Brain and Behavior

30. Introduction to Perception

40. Introduction to Cognitive Psychology

50. Introduction to Cognitive Neuroscience (formerly Introduction to Human Neuropsychology)

Area B Courses:

60. Introduction to Developmental Psychology

70. Introduction to Social Psychology

75. Introduction to Cultural Psychology (formerly PSYCH 161)

80. Introduction to Personality Psychology

90. Introduction to Clinical Psychology

95. Introduction to Abnormal Psychology

Students who declared a major in Psychology prior to the 2002-03 academic year may choose any five of the ten core courses.

Students must take one Writing in the Major course (designated WIM) in Psychology, and should check the *Stanford Bulletin* yearly as these courses may change. The department also strongly recommends that all majors take at least one advanced seminar.

Students may count up to 10 units of independent study and practica (PSYCH 194 and 195) toward the Psychology major. Students enrolled in the Senior Honors Program are allowed up to 15 units in independent study and practica, including PSYCH 197 and 198. Any units beyond the limit of 10 or 15 may be counted toward the 180 required for graduation.

Summer Quarter Psychology courses are not equivalent to courses given during the regular academic year and, while applicable toward the 55 units needed for the major, may not be used to fulfill the core course requirement. Additionally, a course taken during the Summer Quarter cannot be used to replace the grade of a non-Summer Quarter course, even if the title and units of the two courses are the same.

Beyond the Minimal Requirement—The following recommendations may be helpful to students who wish to plan a program which goes beyond the minimal requirements listed above:

1. Within the general major, the student may take advanced undergraduate or graduate courses, including seminars. The student may also take advantage of widespread opportunities for directed research, working closely with individual faculty and graduate students. The undergraduate coordinator maintains a listing of current research opportunities.
2. The student may apply to the Senior Honors Program, described below.
3. The student may elect to pursue one of four specialization tracks: Cognitive Sciences; Health and Development; Mind, Culture, and Society; or Neuroscience, described below.

The training obtained from the pursuit of any of these options is valuable not only for students considering graduate work in psychology, but also for those thinking of professional careers outside of psychology.

MINORS

Declaration—Students who wish to declare a minor field of concentration in Psychology must do so no later than the deadline for their application to graduate.

Requirements—Completion of a minimum of seven courses in Psychology is required for the minor. Beyond PSYCH 1, Introduction to Psychology, and PSYCH 10, Introduction to Statistical Methods, or a comparable statistics course, the minor must include three of ten core courses, with a minimum of one from each area A and B (A: 20, 30, 40, 50; B: 60, 70, 75, 80, 90, and 95) and two other elective Psychology courses of at least three units each. Students who declared a Psychology minor prior to the 2002-03 academic year may choose any three of the ten core courses. Independent study and practica (PSYCH 194 and 195) cannot be counted toward the minor. All courses used to fulfill the requirements of the minor must be passed with a grade of 'C-' or better.

TRANSFER CREDIT

Evaluation of transfer credit for the Psychology major or minor is a two-step process. First, Stanford credit for courses completed at other institutions must be granted by Transfer/External Credit Evaluation in the Office of the Registrar. Those units can then be applied toward the 180 required for graduation. Second, the Psychology Department will evaluate the courses to determine if they can be applied toward the Psychology major or minor requirements. To have a course evaluated, students must complete an undergraduate petition form (available from the undergraduate coordinator) and submit it along with a course syllabus and a copy of the signed transcript from the Transfer/External Credit Evaluation Office showing the number of Stanford units granted for the course.

Psychology majors must complete at least 28 units of course work toward their major at Stanford. No more than 10 units of transfer credit may be counted toward the Psychology minor. Both majors and minors may use only one transfer course towards fulfilling the core course requirements. Additional courses may be used to fulfill the 55 unit requirement, but will not count as core courses.

SPECIALIZATION TRACKS

Students in the major program, including those in the Senior Honors Program, may elect to specialize in one of four tracks: Cognitive Sciences; Health and Development; Mind, Culture, and Society; or Neuroscience. Specialization tracks consist of a coherent set of courses leading to advanced undergraduate or even graduate level courses in an area. In the ideal case, the student who specializes would acquire an understanding of a range of psychological processes, as well as an appreciation of the significance of these processes in the chosen area of application. In this way, specialization could facilitate the student's preparation for a professional career in, for example, medicine, business, or counseling, or for graduate work in Psychology.

Specialization in a track is optional, although students who do not wish to complete all the requirements for a track may still want to use the track as a guideline for an integrated program in Psychology. Students who choose to complete a specialization track must meet the requirements for the major plus the additional requirements designated for the track. Typically the courses required for a track include one or two required courses, four to six recommended courses in Psychology, one or two advanced seminars, and three to four courses in related disciplines. Psychology courses completed for the track count toward satisfying the major requirements, but courses from other departments listed for the tracks do not unless they are designated as approved for major requirements. The Mind, Culture, and Society track includes a two quarter research practicum and students are encouraged to apply to the track by Autumn Quarter of their junior year. Application forms are available from the undergraduate coordinator. There is no application for the other tracks, but all tracks must be declared on Axess. Completion of a track is noted on a student's transcript, but not on the diploma. Information about the required and recommended courses for each track is available from the undergraduate coordinator.

HONORS PROGRAM

The Senior Honors Program is designed for exceptionally able students who wish to pursue a year of intensive supervised independent research. Admission to the program is made at the end of the student's junior year on the basis of (1) excellent academic performance, (2) previous research experience, and (3) recommendations by faculty and/or graduate students. An information meeting about the program is held in Winter Quarter. Applications are available late Spring Quarter from the undergraduate coordinator and are to be turned in to Professor Tversky with a current transcript by June 30 prior to the student's senior year.

Students interested in the program should involve themselves in research as early as possible and acquire a broad general background in Psychology, including statistics, and a deep background in their chosen area. The program is particularly appropriate for students planning to go to graduate school in Psychology and in other social sciences, as well as Computer Science, Business, Law, and Medicine.

During Autumn Quarter of their senior year, honors program students participate in a weekly seminar. Initially, discussions are on general methods and issues in psychological research, but most of the sessions are devoted to discussions of students' presentations of their proposed research. During the quarter, students meet with their advisers to develop their experimental program and begin data collection. At the end of Autumn Quarter, students turn in a written proposal. Winter and Spring quarters are devoted to completing the research, analyzing and making sense of the data, and writing the thesis, which is submitted mid-May. Students give oral presentations of their projects at the annual Honors Convention, scheduled for the day between classes and exams. The convention is attended by undergraduates, graduate students, and faculty.

GRADUATE PROGRAMS

MASTER OF ARTS

The Department of Psychology normally offers a Master of Arts degree only to students concurrently enrolled in its Ph.D. program or students concurrently pursuing B.A. or M.A. degrees. All applicants must satisfy University residency requirements for the degree and are responsible for consulting with their primary departments or the Financial Aid Office about the effects of the proposed program on their current funding. University requirements for the master's degree are described in the "Graduate Degrees" section of this bulletin.

Stanford undergraduate students who would like advanced training in Psychology may apply for a coterminal M.A. degree in Psychology. To do so, students should consult with the student services officer in the department. Along with a coterminal program application, applicants must submit (1) a statement of purpose, (2) a preliminary program plan specifying the courses in which they intend to enroll to fulfill degree requirements, (3) at least two letters of recommendation from Stanford faculty members familiar with their academic work, (4) a current Stanford undergraduate transcript, and (5) a written agreement by a member of the Psychology faculty to serve as the student's master's degree adviser. This program is limited in size and admission is selective. Students should apply to this program between their eighth and eleventh quarters of undergraduate study. The department's deadline for the submission of an application to the coterminal program is March 20.

In exceptional cases, students concurrently enrolled in another doctoral or professional program at Stanford may also apply for the M.A. degree. Such applicants should also consult with the department's student services officer, and need to submit (1) a written agreement by a member of the Psychology faculty to serve as the student's adviser, (2) a statement of purpose, (3) a preliminary program plan specifying the courses in which they intend to enroll to fulfill degree requirements, (4) at least two letters of recommendation from Stanford faculty members familiar with their academic work, (5) complete undergraduate transcript(s), (6) a current Stanford transcript, and (7) GRE (or professional school test) scores.

Students must complete at least 45 units of Psychology courses for the degree. (For coterminal degree students, course work for the master's degree may not duplicate courses taken for the undergraduate degree.) Of these 45 units, at least 27 must be in Psychology courses numbered 200 or above. Units from PSYCH 275 Graduate Research and PSYCH 281 Practicum in Teaching, may not be counted toward these 27 units. Two of the graduate courses (one from Area A and one from Area B below) must be selected from master's courses listed as core course requirements. In addition, at least one upper division statistics course is required. The course must be approved by the student's adviser. All courses to be counted toward the master's degree must be passed with a grade of 'B-' or better (unless the course is offered only on a satisfactory/no credit basis). Demonstration of competence in the design and execution of psychological research is also required for receipt of the master's degree. Normally, this demonstration entails completion of a master's thesis. However, evidence of other research experience (notably the completion of a senior honors thesis) may be substituted for a formal master's thesis upon approval of the department's Committee on Graduate Studies. Participation in graduate research is required for the master's degree.

Students enrolled in the coterminal program must meet the University's residency requirement.

Area A Courses:

- 202. Cognitive Neuroscience
- 203. Foundations of Vision
- 210. Memory and Learning
- 214. Psycholinguistics
- 277. Seminar on Emotion

Area B Courses:

- 211. Developmental Psychology
- 212. Social Psychology
- 213. Personality and Psychopathology
- 215. Mind, Culture, and Society
- 216. Personality Disorders
- 259. Emotions: History, Theories, Research
- 271. Applications of Social Psychology

DOCTOR OF PHILOSOPHY

There are no specific course requirements for admission to the doctoral program. However, an applicant should have research experience as an undergraduate, as well as the equivalent of an undergraduate major in psychology. The major focus of the doctoral program is on research training, and admission is highly selective.

Applicants for admission must submit their scores on the Graduate Record Examination (both general and psychology subject tests) as part of the application. This examination may be taken at most universities and colleges.

University requirements for the Ph.D. are described in the "Graduate Degrees" section of this bulletin.

In addition to fulfilling the University requirements for the degree, the following department requirements are stipulated.

First-Year Course Requirements—During the first year of graduate study, the student must take 207 Proseminar for First-Year Ph.D. Graduate Students, at least one approved graduate statistics course, and at least two core courses from the list below. (Social Ph.D. graduate students must take 212, 215, and 259.)

- 202. Neuroscience
- 205. Foundations of Cognition
- 211. Developmental Psychology
- 212. Social Psychology
 - or 215. Mind, Culture, and Society
 - or 259. Emotions: History, Theories, Research
- 213. Personality

The student is expected to spend at least half of the time in research from the beginning of the first year of graduate study to the completion of the Ph.D., normally taking no more than 10 units of course work each quarter. At the end of the first year of graduate study, the student must file with the department a written report of the first-year research activities.

Second-Year Course Requirements—During the second year of graduate study (or as additional courses during the first year), the student must complete the core courses listed above and take a second approved graduate course in statistics.

Third-Year Major Area Paper—During the first week of Autumn Quarter of the fourth year, the student must turn in a Conceptual Analysis of the Dissertation Area (CADA). This paper provides a general framework for the research topic of the dissertation, addresses the central issues within the specialty area, and reviews the pertinent literature. Typically, the analysis has the kind of scope found in the opening chapters of the more traditional dissertations, but the exact format and scope of the paper is a joint decision made by student and adviser.

Prior to Autumn Quarter, the student should select two faculty members to read the paper and give feedback and commentary on it. These should be two faculty members most likely to serve later on the orals committee of the dissertation. A portion of the paper, revised as appropriate, can then become the first section of the actual dissertation proposal.

If the student should radically change the area of the dissertation research after the CADA has been written, the formal CADA procedure

does not need to be repeated for the second dissertation topic. The student is still expected to be knowledgeable about the literature and problems of any research topics being pursued for the dissertation.

Minor Requirements—The candidate must complete either a University minor satisfactory to the minor department, or elect to have the minor waived by selecting 12 approved units outside the department. A student designing a program of 12 units outside the Department of Psychology is expected to do so in consultation with the adviser.

Dissertation Reading Committee—The candidate must select a dissertation reading committee satisfactory to the department. The minimum membership of this committee must be (1) the principal dissertation adviser, (2) a second member from within the department, and (3) a third member chosen from Psychology or another department.

Orals—The candidate must pass the University oral examination, which is based on the dissertation proposal, not on the completed dissertation. The reason for this policy is to permit the oral examination to serve the function of guiding and improving the proposed research. This function can best be served if the oral examination is scheduled early in the year in which the dissertation research is conducted. It is therefore expected that the oral examination will be taken by the end of the Autumn Quarter of the fourth year.

Dissertation Requirements—The candidate must complete a dissertation satisfactory to the dissertation reading committee.

Ph.D. candidacy expires five years after admission to candidacy by the University Committee on Graduate Studies. Reapplication requires department reexamination.

STUDENT EVALUATIONS

First-Year Evaluation—It is the department's policy to evaluate the progress of each graduate student at the end of the first year of graduate study. As part of the procedure, each student is required to file with the department a report of the first-year research activities.

Students should discuss this report and the evaluation procedures with their adviser as early as possible in their first year. The report is due on June 1. If the student fulfills the academic promise displayed upon entrance, he or she is invited to continue to the doctorate.

The first-year evaluation is primarily based on three factors:

1. Quality of research carried out in the first year
2. Performance in courses (especially required courses)
3. Recommendations of the adviser (including a commitment on the part of that adviser to continue in that role)

Second-Year Evaluation—A similar evaluation is conducted at the end of the second year of graduate training involving the same criteria as the first year; however, the student is not required to submit a paper. Students who do not make satisfactory progress during the second year may be dropped from the program.

THE DOCTORAL TRAINING PROGRAM

As indicated by the requirements described above, a student may concentrate in any one of several areas within psychology. Regardless of area, however, the training program places emphasis on the development of research competence, and students are encouraged to develop those skills and attitudes that are appropriate to a career of continuing research productivity.

Two kinds of experience are necessary for this purpose. One is the learning of substantial amounts of technical information. A number of courses and seminars are provided to assist in this learning, and a student is expected to work out a program, with his or her adviser, to attain this knowledge in the most stimulating and economical fashion.

A second aspect of training is one that cannot be gained from the courses or seminars. This is firsthand knowledge of, and practical experience with, the methods of psychological investigation and study. These methods include ways of behaving with the people or animals being studied. Students are provided with whatever opportunities they need to reach those levels of competence representative of doctoral standing. Continuing research programs, sponsored by members of the faculty, offer direct

opportunities for experience in fields represented by the faculty's many research interests.

Each student achieves competence in unique ways and at different rates. Each student and adviser share in planning a program leading to the objectives discussed. The student is expected to spend half of his or her time on research and normally takes no more than 10 units of course work per quarter.

TEACHING REQUIREMENT

The department views experience in supervised teaching as an integral part of its graduate program. Regardless of the source of financial support, all students serve as teaching assistants for four Psychology courses during their graduate study. Of the four courses, one of them should be PSYCH 1, Introduction to Psychology, and another should be PSYCH 10, Statistical Methods. Students are discouraged from participating in teaching during the first year of graduate study. Students typically progress from closely supervised teaching to more independent work. They usually begin by teaching sections of Introduction to Psychology and Statistics and then progress to more advanced courses in their area of specialization. They may offer a supervised, but essentially independent, seminar during their final year of graduate study.

Ph.D. MINOR

Candidates for the Ph.D. degree in other departments may elect a minor in Psychology. To obtain a minor, the student must complete 20 units of course work at the graduate level in the Department of Psychology, excluding PSYCH 275 (graduate-level research). Crosslisted graduate courses can be used to satisfy this requirement. All courses counting toward the Ph.D. minor must be passed with a grade of 'B-' or better (unless the course is offered only on a satisfactory/no credit basis).

COGNITIVE SCIENCE PROGRAM

Psychology is participating, along with the departments of Computer Science, Linguistics, and Philosophy, and the School of Education, in an interdisciplinary program of cognitive science. The program is intended to provide students with an interdisciplinary education as well as a deeper concentration in psychology. Doctoral students in Psychology are eligible to participate in the cognitive science program. Students who complete the requirements receive a special designation in cognitive science along with the Ph.D. in Psychology. To receive this field designation, students must complete 30 units of approved courses, 18 of which must be taken in two disciplines outside of psychology. For information or course approval, see the student services officer.

PSYCHOLOGY COLLOQUIUM

The Psychology Colloquium meets on most Wednesday afternoons at 3:45. Speakers from Stanford and other institutions present topics of current interest. Graduate students are expected to attend.

COURSES

(WIM) indicates that the course satisfies the Writing in the Major requirement.

SUMMER SESSION

The courses announced for the Summer Session are those regularly scheduled in the department curriculum. Additional courses may be announced in the Stanford University bulletin *Summer Session 2003*, issued in February.

STANFORD INTRODUCTORY SEMINARS

PSYCH 2N. Aging and Time Perspective—Stanford Introductory Seminar. Preference to freshmen. Humans are unique in their ability to monitor time and to appreciate their place in the life cycle. Because goals are always set within temporal contexts, different types of goals are pursued at different times in life. Review of literature on adult development and motivation, specifically considering how perceived time influences life course trajectories.

3 units, Spr (Carstensen)

PSYCH 3N. Culture and Mind—Stanford Introductory Seminar. Preference to freshmen. Ideas that cultures and mind make each other up, including the role of culture in cognition, emotion, and motivation.

3 units (Markus) not given 2002-03

PSYCH 4N. Conflict, Identity and Justice—Stanford Introductory Seminar. Preference to freshmen. Exploration of sources of human misunderstanding and conflict. Emphasis is on psychological processes and barriers to dispute resolution. Strategies for overcoming barriers suggested by psychological research and the experience of negotiators. The role that threat to identity and attempts at identity protection and maintenance play in conflict and the problem of conflicting views of fairness or justice. Current conflicts around the world. Reading of papers written by psychologists for scholarly books and journals as well as popular treatments of these topics in books and magazines written for the more general public of intelligent, concerned lay people.

3 units, Spr (Ross)

PSYCH 5N. The Psychology of Shyness—Stanford Introductory Seminar. Preference to freshmen. The causes, correlates, consequences, and treatments for shyness. Analysis focuses on temperament, and situational and cultural factors.

3 units (Zimbardo) not given 2002-03

PSYCH 6N. Remembering and Misremembering—Stanford Introductory Seminar. Preference to freshmen. Discussion of experiments and cases of errors, biases, distortions, and omissions in memory, and understanding them in light of a theory of memory.

3 units (Tversky) not given 2002-03

PSYCH 7N. Language Acquisition—Stanford Introductory Seminar. Preference to freshmen. Although the potential for language is in some sense in people's genes, an extraordinary competence that distinguishes humans from all other species, there is considerable debate as to how biology guides linguistic development. An exploration of theories about the nature and origins of human language abilities and experimental research on the emergence of understanding in infancy.

3 units, Win (A. Fernald)

PSYCH 9N. The Social Psychology of Race, Gender, and Culture—Stanford Introductory Seminar. Preference to freshmen. Focus is on the role that one's social context, or one's position in society and social identity, plays in shaping the psychology of the individual and the collective psychology of society more generally.

3 units, Win (Steele)

PSYCH 11N. Origin of Mental Life—Stanford Introductory Seminar. Preference to freshmen. Mental life begins in infancy, so understanding the human mind requires discovering how thinking originates. How do babies construe the objects, events, people, and language that surround them? Recent advances in psychological theory and methods permit answers to questions once thought intractable. The methods, hypotheses, and evidence about how the human mind develops in infancy. Student critiques of influential studies.

3 units (Markman) not given 2002-03

PSYCH 12Q. Emotion—Stanford Introductory Dialogue. Preference to sophomores. What is emotion? Why do people have emotions? Can people change their emotions? How do people's emotions differ? Can emotions make people sick? Focus is on experimentally tractable questions, and empirical research findings relevant to these questions, emphasizing critical thinking and writing skills. Limited enrollment.

2 units, Aut (Gross)

PSYCH 13N. Culture and Social Relationships—Stanford Introductory Seminar. Preference to freshmen. How does culture influence how people relate to others including romantic partners, family, friends, acquaintances, and strangers? The cultural norms, values, and structures that shape expectations of and interactions with others.

3 units, Win (Tsai)

PSYCH 14N. Collective Violence—Stanford Introductory Seminar. Preference to freshmen. During the 20th century, more than 170 million civilians fell victim to massacres. There are over 100,000 books, articles, and essays on the Holocaust by historians, journalists, political scientists, and documentarists who use assumptions based on psychological theories and empirical studies. Psychologists seek to explain these killings and the psychological concepts introduced in the analysis of massacres.

3 units (*Zajonc*) not given 2002-03

PSYCH 15N. Explorations in Human Memory—Stanford Introductory Seminar. Preference to freshmen. Memories underlie personal identities, autobiography, and the coherent unity of oneself, forming a person's core. Memory puts people into mental contact with the emotionally significant events of their past, rewriting it to suit needs, shaping what they believe themselves to be. The vicissitudes of human memory through a book on memory written by an expert psychologist.

3 units, Aut (*Bower*)

PSYCH 17Q. Understanding Spoken Language—Stanford Introductory Seminar. Preference to sophomores. Spoken language comprehension requires the rapid integration of acoustic information with linguistic knowledge and with knowledge about the world. Focus is on biological and experiential influences on language development, and how children and adults use syntactic, semantic, and contextual information to recognize words and understand meanings in strings of speech sounds.

4 units (*A. Fernald*) not given 2002-03

PSYCH 19Q. Neuroethology: The Neural Control of Behavior—Stanford Introductory Seminar. (Enroll in HUMBIO 91Q.)

3 units, Aut (*R. Fernald*)

PSYCH 20Q. The Psychology of Stigma—Stanford Introductory Dialogue. Preference to sophomores. Stigma marks a person as devalued or flawed in some way, as a member of a particular group or as having a physical disability. The psychological processes in the act of stigmatizing another, and the responses of the person stigmatized.

2 units, Aut (*Hastorf*)

OPEN TO ALL STUDENTS

Additional courses not listed here are frequently offered by postdoctoral or terminal Ph.D. personnel in the areas of their special research. These are listed in the quarterly *Time Schedule*; course descriptions are circulated in advance.

PSYCH 1. Introduction to Psychology—The scientific study of behavior, focusing on psychological research and theory. Topics: sensation and perception, emotion, learning, memory, cognition, child development, psychopathology, social psychology, and the biological bases of behavior. Sections optional. GER:3b

4-5 units, Aut (*Gross*), Win (*Knutson*), Spr (*Zimbardo*)

PSYCH 3. Practicum in Effective Teaching Methods and Style—Enrollment limited to advanced undergraduates serving as teaching assistants in PSYCH 1. Discussions on teaching methods and style, selected readings on teaching effectiveness, student presentations to class sections, preparation of exams, and grading essays and term papers.

3 units, Spr (*Zimbardo*)

PSYCH 10. Introduction to Statistical Methods: Precalculus—(Same as STATS 60/160.) Emphasis is on techniques for organizing data, computing, and interpreting measures of central tendency, variability, and association. Estimation, confidence intervals, tests of hypotheses, t-tests, correlation, and regression. Possible topics: analysis of variance and chi-square tests, computer statistical packages. GER:2c

5 units, Aut (*Walther*), Win (*Thomas*), Spr (*Switzer*)

PSYCH 20. Introduction to Brain and Behavior—How the brain regulates behavior and in turn is influenced by behavioral interactions. Behavior is described in physiological terms, organized with respect to evolutionary principles. Topics: neurons, transmission of neural information, anatomy and physiology of sensory and motor systems, regula-

tion of body states and the biology of learning, memory, and psychopathology. Recommended: 1. GER:2a

3 units, Aut (*R. Fernald*)

PSYCH 30. Introduction to Perception—Perceptual psychology and sensory neuroscience, emphasizing vision and hearing. Topics include anatomy and physiology of the eye and ear, and of the visual and auditory areas of the brain, pitch and loudness perception, speech perception, color vision, depth perception, and visual motion perception. Recommended: 1. GER:2a

3 units, Aut (*Grill-Spector*)

PSYCH 40. Introduction to Cognitive Psychology—Survey and analysis of major topics in cognitive psychology, including perception, memory, problem solving, and reasoning. Emphasis is on contemporary research and theory. Recommended: 1 and 10. GER:3b

4 units, Win (*Tversky*)

PSYCH 50. Introduction to Cognitive Neuroscience—(Formerly Introduction to Human Neuropsychology.) Topics in human neuropsychology. Review of the functional organization of the human nervous system and of brain imaging techniques (MRI, PET). Hemispheric specialization and the brain basis of perception, memory, language, emotion, spatial cognition, and problem solving. Neuropsychological deficits in neurological disorders and their implications in understanding normal function. Recommended: 1. (WIM)

4 units, Win (*Gabrieli*)

PSYCH 60. Introduction to Developmental Psychology—Psychological development from birth to adulthood, emphasizing infancy and the early and middle childhood years. The nature of change during childhood and theories of development. Recommended: 1. GER:3b (WIM)

3 units, Aut (*Johnson*)

PSYCH 60A. Introduction to Developmental Psychology Section—Guided observation of children age 2-6 at Bing Nursery School. Corequisite: 60.

2 units, Aut (*Hartman*)

PSYCH 70. Introduction to Social Psychology—A survey of theory and empirical research in social psychology: conformity, obedience, helping, and aggression; attitudes, persuasion, identity and roles; person perception, attribution, and social judgment; interpersonal and intergroup relationships, social conflict, prejudice, and stereotyping. Original research proposal. Recommended: 1. GER:3b (WIM)

4 units, Win (*Eberhardt, Monin*)

PSYCH 75. Cultural Psychology—(Formerly 161.) The cultural sources of diversity in thinking, emotion, motivation, self, personality, morality, development, and psychopathology. Recommended: 1. GER:4a (WIM)

5 units, Spr (*Markus*) alternate years, not given 2003-04

PSYCH 80. Introduction to Personality Psychology—Concepts and research methods, major theoretical approaches, and related empirical findings. The psychodynamic, trait, biological, humanistic, behavioral, social learning, cognitive, and cultural perspectives. Recommended: 1.

3 units, Spr (*Tsai*)

PSYCH 90. Introduction to Clinical Psychology—(Formerly 153.) Topics include the history of clinical psychology, models and assessment of personality, behavior, cognition, psychopathology, and approaches to the treatment of abnormal behavior. Emphasis is on current theory, research, and issues in clinical psychology and on the role of clinical psychology in contemporary society. Recommended: 1. GER:3b

3 units, Win (*Gotlib*)

PSYCH 95. Introduction to Abnormal Psychology—(Formerly 90.) The nature, origin, and treatment of a variety of psychological disorders from various psychological and biomedical perspectives. Historical and current controversies in the field. Recommended: 1.

3 units (*Butler*) not given 2002-03

PSYCH 102. Statistical Methods for Behavioral and Social Sciences—(For undergraduates; see 252.)

6 units, Aut (*Monin, Thomas*)

PSYCH 103. Statistical Theory, Models, and Methodology—(For undergraduates; see 253.)

3 units (*Thomas*) alternate years, given 2003-04

PSYCH 110. Research Methods and Experimental Design—Experimental research methods and principles in psychology. Structured research exercises and the design of an individual research project. Prerequisite: consent of instructor. (WIM)

5 units (*M. Lepper*) not given 2002-03

PSYCH 120. Cellular Neuroscience: Cell Signaling and Behavior—Survey of neural interactions underlying behavior. Prerequisites: 1 or equivalent, and elementary biology.

4 units, Aut (*Wine*)

PSYCH 121. Ion Transport and Intracellular Messengers—(Graduate students register for 228.) Ion channels, carriers, ion pumps, and their regulation by intracellular messengers in a variety of cell types. Lab demonstrations and brief hands-on introduction to techniques such as patch clamping. Recommended: 120 or introductory course in biology or human biology.

3 units, Spr (*Wine*)

PSYCH 122. Human Behavioral Biology—(Enroll in BIOSCI 150/250.)

2-6 units (*Sapolsky*) alternate years, given 2003-04

PSYCH 126. Sleep and Dreams—(Enroll in HUMBIO 11.)

3 units, Win (*Dement*)

PSYCH 130. Introduction to Cognitive Science—(Enroll in LINGUIST 144, PHIL 190, SYMBSYS 100.)

4 units, Spr (*Beaver, Greeno, Wasow*)

PSYCH 131. Language and Thought—The psychology of language, including production and understanding in utterances; from speech sounds to speaker's meaning; children's acquisition of the first language; and the psychological basis for language systems. Language functions in natural contexts and their relation to the processes by which language is produced, understood, and acquired. Prerequisite: 1 or LINGUIST 1. GER:3b

4 units, Aut (*H. Clark*)

PSYCH 133. Human Abilities—(Same as EDUC 255.) Introductory survey of psychological theory and research on human cognitive abilities; their nature, development, and measurement, and their importance in society. Relation of education and intellectual abilities. Cognitive analysis of verbal reasoning and spatial abilities. Individual differences in relation to motivation, personality, gender, and ethnic differences. Prerequisite: 1 or equivalent. (PSE)

3 units, Win (*Shavelson*)

PSYCH 134. Seminar on Language and Deception—Deceptive, exploitative, and other noncooperative uses of language. How is language used to deceive or exploit? Where are these techniques practiced and why? What are the personal, ethical, and social consequences of these practices? Prerequisite: 131, LINGUIST 1, or PHIL 181.

3 units, Win (*H. Clark*)

PSYCH 140. Research Methods in Developmental Psychology—Conceptual and methodological issues related to research on early development, training in experimental design, lab, and observational procedures, and the collection, analysis, and interpretation of data. Students conduct a series of supervised experiments, with infants and preschoolers, at the Center for Infant Studies in the Department of Psychology and at Bing Nursery School. Limited enrollment. Lab required.

5 units (*Markman, Johnson*) not given 2002-03

PSYCH 141. Cognitive Development—Topics and issues on cognitive development, developmental changes in memory, conceptual organization, logical reasoning, and communication skills. Prerequisite: 1. GER:3b

3 units, Aut (*Markman*)

PSYCH 143. Developmental Anomalies—(Graduate students register for 239.) Neurodevelopmental disorders and impairments. What can the sparing of isolated mental abilities in otherwise devastating disorders (or vice versa) tell about the mind and its development in the normal case? Disorders and impairments: autism, congenital blindness, deafness, dyslexia, and Williams syndrome. Prerequisites: 60, 141 or LINGUIST 1.

3 units, Win (*Johnson*)

PSYCH 144. Conceptual Organization and Development—(For undergraduates; see 242.) Prerequisite: PSYCH 141 or consent of instructor.

3 units (*Markman*) not given 2002-03

PSYCH 145. Seminar on Infant Development—For students interested in research skills. Focus is on conceptual and methodological issues related to research on early development; training in experimental design, lab, and observational procedures; and the collection, analysis, and interpretation of data. Limited enrollment.

1-2 units, Spr (*A. Fernald*)

PSYCH 146. Observation of Children—Learning about children through guided observations at Bing Nursery School, Psychology's lab for research and training in child development. Physical, emotional, social, cognitive, and language development. Recommended: 60.

3-5 units, Win, Spr (*Hartman*)

PSYCH 147. Development in Early Childhood—Supervised experience with young children at Bing Nursery School. 3 units require 4 hours per week in Bing classrooms throughout the quarter; 4 units require 7 hours per week; 5 units require 10.5 hours per week. Weekly seminar on developmental issues in the teaching-learning environment at Bing School. Prerequisite: 60 or 146, or consent of instructor.

3-5 units, Aut, Win, Spr (*J. Lepper*)

PSYCH 148. Development of Language Understanding—(For undergraduates; see 247.)

3 units (*A. Fernald*) not given 2002-03

PSYCH 152. Social Conflict: Models and Methods of Mediation—Conceptual models of social conflict and approaches to resolving them through mediation. Examples from conflict settings ranging from minor disputes between individuals to intragroup and intergroup tensions. Existing theories and empirical research. Students generate examples from the Stanford community, and role play methods of mediation in resolving social conflict.

3 units, Spr (*Daher, Horowitz, Martinez*)

PSYCH 154. Selected Topics in Affective Disorders—(For undergraduates; see 234.)

3 units, Spr (*Gotlib*)

PSYCH 155. Introduction to Comparative Studies in Race and Ethnicity—(Enroll in HISTORY 65.)

5 units (*Staff*) not given 2002-03

PSYCH 156. Applications of Social Psychology—(Graduate students register for 271.) The application of social psychological theory and research to: evaluating the impact of social interventions, strategies, and shortcomings in personal and social decision making; the effects of mass media and other sources of social persuasion; conflict resolution and negotiation; applications in legal, medical, educational, and business settings. Prerequisites: 1 and 10, or consent of instructor.

4 units, Win (*Ross*)

PSYCH 158. Emotions: History, Theories, and Research—(For undergraduates; see 259.) Prerequisite: consent of instructor.

3 units, Spr (*Zajonc*)

PSYCH 160. Culture and Self—(See 226.) Prerequisites: 1, 10, and 70.
3 units (*Markus*) not given 2002-03

PSYCH 162. The Psychology of Gender—Research and theory on the socialization and psychological development of women and men. The biological, cultural, and social factors that influence gendered behavior. GER:4c
4 units, *Win* (*Carstensen*)

PSYCH 163. Interpersonal Basis of Abnormal Behavior—The role of interpersonal problems and processes in producing different forms of psychopathology, from neurotic reactions to schizophrenia. The clinical (case study) approach is combined with conventional empirical methods to clarify the origin, nature, and treatment of emotional disorders. Prerequisite: 95.
3 units, *Win* (*Horowitz*)

PSYCH 165. Peace Studies—(Same as POLISCI 111.) Interdisciplinary. The challenges of pursuing peace in a world where the sources of conflict are many, and regional, ethnic, and religious antagonisms are rising. The art of creating and maintaining peace from historical, social, psychological, and moral perspectives. Goal is to illustrate the contributions of academic disciplines and critical analyses to the study of peace, and to prepare students to think critically and to act responsibly and effectively on behalf of peace. Students explore a particular conflict and offer possible contributions to the building of peace. Limited enrollment. GER:3b
5 units, *Spr* (*Bland, Ross, Holloway*)

PSYCH 166. Seminar on Personal and Social Change—Analysis of the social cognitive approaches to personal and social change. Applications of sociocognitive theory to the modification of psychological dysfunctions in familial, educational, medical, and organizational settings. Ethical and value issues in behavior change.
3 units, *Spr* (*Bandura*) alternate years, not given 2003-04

PSYCH 167. Seminar on Aggression—Analysis of the causes and modification of individual and collective aggression. Major issues in aggression: social labeling of injurious conduct, social determinants of aggression, effects of the mass media, institutionally sanctioned violence, terrorism, psychological mechanisms of moral disengagement, modification of aggressive styles of behavior, and legal sanctions and deterrence doctrines.
3 units, *Win* (*Bandura*)

PSYCH 169. Emotion—(For undergraduates; see 277.)
3 units, *Aut* (*Gross*)

PSYCH 170. Seminar on the Psychology of Gender—(Graduate students register for 238.) In-depth coverage of a topic related to the psychology of gender. Prerequisite: 162.
3 units (*Carstensen*) not given 2002-03

PSYCH 171. Research Seminar on Aging—Two quarter practicum exposes students to multiple phases of research by participating in a laboratory focusing on social behavior in adulthood and old age. Review of current research and participation in ongoing data collection, analysis, and interpretation. Prerequisites: 1, research experience, and consent of instructor.
4 units, *Aut, Win, Spr* (*Carstensen*)

PSYCH 173. Mind, Culture, and Society Research Lab—For undergraduate juniors in the Mind, Culture, and Society track. Offered over two quarters. Lecture series on current research topics in mind, culture, and society. Research project in second quarter.
2-3 units, *Win, Spr* (*Eberhardt*)

PSYCH 174. African American Psychology—Introduction to ethnic psychology, with emphasis on the psychological dimensions of the Black experience in America. Black psychology from its evolution as a concentration area in the social sciences to present concerns that impact Black

Americans' mental health. Students are encouraged to expand on the methodological constructs employed in the study of Black Americans.
3-4 units (*McCants*) alternate years, given 2003-04

PSYCH 175. Seminar on Topics in Identity Development—Issues affecting identity development from adolescence throughout adulthood. Topics include the effect of group dynamics on identity; the impact of social factors such as racism, stereotypes, and culture; how a person's identity affects education and self-esteem.
3 units, *Win* (*McCants*) alternate years, not given 2003-04

PSYCH 176. Carl Jung and Analytical Psychology—Introduction to the person of Jung, his seminal philosophical perspectives, and their impact on modern thought and life. The formation of analytical psychology with regards to Jung's past relationship with Freud and later emergence as a prominent 20th-century thinker. Emphasis is on the archetypal themes of the shadow, *anima/animus* (feminine/masculine) and *puer/senex* (youth/elder). The function of dreams and the interplay between the Jungian paradigm and spirituality.
4 units, *Aut* (*Daher*)

PSYCH 177. Senior Seminar on Mind, Culture, and Society—For undergraduate seniors in the Mind, Culture, and Society track.
3 units, *Aut* (*Markus*)

PSYCH 178. Stigma and Marginality—(For undergraduates; see 263.)
3 units, *Spr* (*Eberhardt*) alternate years, not given 2003-04

PSYCH 179. The Psychology of Everyday Morality—(For undergraduates; see 270.)
3 units, *Spr* (*Monin*)

PSYCH 180. Social Psychological Perspectives on Stereotyping and Prejudice—(For undergraduates; see 245.) Prerequisites: 1, 10, and 70.
3 units, *Spr* (*Eberhardt*)

PSYCH 181. Social Influence and Persuasion—(Graduate students register for 229.) Theories and research on social influence, conformity, obedience, and persuasion from Aristotle to the present, looking at the relative effectiveness of direct approaches to persuasion such as advertising and political campaigns; and less direct strategies such as inducing individuals to engage in self-persuasion in order to justify their own prior actions. Societal issues involving social influence from intimate relations to police interrogation, including attempts at reducing prejudice and curbing aggression. Prerequisite: 1.
3 units, *Spr* (*Aronson*)

PSYCH 182. American Indian Identity: A Social Psychological Approach—(Enroll in NATIVEAM 108, CSRE 108.)
5 units (*Staff*) not given 2002-03

PSYCH 194. Reading and Special Work—Independent study. May be repeated for credit. Prerequisite: consent of instructor.
1-3 units, any quarter (*Staff*)

PSYCH 195. Special Laboratory Projects—Independent study. May be repeated for credit. Prerequisites: 1, 10, and consent of instructor.
1-6 units, any quarter (*Staff*)

PSYCH 196. Contemporary Psychology: Overview of Theory, Research, Applications—A capstone experience for juniors and seniors that bridges previous course work with future research opportunities. Lectures representing each of the department's areas: social, personality, developmental, and cognitive psychology. Each Tuesday, a different faculty member presents his or her current psychological research and engages with students on issues related to that field of study. Thursday discussions led by advanced graduate students working in the field represented by that week's guest. Students are guided by the instructors to write their own research proposal. Small grants available to students interested in conducting a pilot study of their proposed research. Limited enrollment.
3 units, *Aut* (*Thomas, Shestowsky*)

PSYCH 197. Advanced Research—Limited to students in senior honors program. Weekly research seminar, independent research project under the supervision of an appropriate faculty member. A detailed proposal is submitted at the end of Autumn Quarter. Research continues during Winter and Spring quarters as 198. A report demonstrating sufficient progress is required at the end of Winter Quarter.

1-4 units, Aut (Tversky)

PSYCH 198. Senior Honors Research—Limited to students in the senior honors program. Work includes finishing the research and data analysis, writing the thesis, and presenting at the Senior Honors Convention.

1-4 units, Win, Spr (Tversky)

PRIMARILY FOR GRADUATE STUDENTS

Undergraduate students admitted only by consent of instructor.

PSYCH 202. Cognitive Neuroscience—Graduate core course in cognitive neuroscience. The anatomy and physiology of the brain. Methods: electrical stimulation of the brain, neuroimaging, neuropsychology, psychophysics, single-cell neurophysiology, theory and computation. Neuronal pathways and mechanisms of: attention, consciousness, emotion, language, memory, motor control, and vision. Prerequisite: 207 or consent of instructor.

3 units, Spr (Gabrieli, Grill-Spector, Wine)

PSYCH 203. Foundations of Vision—The quantitative behavioral and neural aspects of human vision. Image formation by the eye, retinal sampling and wavelength encoding, neural encoding within the retina and cortex; performance measures including spatial contrast sensitivity, localization, color sensitivity, multiresolution representations of image data; color, motion, and depth perception.

1-3 units, Spr (Wandell)

PSYCH 204. Computational Neuroimaging—Advanced seminar designed for individuals working with functional magnetic resonance imaging (fMRI). Review of the current understanding of the physiological basis of the signal measured using fMRI. Discussion of possibilities for experiment design and interpretation of the signal with respect to other physiological and behavioral measurements. Specific emphasis on experimental design, software tools, and pulse sequences for fMRI experiments.

1-3 units, Aut (Wandell)

PSYCH 205. Foundations of Cognition—Advanced survey of cognitive psychology and cognitive science. Topics: perception, imagery, attention, memory, similarity, categories and concepts, learning, reasoning, decision making, planning, language, emotions, morality, mate choice, consciousness. Focus is on what computational problems the mind is designed to solve, how it solves them, and how those solutions might be implemented in the brain. Themes: the nature of mental representations, inference under uncertainty, rationality versus irrationality, modular versus general purpose design, learning versus evolutionary origins. Prerequisite: 207 or consent of instructor.

1-3 units, Aut (Ramscar)

PSYCH 207. Professional Seminar for First-Year Ph.D. Graduate Students—Required of and limited to first-year Ph.D. students in Psychology. Survey of major issues in contemporary psychology with their historical backgrounds.

2-3 units, Aut (M. Lepper)

PSYCH 210. Memory and Learning—Topics in human memory, emphasizing information-processing approaches to short-term memory, organization and long-term memory, forgetting, retrieval processes, prose memory, imagery, emotional memory, autobiographical memory, and skills.

1-3 units (Bower) not given 2002-03

PSYCH 211. Developmental Psychology—Prerequisite: 207 or consent of instructor.

1-3 units, Win (A. Fernald, Johnson, Markman)

PSYCH 212. Social Psychology—Prerequisite: 207 or consent of instructor.

1-3 units, Aut (M. Lepper, Ross)

PSYCH 213. Personality and Psychopathology—Survey of theory and research in personality and psychopathology. Prerequisite: 207 or consent of instructor.

1-3 units, Spr (Horowitz)

PSYCH 214. Psycholinguistics—Prerequisite: graduate standing in Psychology or consent of instructor.

1-3 units, Spr (H. Clark)

PSYCH 215. Mind, Culture, and Society—Social psychology from the context of society and culture. Focus: the interdependence of psychological and sociocultural processes; how sociocultural factors shape psychological processes; how psychological systems shape sociocultural systems. Conceptualizations of the interdependence of psychological processes and sociocultural context. Use of theoretical developments to understand social issues, problems, and polity. Works of Baldwin, Mead, Asch, Lewin, Burner, and contemporary theory and empirical work on the interdependence of psychology and social context as constituted by gender, ethnicity, race, religion, region of the country, and part of the world. Prerequisite: 207 or consent of instructor.

3 units, Win (Markus, Steele)

PSYCH 217. Topics and Methods in Cultural Psychology—Discussion and critical examination of conceptual and methodological issues in cultural psychology. Possible topics: the mechanisms by which culture influences psychological and social processes in monocultural and multicultural contexts; the relations between culture and biology; the measurement of culture; the development of culturally appropriate instruments and tasks; and the use of various questionnaire, interview, observational, and physiological methods to study cultural influences on human behavior.

1-3 units, Win (Tsai)

PSYCH 219. Selected Topics in Cognition—Prerequisite: consent of instructor.

1-3 units, Aut (Tversky)

PSYCH 220. Topics in Cognitive Development—Prerequisite: graduate standing in Psychology or consent of instructor.

1-3 units, Spr (Markman)

PSYCH 221. Applied Vision and Image Systems—Lectures/demonstrations illustrate the design and control of color imaging devices (display, printers, cameras, and scanners). Aspects of human vision relevant to software and hardware design. Topics: digital halftoning, color calibration, color metrics, flicker sensitivity, motion compensation, human spatial resolution, visual masking, JPEG principles, printer design, scanner design, color software architecture. Lab.

1-3 units, Win (Wandell)

PSYCH 222. Graduate Seminar in Cognitive Neuroscience—For students who are already or planning to become involved in research. Critical reviews of theory and ongoing research in human cognitive neuroscience. Prerequisite: consent of instructor.

1-2 units, Aut, Win, Spr (Gabrieli)

PSYCH 226. Culture and Self—(Undergraduates register for 160.) Recent perspectives on the nature and functioning of self, anthropological and psychological literature on the self in various cultural contexts, and the consequences of variation in selfhood for cognition, learning, emotion, motivation, and psychopathology. Prerequisites: 1, 10, 70.

3 units (Markus) not given 2002-03

PSYCH 228. Ion Transport and Intracellular Messengers—(For graduate students; see 121.)

3 units, Spr (Wine)

PSYCH 229. Social Influence and Persuasion—(For graduate students; see 181.)

3 units, Spr (Aronson)

PSYCH 231. Graduate Seminar on Self-Efficacy—The origins, mediating mechanisms, and diverse effects of people's beliefs in their efficacy to exercise control over events in their lives. Alternative theories of perceived control; the nature and structure of self-efficacy belief systems; major sources of efficacy beliefs; the processes through which they affect human functioning; developmental analysis of efficacy beliefs over life course; the application of self-efficacy theory to cognitive development, health functioning, clinical dysfunctions, organizational functioning, and athletic performance; the exercise of collective efficacy to accomplish social change.

1-3 units (Bandura) alternate years, given 2003-2004

PSYCH 233. Theories and Interventions from a Multicultural Perspective—(Enroll in EDUC 233A.)

3 units (Staff) not given 2002-03

PSYCH 234. Selected Topics in Affective Disorders—(Undergraduates register for 154.) Current research topics in the study of affective disorders. Topics: epidemiology and phenomenology of affective disorders, psychological theories of depression, gender differences in affective disorders, cognitive and social functioning of depressed persons, psychobiology of affective disorders, depression in children, postpartum depression, suicide issues in the treatment of depression, and cultural aspects of affective disorders. Prerequisite: graduate standing in Psychology, or consent of instructor.

1-3 units, Spr (Gotlib)

PSYCH 235. American Indian Mental Health and Education—(Enroll in EDUC 340X.)

3 units, Win (LaFromboise)

PSYCH 237. Educational and Career Assessment—(Same as EDUC 234.) Methods of integrating career and personal counseling with clients and counselors from differing cultural backgrounds. Practice with selected assessment instruments. Case studies of bicultural role conflict. Informal supervised experience. (PSE)

3 units (Krumboltz) not given 2002-03

PSYCH 238. Seminar on the Psychology of Gender—(For graduate students; see 170.)

1-3 units (Carstensen) not given 2002-03

PSYCH 239. Developmental Anomalies—(For graduate students; see 143.)

3 units, Win (Johnson)

PSYCH 240. Language Acquisition I—(Enroll in LINGUIST 140/240.)

4 units, Aut (E. Clark)

PSYCH 241. Language Acquisition II: Lexicon and Syntax in Acquisition—(Enroll in LINGUIST 241.)

1-4 units, not given 2002-03

PSYCH 242. Conceptual Organization and Development—(Undergraduates register for 144.) Theories and research in conceptual organization and development. Topics: the acquisition of categories and category terms informed by the general problem of induction, by philosophical and psychological analyses of the nature of human categories (natural kind terms, family resemblances), by recent arguments how the acquisition of category terms is guided by constraints children place on possible word meanings, and by more traditional theories of cognitive development. Prerequisite: graduate standing in Psychology or consent of instructor.

3 units (Markman) not given 2002-03

PSYCH 243. General Development Seminar—Prerequisite: consent of instructors.

1-2 units, Win (A. Fernald, Johnson, Markman)

PSYCH 244. Psychology of Aging—Critical examination of theory and research in gerontology. Normal and abnormal changes that occur in biological, cognitive, and psychological aging. Emphasis is on the environmental factors that influence the aging process. Prerequisite: graduate standing in Psychology or consent of instructor.

1-3 units (Carstensen) not given 2002-03

PSYCH 245. Social Psychological Perspectives on Stereotyping and Prejudice—(Undergraduates register for 180.) Classic and contemporary social psychological approaches to prejudice and stereotyping. Emphasis is on how stereotypes are employed and maintained, and the influence of stereotyping and prejudice on behavior in domains including education, employment, politics, and law. Limited enrollment.

3 units, Spr (Eberhardt)

PSYCH 247. Development of Language Understanding—(Undergraduates register for 148.) How do infants first learn to hear meanings in strings of sounds? Early biological and experiential influences on the perceptual organization of speech. How infants parse the speech stream and recognize words. Language input as a support system. The relation of comprehension and production, early word learning, and sentence understanding by young language learners.

3 units (A. Fernald) not given 2002-03

PSYCH 248. Introduction to Test Theory—(Enroll in EDUC 252.)

3-4 units (Haertel) not given 2002-03

PSYCH 249A. Problems in Measurement: Item Response Theory—(Enroll in EDUC 353A.)

3 units (Haertel) not given 2002-03

PSYCH 250. High Level Vision—Critical review of theories and ongoing research of high level vision. Topics: behavioral studies pertaining to representation of objects; generalization and invariances; learning new categories; neuropsychological deficits; properties of high level visual areas in monkey and humans; theories and models of object and face recognition.

1-3 units, Win (Grill-Spector)

PSYCH 251. Affective Neuroscience—Focus is on theory and research in the field of affective neuroscience. Comparative and human research approaches map affective function to both neuroanatomical and neurochemical substrates. Prerequisite: consent of instructor.

3 units, Spr (Knutson)

PSYCH 252. Statistical Methods for Behavioral and Social Sciences—(Undergraduates register for 102.) For students who seek experience and advanced training in empirical research. Analysis of data from experimental through factorial designs, randomized blocks, repeated measures; regression methods through multiple regression, model building, analysis of covariance; categorical data analysis through two-way tables. Integrated with the use of statistical computing packages. Prerequisite: 10 or equivalent. (PSE)

1-6 units, Aut (Monin, Thomas)

PSYCH 253. Statistical Theory, Models, and Methodology—(Undergraduates register for 103.) Practical and theoretical study of advanced data analytic techniques such as loglinear models, signal detection, meta-analysis, logistic regression, reliability theory, and factor analysis. Prerequisite: 252 or EDUC 257.

3 units (Thomas) alternate years, given 2003-04

PSYCH 254. Frontiers of Personality—In the 70s, personality research almost disappeared from psychology. Recently, there has been a resurgence of interest in it, especially from fields outside traditional psychology. New findings from fields such as genetics, neuroscience,

medicine, and health psychology. Readings from current science journals with an emphasis on the interdisciplinary integration and applications of personality research.

3 units, Spr (Knutson)

PSYCH 255. Selected Topics in Personality and Abnormal Psychology—Graduate seminar. Prerequisite: consent of instructor.

1-3 units, Aut (Horowitz)

PSYCH 257. Individually Supervised Practicum—Satisfies INS requirements for Curricular Practical Training. Relevant experience for graduate students as part of their program of study. Maybe repeated for credit. Prerequisites: graduate standing in Psychology, consent of adviser.

3-5 units, any quarter (Staff)

PSYCH 258. Graduate Seminar in Social Psychology Research—For students who are already or are planning to become involved in research on social construal and the role that it plays in a variety of phenomena, notably the origin and escalation of conflict.

1-3 units, Aut, Win, Spr (Zajonc)

PSYCH 259. Emotions: History, Theories, and Research—(Undergraduates register for 158.) Theoretical and empirical issues in the domain of emotions. The history of emotion theories, current approaches, and the interaction between emotion and cognition.

3 units, Spr (Zajonc)

PSYCH 261. Learning and Cognition in Activity—(Same as EDUC 295.) Introduction to the results and methods of research on learning, understanding, reasoning, problem solving, and remembering, considered as aspects of participation in social organized activity. Focus is on the principles of coordination that support cognitive achievements and learning in activity settings in work and school environments.

3 units, Win (Nasir, Greeno)

PSYCH 263. Stigma and Marginality—(Undergraduates register for 178.) The perceptions and strategies of the targets of prejudice and discrimination, with emphasis on race and ethnicity. Topics: social perceptions and the judgments of targets, racial identity, behavioral consequences of prejudice and discrimination, and legal and policy implications. Readings from social psychology, African American studies, sociology, and law. Limited enrollment.

3 units, Spr (Eberhardt) alternate years, not given 2003-04

PSYCH 264. Selected Topics in Human Learning—Recent empirical and theoretical analyses of verbal learning, learning from text, learning of concepts, and intellectual skills. Emphasis is on information processing theories of memory and retrieval. Readings from recent research journals with topics determined partly by students' interests. Discussion format. Prerequisite: 210 or consent of instructor.

1-3 units (Bower) not given 2002-03

PSYCH 265. Political Anthropology from Rousseau to Freud—(Enroll in FRENGEN 256E.)

3-5 units, Spr (Dupuy)

PSYCH 267. Vision and Image Processing—Introduction to image processing through a combination of lectures and hands-on experience in a computer lab. Topics: image representation, sampling and filtering, image segmentation and mosaicing, image warping and morphing, motion analysis, image statistics, restoration, synthesis, and compression.

1-3 units (Staff) not given 2002-03

PSYCH 269. Graduate Seminar in Personality Research—May be repeated for credit. Prerequisite: graduate standing in Psychology.

1-2 units, Aut, Win, Spr (Gotlib)

PSYCH 270. The Psychology of Everyday Morality—(Undergraduates register for 179.) For graduate students, coterms, and senior Psychology majors who want to explore the role of morality in social psychology.

A review of traditional approaches (Kohlberg), with a focus on how morality colors the most mundane of human activities such as eating, and on morality as defined by actors themselves rather than social scientists. Past and present work bearing on this question includes moral hypocrisy, food and disgust, taboo trade-offs, moral reproach, and prejudice with compunction. Limited enrollment. Prerequisite: 70, and consent of instructor.

3 units, Spr (Monin)

PSYCH 271. Applications of Social Psychology—(Undergraduates register for 156.)

4 units, Win (Ross)

PSYCH 272. Special Topics in Psycholinguistics—May be repeated for credit. Prerequisite: consent of instructor.

1-3 units, Win (H. Clark)

PSYCH 275. Graduate Research—Intermediate-level research undertaken with members of departmental faculty. Prerequisite: consent of instructor.

1-15 units, any quarter (Staff)

PSYCH 277. Emotion—(Undergraduates register for 169.) Overview of the scientific study of emotion. Topics: models of emotion, emotion antecedents, emotional responses (facial, subjective, and physiological), functions of emotion, emotion regulation, individual differences, and health implications. Focus is on experimentally tractable ideas.

3 units, Aut (Gross)

PSYCH 280. Doctoral Research—For dissertation. Prerequisite: consent of instructor.

1-15 units, any quarter (Staff)

PSYCH 281. Practicum In Teaching—Enrollment limited to students serving as teaching assistants in selected Psychology courses. May be repeated for credit.

1-4 units, any quarter (Staff)

PSYCH 283. Interdisciplinary Seminar on Conflict and Dispute—(Same as LAW 611, MS&E 459.) Problems of conflict resolution and negotiation from an interdisciplinary perspective. Presentations by faculty and scholars from other universities.

1 unit, Spr semester (Hensler)

PSYCH 290. Graduate Research Methods—Primary tool use for psychologists: basics of experiment design; computer-based experiments; web-based experiments; data analysis packages and data presentation; exploratory statistics; eye-tracking methods; psychophysiology methods; survey construction; corpus and discourse analysis; and maybe hypnosis. Prerequisite: doctoral student in Psychology.

2 units, Win (Ray)

PSYCH 292A,B,C. Interdisciplinary Pedagogy I: Race, Identity, and Social Issues—(Enroll in EDUC 404A,B,C.)

1-5 units, A: Aut, B: Win, C: Spr (Staff)

PSYCH 296. Methods in Personality and Social Psychology—Focus is on developing and consolidating a set of methodological skills in personality and social psychology. Experimental survey and multivariate methods. Topics: archival and correlational studies; experimental and quasi-experimental design; formulating the research problem; going from abstract ideas to concrete instances; handling research artifacts; measuring and analyzing change data; observational techniques; organizing data: professional and ethical issues; triangulation; validity and reliability of measurement. Practicum format. Research proposal. Prerequisite: graduate standing in Psychology or consent of instructor.

1-3 units, Spr (Lepper, Steele)

PSYCH 297. Seminar for Coterminal Master of Arts—Contemporary issues and student research. Student and faculty presentations.

1-2 units, Aut, Spr (Thomas) Win (Thomas, Ross)

PSYCH 459. Frontiers in Interdisciplinary Biosciences—(Crosslisted in multiple departments in the schools of Humanities and Sciences, Engineering, and Medicine; students should enroll directly through their affiliated department, otherwise enroll in CHEMENG 459.) An introduction to cutting-edge research involving interdisciplinary approaches to bioscience and biotechnology; for specialists and non-specialists. Organized and sponsored by the Stanford BioX Program. Three seminars each quarter address a broad set of scientific and technical themes related to interdisciplinary approaches to important issues in bioengineering, medicine, and the chemical, physical, and biological sciences. Leading investigators from Stanford and throughout the world present the latest breakthroughs and endeavors that cut broadly across many core disciplines. Pre-seminars introduce basic concepts and provide background for non-experts. Registered students attend all pre-seminars in advance of the primary seminars, others welcome. Prerequisite: keen interest in all of science, engineering, and medicine with particular interest in life itself. Recommended: basic knowledge of mathematics, biology, chemistry, and physics.

1 unit, Aut, Win, Spr (Robertson)

OVERSEAS STUDIES

Courses approved for the Psychology major and taught overseas can be found in the "Overseas Studies" section of this bulletin, or in the Overseas Studies office, 126 Sweet Hall.

OXFORD

PSYCH 133Y. Human Abilities—(Same as EDUC 255Y.)

3 units, Aut (Shavelson)

This file has been excerpted from the *Stanford Bulletin, 2002-03*, pages 557-567. Every effort has been made to insure accuracy; late changes (after print publication of the bulletin) may have been made here. Contact the editor of the *Stanford Bulletin* via email at arod@stanford.edu with changes, corrections, updates, etc.