PSYCHOLOGY

Director of undergraduate studies: Laurie Santos, 213 SSS, 432-4524, psychdus@yale.edu; senior thesis director: Julia Kim-Cohen, 317 K, 432-7581, julia.kim-cohen@yale.edu; psychology.yale.edu

FACULTY OF THE DEPARTMENT OF PSYCHOLOGY


Associate Professors  Robert Kerns, Jr., Maria Piñango, Laurie Santos, Glenn Schafe, Mary Schwab-Stroke

Assistant Professors  Yarrow Dunham, June Gruber, Julia Kim-Cohen, Hedy Kober, Jaime Napier, David Rand, Gregory Samanez-Larkin

Lecturers  Nancy Close, Nelson Donegan, Carla Horwitz, David Klemanski, Kristi Lockhart, Benjamin Toll, Marney White

The introduction to psychology is PSYC 110, the general survey course. PSYC 110 is a prerequisite for other 100-level courses only if indicated in their course descriptions; it is a prerequisite for all courses numbered 200 or above.

Courses in the department are organized so that they are best taken in several parallel sequences. Courses numbered from 120 to 190 and ending in a zero are core survey courses that introduce students to major areas of psychology and provide additional background for more advanced courses. These courses represent major content areas of psychology; students should sample broadly from them before specializing. Courses numbered from 200 to 209 focus on statistics and general methodology. Courses numbered from 210 to 299 teach data collection in various areas of psychology. Courses numbered from 300 to 399 are more advanced courses in a particular specialization. Senior seminars, whose enrollment is limited to twenty students, are numbered from 400 to 489. These seminars are best taken once a student has appropriate background. Courses numbered from 490 to 499 are special tutorial courses that require permission of the adviser and the director of undergraduate studies.

The standard major  The major in Psychology requires twelve term courses beyond PSYC 110, including the senior requirement.

1. Because psychology is so diverse a subject, every student is required to take four courses from the list below. Two of these courses must be from the social science point of view in psychology and two must be from the natural science point of view. At least one from each group must be a course designated as "Core" in the course listings. Students are expected to take their two core courses as early as possible in the major, normally within two terms after declaring their major.

Social science:  PSYC 125, PSYC 126, 127, 128, 131, 140, 150, 231, 250, 260, 330, 355, 356

Natural science:  PSYC 130, 137, 160, 270, 304, 318, 321, 327, 350, 376

2. Because statistical techniques and the mode of reasoning they employ are fundamental in psychology, a course in statistics (PSYC 200) is required, preferably prior to the senior year. A student may substitute STAT 103 for PSYC 200 or may substitute an examination arranged with the instructor of PSYC 200 for the course requirement. Students may take the examination only one time.

3. To assure some direct experience in collecting and analyzing data, students must elect at least one course, preferably prior to the senior year, in which research is planned and carried out. Courses numbered between 210 and 299 fulfill this research methods requirement. (The same course may satisfy both this and the first requirement.)

4. To encourage consideration of the relation between psychology and other disciplines, students may count toward the major as many as three term courses in other related departments, including college seminars. Appropriate courses are offered in anthropology, cognitive science, computer science, philosophy, political science, sociology, and the biological sciences. Some students may find courses in other subjects related to their major. Students should consult with the director of undergraduate studies in Psychology about selecting outside courses. In all cases, courses in other departments must have substantial psychological content or clear links to topics in psychology.

5. Students interested in research are encouraged to take an independent study course (PSYC 490, 491, 492, 493) as early as the sophomore year. Students may also take PSYC 495 for one-half course credit per term with prior permission of the faculty adviser and the director of undergraduate studies. No more than a total of three credits from PSYC 490–495 combined may count toward the major.

B.S. degree  The B.S. degree is typically awarded to students who conduct empirical research through a directed research course. B.S. candidates must fulfill the statistics and research methods requirements of the major before starting the senior year. An empirical research project normally includes designing an experiment and collecting and analyzing the data.

B.A. degree  The B.A. degree is typically awarded to students who conduct a nonempirical literature review. There are no restrictions in the research format for the B.A.

Senior requirement  Majors are required to earn two course credits from courses numbered PSYC 400–495. At least one of these course credits must be taken during the senior year and, for the B.S. degree, at least one must be a directed research course (PSYC 492 or 493) taken during the senior year. Juniors may preregister for senior seminars at the end of the junior year. In order to count credits obtained
from PSYC 400–495 toward the senior requirement, a student must submit a substantial final paper (a minimum of 20 pages for a one-
credit course, 10 pages for a half-credit course).

**Credit/D/Fail** No more than two term courses taken Credit/D/Fail may be applied toward the major; no 200-level course taken Credit/
D/Fail may be applied toward the major.

**Departmental advisers** Schedules for all majors must be discussed with, and approved by, the director of undergraduate studies or the
advisers for the neuroscience and philosophy tracks in Psychology. Only then may a schedule be submitted to the residential college
dean’s office. For questions concerning credits for courses taken at other institutions or at Yale but outside the Department of Psychology,
students should consult with the director of undergraduate studies. For questions concerning special tracks, students should consult with
the advisers for the neuroscience and philosophy tracks in Psychology.

**Distinction in the Major** To be considered for a B.S. degree with Distinction, a student must first submit a research proposal of one to
two single-spaced pages, signed by the senior essay adviser, by the end of the registration period in the fall term of the senior year. The
proposal must specify a research hypothesis, a rationale for the hypothesis, and proposed methods for collecting and analyzing data.
To be considered for a B.A. degree with Distinction, a student must first submit a senior essay proposal of one to two pages, signed by the
essay adviser and specifying the research topic, by the end of the registration period in the fall term of the senior year.
Additionally, to be considered for Distinction in the Major with either degree, students must submit a senior essay to the Psychology
department at least one week before the last day of classes in the final term of enrollment. The senior essay must be written during the
senior year and must be a product of one or two of the 400-level courses taken to fulfill the senior requirement. Senior essays that are
submitted after the deadline will be subject to grade penalties.

**Computer Science and Psychology major** The interdepartmental major in Computer Science and Psychology may be considered by
students with interests lying squarely between the two disciplines. See under Computer Science and Psychology for more information.

**Neuroscience track in Psychology** Students with a major interest in neuroscience may wish to elect the neuroscience track. Such students
are considered Psychology majors for whom the requirements have been modified to accommodate their interests, and to reflect the
multidisciplinary nature of modern neuroscience and psychology. Given the broad nature of the field of neuroscience, students may
wish to concentrate their studies in one area of the field (e.g., behavioral, cellular and molecular, cognitive, affective, social, clinical,
or developmental). Interested students are encouraged to meet with the track adviser, Gregory Samanez-Larkin, 318 SSS, 432-1150,
g.samanezlarkin@yale.edu. Majors in the neuroscience track meet with the track adviser at the beginning of each term in their junior and
senior years.

Students in the Class of 2014 may fulfill the requirements for the neuroscience track in Psychology as described below for the Class of 2015
and subsequent classes. Alternatively, they may fulfill the requirements for the neuroscience track that were in place when they entered the
major, as described in previous editions of this bulletin (http://www.yale.edu/printer/bulletin/archivepdffiles/YCPS) .

Requirements for the neuroscience track for the Class of 2015 and subsequent classes are the same as for the standard major, with the
following exceptions:

1. Two terms of introductory biology are required for the major, either MCDB 120 or BIOL 101 and 102, and either E&EB 122 or BIOL 103
and 104. Students who have scored 5 on the Advanced Placement test in Biology may place out of these courses; such students are
required to replace the introductory courses with two additional term courses in Psychology, Ecology and Evolutionary Biology, or
Molecular, Cellular, and Developmental Biology.

2. Students must take PSYC 160 or PSYC 170 and a data-collection course chosen from PSYC 230L or 270. MCDB 320 may substitute
for the PSYC 160 or PSYC 170 requirement, or MCDB 320 and 321L may substitute for the PSYC 230L or 270 requirement, but not
both. If MCDB 320 is substituted for a Psychology course, it cannot be counted as one of the two advanced science courses outside the
department (see item 4 below).

3. At least seven courses must be taken in the Psychology department. As required for the standard major, students in the neuroscience
track must take two courses from the social science list above, at least one of which must be designated as "Core" in the course listings.
Students in the neuroscience track must also take a course from the natural science list in addition to the courses specified in item 2 above.

4. At least two advanced science courses must be chosen from Molecular, Cellular, and Developmental Biology and Ecology and
Evolutionary Biology courses numbered 200 and above that deal with human and/or animal biology; recommended courses include
MCDB 200, 202, 205, 210, 240, 300, 315, 320, E&EB 220, 225, and 240. Certain courses outside of these departments may also meet the
advanced science requirement, including BENG 350, 421, CPSC 475, MB&B 300, 301, 420, 435, 443, 452, MATH 222, 225, 230, 231, and
STAT 241. Other courses may qualify for this requirement with permission of the neuroscience track adviser. Laboratory courses do not
count toward the advanced science requirement. Students should note that many advanced science courses have prerequisites that must
be taken first.

5. The senior requirement for the neuroscience track is the same as for the standard major, except that the two required course credits
from PSYC 400–495 must have neuroscience content. Students pursuing the B.S. degree in the track must carry out a neuroscientific
empirical project in PSYC 492 or 493 and must be supervised by a faculty member within the neuroscience area of the Psychology

Yale University
Students who wish to work with an affiliated faculty member studying neuroscience outside the department must obtain permission from the neuroscience track adviser.

**Philosophy track in Psychology** Students in the Class of 2014 who have elected the philosophy track in Psychology may fulfill its requirements as described in previous editions of this bulletin (http://www.yale.edu/printer/bulletin/archivepdffiles/YCPS). The adviser for the philosophy track is Brian Scholl, 304 SSS, 432-4629, brian.scholl@yale.edu.

Students in the Class of 2015 and subsequent classes whose interests encompass both philosophy and psychology should consider the psychology track offered by the Philosophy department.

**REQUIREMENTS OF THE MAJOR**

**STANDARD MAJOR**

**Prerequisite**  PSYC 110

**Number of courses**  12 courses beyond prereq (incl senior req)

**Specific course required**  PSYC 200

<table>
<thead>
<tr>
<th>Distribution of courses</th>
<th>B.A. – 2 social science courses and 2 natural science courses, as specified; 1 course numbered PSYC 210–299; B.S. –Same, with completion of the statistics and research methods req before senior year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substitution permitted</td>
<td>For PSYC 200, STAT 103 or exam arranged with instructor; up to 3 relevant courses in other depts, with DUS permission</td>
</tr>
</tbody>
</table>

**Senior requirement**  B.A. – 2 course credits from PSYC 400–495, 1 during senior year; B.S. – PSYC 492 or 493 taken during senior year; 1 addtl course credit from PSYC 400–495

**NEUROSCIENCE TRACK**

**Prerequisite**  PSYC 110

**Number of courses**  12 courses beyond prereq (incl senior req)

**Specific courses required**  PSYC 160 or PSYC 170; PSYC 200; PSYC 230L or 270; MCDB 120 or BIOL 101 and 102; E&EB 122 or BIOL 103 and 104

<table>
<thead>
<tr>
<th>Distribution of courses</th>
<th>B.A. – At least 7 courses in Psych, incl 2 in social science and 1 addtl course in natural science, as specified; at least 2 advanced science courses, as specified; B.S. –Same, with completion of the statistics and research methods req before senior year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substitution permitted</td>
<td>MCDB 320 for PSYC 160 or PSYC 170, or MCDB 320 and 321L for PSYC 230L or 270; for PSYC 200, STAT 103 or exam arranged with instructor</td>
</tr>
</tbody>
</table>

**Senior requirement**  B.A. – 2 course credits from PSYC 400–495 with neuroscience content, 1 during senior year; B.S. – PSYC 492 or 493 taken during senior year; 1 addtl course credit from PSYC 400–495 with neuroscience content

**Courses**

**PSYC 110a or b, Introduction to Psychology**  Marvin Chun [F] and Paul Bloom [Sp]

A survey of major psychological approaches to the biological, cognitive, and social bases of behavior.  SO

**PSYC 120a / CGSC 201a, Brain and Thought: An Introduction to the Human Brain**  Amy Arnsten

An introduction to human brain anatomy, physiology, and function, designed for neuroscience-related majors but accessible to nonscience majors. Focus on basic concepts of neural function and on brain mechanisms underlying perception, memory, and higher cognitive abilities, and how these are altered in neurological and neuropsychiatric disorders.  SC

Psychology: Core

Psychology: Natural Science

**PSYC 125a / CHLD 125a / EDST 125a, Child Development**  Nancy Close and Carla Horwitz

The reading of selected material with supervised participant-observer experience in infant programs, a day-care and kindergarten center, or a family day-care program. Regularly scheduled seminar discussions emphasize both theory and practice. An assumption of the course is that it is not possible to understand children – their behavior and development – without understanding their parents and the relationship between child and parents. The focus is on infancy as well as early childhood. Enrollment limited to juniors and seniors.  WR, SO

Psychology: Social Science

**PSYC 127a / CHLD 127a / EDST 127a, Early Childhood Education: Implications of Curriculum and Policy**  Carla Horwitz

Development of curricula for preschool children – infants through five-year-olds – in light of current research and child development theory.  WR, SO RP

Psychology: Social Science

**PSYC 128b / CHLD 128b / EDST 128b, Language, Literacy, and Play**  Nancy Close and Carla Horwitz

The complicated role of play in the development of language and literacy skills among preschool-aged children. Topics include social-emotional, cross-cultural, cognitive, and communicative aspects of play.  WR, SO RP

Psychology: Social Science
An introduction to the interdisciplinary study of how the mind works. Discussion of tools, theories, and assumptions from psychology, computer science, neuroscience, linguistics, and philosophy. So

Psychology: Core
Psychology: Natural Science

Introduction to major discoveries in human emotion. Evolutionary theories of anger, love, and disgust; emotion and morality; cultural and gender differences; emotion and the brain; relation between emotion and thinking; development of emotion; and abnormal emotions in mental illness. So, RP

Psychology: Social Science

Knowledge of language as a component of the mind: mental grammars, the nature and subdivisions of linguistic knowledge in connection with the brain. The logical problem of language acquisition. The "universal grammar hypothesis" according to which all humans have an innate ability to acquire language. The connection between language acquisition and general cognitive abilities. So

Psychology: Natural Science

An introduction to research and theory on the development of perception, action, emotion, personality, language, and cognition from a cognitive science perspective. Focus on birth to adolescence in humans and other species. Prerequisite: PSYC 110. So

Psychology: Core
Psychology: Social Science

An interdisciplinary approach to understanding and treating psychiatric disorders, integrating clinical psychology, psychiatry, and advances in basic neuroscience. Focus on how research with animal models can advance our understanding of psychiatric disorders and generate more effective treatments for patients. Topics include drug addiction, depression, Parkinson’s disease, and schizophrenia. SC, So

Psychology: Natural Science

Study of social cognition, attitudes and persuasion, group processes, intergroup processes, prosocial behavior, aggression, and conformity. Theories, methodology, and applications of social psychology. Prerequisite: PSYC 110. So

Psychology: Core
Psychology: Social Science

Introduction to the neural bases of human psychological function, including social, cognitive, and affective processing. Preparation for more advanced courses in cognitive and social neuroscience. Topics include memory, reward processing, neuroeconomics, individual differences, emotion, social inferences, and clinical disorders. Neuroanatomy, neurophysiology, and neuropharmacology are also introduced. SC

Psychology: Core
Psychology: Social Science

Psychoactive drugs and their effects on both brain and behavior. Pharmacological and brain mechanisms of different classes of legal, illegal, and medicinal drugs, including alcohol, caffeine, tobacco, stimulants, depressants, antidepressants, and hallucinogens. Individual drugs’ pharmacokinetics, mechanisms of action, dosing, routes of administration, and patterns and effects of use and misuse. Some attention to substance use disorders, prevention, and treatment. SC

Psychology: Core
Psychology: Natural Science

Psychotherapy in the study of happiness and human emotion. Psychophysiology, behavioral observation and coding, and self-report assessment instruments. Attention to experimental design, data acquisition, computerized methods of analysis, and writing research reports. Prerequisites: PSYC 110 and a course in statistics, or with permission of instructor. Recommended preparation: research experience. So

Psychology: ResearchMethods
Psychology: Social Science

Methods of research in social interaction and decision making. Game theory, economic modeling, and evolutionary modeling applied to experimental psychology. Students design and conduct a research study, analyze the data, and write a research report. Prerequisites: PSYC 110 and a course in statistics, or with permission of instructor. Recommended preparation: research experience. Enrollment limited. So
Psychology: ResearchMethods
Psychology: Social Science

*PSYC 235a, Research Methods in Psychology  Julia Kim-Cohen
Introduction to general principles and strategies of psychological research. Topics include generating and testing hypotheses, laboratory and field experiments, scale construction, sampling, archival methods, case studies, ethics and politics of research, and Internet and cross-cultural methods. Hands-on research experience in laboratories. Prerequisites: PSYC 200 or STAT 103, or permission of instructor.  WR, SO

PSYC 250a, Research Methods in Clinical Psychology  Alan Kazdin
Introduction to the underpinnings, processes, and methods of scientific research utilized in clinical psychology. Rationale for various methods, generating and testing hypotheses, nonhuman animal models, laboratory and applied studies, assessment methods, ethical issues, protection of participants, and research findings in relation to public life and policy.  SO

*PSYC 260b, Research Methods in Behavioral Genetics  Tyrone Cannon
Methods of human behavioral genetics research. Focus on the genetics of psychiatric disorders, personality, and cognition. Students design and perform genetic-association analyses of behavioral traits, using existing datasets supplied by the instructor.  SO

*PSYC 270b, Research Methods in Behavioral Neuroscience  Nelson Donegan
Laboratory course in which students design and conduct research to study brain function and behavior. Emphasis on hands-on participation in behavioral and neuroscience techniques. Prerequisites: PSYC 160 or , and a course in statistics, or with permission of instructor.  SC

Psychology: Natural Science

*PSYC 280Lb, Research Methods in Cognitive Development  Yarrow Dunham
Introduction to research methods in cognitive development, with a focus on experimental and observational methods in infancy and early to middle childhood. Case studies in which different methodological approaches yield either conflicting or convergent patterns of results. Generation and critique of research designs; replication and extension of published work.  SO

PSYC 304a / CGSC 304a, The Mental Lives of Babies and Animals  Karen Wynn
Interdisciplinary exploration of the cognitive, social, and emotional capacities of creatures lacking language and culture. The extent to which our complex psychology is unique to mature humans; the relative richness of a mental life without language or culture. Some attention to particular human populations such as children with autism and adults with language disorders.  SO

Psychology: Natural Science

PSYC 318b / LING 220bG, General Phonetics  Jelena Krivokapic and Christian DiCanio
Investigation of possible ways to describe the speech sounds of human languages. Acoustics and physiology of speech; computer synthesis of speech; practical exercises in producing and transcribing sounds. (Formerly LING 120)  SO

Psychology: Natural Science

*PSYC 319b / HLTH 215b, Health Psychology  Benjamin Toll
An introduction to health behaviors and ways in which they can be altered. Health-compromising behaviors such as the use of alcohol, drugs, and tobacco; the impact of health psychology on problems such as stress, pain management, AIDS, and cancer.  SO

Psychology: Social Science

PSYC 321bG, Psychopharmacology  Thomas Brown
Study of therapeutic and recreational drugs that affect the central nervous system and influence mood, cognition, perception, and behavior. Drugs considered vary from psychotropic to hypnotic to narcotic. Prerequisite: PSYC 160 or or equivalent, or permission of instructor.  SC

Psychology: Natural Science

PSYC 322a / LING 130aG, Evolution of Language  Stephen Anderson
The origin and evolution of human language from an interdisciplinary perspective. Topics include the design features of language, the structure of evolutionary theory, elementary molecular genetics and genetic evidence for language evolution, cognitive continuity and discontinuity with other species, hominid evolutionary history, domain specificity and generality of the language faculty, evidence for evolutionary shaping of physical and cognitive structures.

PSYC 327b / LING 227bG, Language and Computation  Gaja Jarosz and Tamas Biro
Design and analysis of computational models of language. Topics include finite state tools, computational morphology and phonology, grammar and parsing, lexical semantics, and the use of linguistic models in applied problems. Prerequisite: Prior programming experience or permission of instructor. (Formerly LING 141)  QR, SO

Psychology: Natural Science
the most advanced forms of higher-level cognition. The perception of animacy, agency, and goal-directedness; biological motion; Connections between visual perception, among the earliest and most basic of human cognitive processes, and social cognition, among the historically separate fields of learning and memory research desegregated under a neuroscientific perspective that recognizes the evolutionary continuity among higher animals. Prerequisites: introductory courses in biology and psychology, or permission of instructor. Credit for PSYC 355 only on completion of PSYC 356.
Psychology: Natural Science

*PSYC 350a or b / CHLD 350a or b, Autism and Related Disorders James McPartland
Weekly seminar focusing on autism and related disorders of socialization. A series of lectures on topics in etiology, diagnosis and assessment, treatment and advocacy, and social neuroscience methods; topics cover infancy through adulthood. Supervised experience in the form of placement in a school, residence, or treatment setting for individuals with autism spectrum disorders. Details about admission to the course are explained at the first course meeting. Prerequisite: an introductory psychology course. so Psychology: Natural Science

*PSYC 355a and PSYC 356b, Clinical Psychology in the Community Kristi Lockhart
Mental disorders as they are treated within a community setting. Students participate in a fieldwork placement, working either one-on-one or in groups with the psychiatrically disabled. Seminar meetings focus on such topics as the nature of severe mental disorders, the effects of deinstitutionalization, counseling skills, and social policy issues related to mental health. Prerequisite: PSYC or permission of instructor. Credit for PSYC 355 only on completion of PSYC 356.
Psychology: Natural Science

*PSYC 360a / LING 361a, Topics in Syntax: The Mental Lexicon Maria Piñango
Definitions of lexical knowledge; views of the lexicon as a repository of information vs. a "generative" system; the case of idioms; the lexicon and the grammar-conceptual structure interface; acquisition of the lexicon. (Formerly LING 260) so

PSYC 376a, Learning and Memory Thomas Brown
The basic facts, general principles, and theories that describe how higher animals, from mice to humans, are changed by their experiences. The historically separate fields of learning and memory research desegregated under a neuroscientific perspective that recognizes the evolutionary continuity among higher animals. Prerequisites: introductory courses in biology and psychology, or permission of instructor. SC, SO Psychology: Natural Science

*PSYC 402b, Topics in Infant Studies Karen Wynn
Advanced topics in infant cognitive, social, and emotional development. Attention to infant attachment strategies as well as maternal and paternal investment and attachment. Perspectives from biology, anthropology, and developmental, comparative, clinical, physiological, and evolutionary psychology. so

*PSYC 414a / WGSS 466a, Gender Images: A Psychological Perspective Marianne LaFrance
The nature and effects of gender images (males and females, sexual orientation, gender identities) on the construction of self-identity, stereotypes, aspirations, and interpersonal relationships. Focus on contemporary media, with attention to how, when, and why gender images change with time. so

*PSYC 415a, Psychology of Inequality Jaime Napier
The role of psychological factors in the perpetuation of inequality. Social and psychological effects of living in highly unequal environments. Race, ethnicity, gender, social class, socioeconomic status, sexual orientation, ability, and other dimensions of difference; ways in which such differences are centered in power relations and affect individual-level achievement, objective and subjective well-being, and social interactions. SO

*PSYC 416a, The Psychology of Group Life Yarrow Dunham
Study of social categorization, the psychological tendency to partition individuals into groups, with attention to cognitive, developmental, social, and evolutionary approaches. The nature and development of social categorization, including its evolutionary advantages and its relation to the phenomenon of categorization more broadly. Ways in which social categorization influences prejudice and discriminatory behavior; methods for reducing such negative effects. SO

*PSYC 425b / CGSC 425b, Social Perception Brian Scholl
Connections between visual perception, among the earliest and most basic of human cognitive processes, and social cognition, among the most advanced forms of higher-level cognition. The perception of animacy, agency, and goal-directedness; biological motion;
face perception (including the perception of facial attractiveness); gaze processing and social attention; "thin-slicing" and "perceptual stereotypes"; and social and cultural influences on perception.  

*PSYC 435b / CGSC 435b / PHIL 435b, Philosophy for Psychologists  Aaron Norby  
Central issues in philosophy of mind and their relations with contemporary psychology. Scientific psychology versus philosophy as the better approach to addressing the questions raised. Prerequisite: PHIL 181 or equivalent.  

*PSYC 456b, Developmental Psychopathology  Julia Kim-Cohen  
Overview of the theoretical and empirical literature in developmental psychopathology. Models of atypical development that can elucidate underlying mechanisms of stability and change. Prerequisite: PSYC or permission of instructor.  

*PSYC 458a, Decision Neuroscience  Gregory Samanez-Larkin  
The decision-making process examined from the perspective of neuroscience. Research from cognitive neuroscience, psychology, public health, behavioral economics, finance, marketing, and computer science. Topics include reinforcement learning, risky decision making, intertemporal choice, social decision making, impulsivity and self control, development and aging, psychopathology, and commercial and public health applications.  

*PSYC 479bG, Thinking  Woo-kyoung Ahn  
A survey of psychological studies on thinking and reasoning, with discussion of ways to improve thinking skills. Topics include judgments and decision making, counterfactual reasoning, causal learning, inductive inferences, analogical reasoning, problem solving, critical thinking, and creativity. First class meeting to be held during course selection period at a time determined by admitted students. See the syllabus on Classes*v2 (http://classesv2.yale.edu) for application information.  

*PSYC 489b, Principles of Cognitive and Behavior Therapy  Alan Kazdin  
An examination of the diverse theories, principles, and treatments in behavior therapy, including operant and classical conditioning, cognitive behavioral approaches, and social learning. Enrollment limited to senior Psychology majors.  

*PSYC 490a and PSYC 491b, Directed Reading  Laurie Santos  
Individual study for qualified students, primarily seniors, who wish to investigate an area of psychology not covered by regular departmental offerings. A student must be sponsored by a faculty member, who sets requirements and meets regularly with the student. To register, the student must submit a written plan of study approved by the adviser to the director of undergraduate studies. The normal minimum requirement is a term paper, but individual faculty members may set alternative equivalent requirements. May be elected for one or two terms.  

*PSYC 492a and PSYC 493b, Directed Research  Laurie Santos  
Empirical research projects for qualified students, primarily seniors. A student must be sponsored by a faculty member, who sets the requirements and supervises research. To register, the student must submit a written plan of study approved by the adviser to the director of undergraduate studies. The normal minimum requirement is a written report of the completed research, but individual faculty members may set alternative equivalent requirements. May be elected for one or two terms.  

*PSYC 495a or b, Research Topics  Laurie Santos  
Discussion of current and advanced topics and/or ongoing research projects. Students should consult the director of undergraduate studies before enrolling. May be repeated for credit.  

½ Course cr