

# PSYCHOLOGY

Kirtland Hall, 203.432.4500  
<http://psychology.yale.edu>  
 M.S., M.Phil., Ph.D.

## Chair

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## Director of Graduate Studies

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**Associate Professors** Arielle Baskin-Sommers, Steve Chang, Yarrow Dunham, Avram Holmes

**Assistant Professors** Molly Crockett, Dylan Gee, Maria Gendron, Julian Jara-Ettinger, Samuel McDougale, Robert Rutledge, Ilker Yildirim

**Lecturers** Richard Aslin (*Senior Lecturer*), Stephanie Lazzaro, Kristi Lockhart (*Senior Lecturer*), Mary O'Brien

**Affiliated Faculty** Alan Anticevic (*Psychiatry*), Amy Arnsten (*Neuroscience*), Christopher Benjamin (*Neurology*), Tori Brescoll (*School of Management*), Philip Corlett (*Psychiatry*), Ravi Dhar (*School of Management*), Tamar Gendler (*Philosophy*), Walter Gilliam (*Child Study Center*), Carlos Grilo (*Psychiatry*), Jeannette Ickovics (*Public Health*), Dan Kahan (*Law School*), Robert Kerns (*Veterans Administration Medical Center*), Hedy Kober (*Psychiatry*), John Krystal (*Psychiatry*), Becca Levy (*Public Health*), Ifat Levy (*Neuroscience*), Lawrence Marks (*Environmental Health Sciences*), Linda Mayes (*Child Study Center*), Carolyn Mazure (*Psychiatry*), James McPartland (*Child Study Center*), George Newman (*School of Management*), Nathan Novemsky (*School of Management*), Helena Rutherford (*Child Study Center*), Wendy Silverman (*Child Study Center*), Dana Small (*Psychiatry*), Jane Taylor (*Psychiatry*), Fred Volkmar (*Child Study Center*), Gideon Yaffe (*Law School*)

## FIELDS OF STUDY

Fields include clinical psychology; cognitive psychology; developmental psychology; neuroscience; and social/personality psychology.

## SPECIAL REQUIREMENTS FOR THE PH.D. DEGREE

In order to allow students to be trained in accordance with their own interests and career goals, the general requirements of the department are kept to a minimum. The formal requirements are: (1) Course work selected to meet the individual's objectives with a minimum of three basic-level courses and one course in data analysis. Two of the three required basic-level courses must be in two different areas of psychology outside the student's main area of concentration. The basic-level course requirement must be completed by the end of the second year. Students must attain an Honors grade in at least two term courses by the end of the second year of study. (2) Students are required to assist in teaching four courses by the end of their fourth year. (3) Completion of a First-Year Research Paper due by May 10 of the second term. (4) Completion of a predissertation research project, to be initiated not later than the second term and completed not later than May 1 of the second year. Certification of this research project as well as performance in course work and other evidence of scholarly work at a level commensurate with doctoral study, as judged by the faculty, are necessary for continuation beyond the second year. (5) Submission of a dissertation prospectus, and a theme essay that demonstrates the candidate's comprehensive knowledge and understanding of the area of concentration. Certification of the theme essay completes the qualifying examination. (6) Approval of the dissertation by an advisory committee and the passing of an oral examination on the dissertation and its general scientific implications. The theme essay and the dissertation prospectus are completed during the third year. Students are then formally admitted to Ph.D. candidacy. There are no language requirements.

The faculty considers teaching to be an essential element of the professional preparation of graduate students in Psychology. For this reason participation in the Teaching Fellow Program is a degree requirement for all doctoral students. They are expected to serve as teaching fellows (level 20) for four terms over the course of the second through fourth years in the program. Opportunities for teaching are matched as closely as possible with students' academic interests.

## CLINICAL GRADUATE STUDENT INTERNSHIPS

Registered students undertaking their required clinical internships (usually in their sixth year) are typically not eligible for Graduate School stipend funding, since these are paid internships. However, clinical internship stipends for sixth-year students that fall below the current year's Psychology stipend will be topped up to the current year's Psychology stipend. Students will be considered to have fulfilled the final requirement for the degree after successfully completing their internship (typically in July) and will be awarded degrees the following December. They will not be registered in the Graduate School during the fall term in which their degrees are conferred.

## COMBINED PH.D. PROGRAMS

Psychology offers a combined Ph.D. degree program with African American Studies. For the combined program with African American Studies, students must apply to the African American Studies department, with Psychology indicated as the secondary department.

Psychology also offers a combined Ph.D. degree program with Philosophy. Students interested in this combined degree can apply to the Philosophy department or the Psychology department. Students must be accepted into one of these departments (the “home department”) through the standard admissions process, and both departments must then agree to accept the student into the combined program. If a student applies to the Philosophy department for the combined degree program, that student should also contact one or more Psychology faculty members with compatible interests so that a suitable adviser in Psychology can be identified prior to an admissions decision. Students enrolled in the combined program complete a series of courses in each discipline as well as an interdisciplinary dissertation that falls at the intersection of the two. On completing these requirements, students are awarded a Ph.D. either in Philosophy and Psychology, or in Psychology and Philosophy.

Questions about the combined degree programs may be directed to the directors of graduate studies in the participating departments prior to application.

## MASTER’S DEGREES

**M.Phil.** The academic requirements for the M.Phil. degree are the same as for the Ph.D. degree except for the submission of a prospectus, and the completion and defense of a dissertation, which define the Ph.D.

**M.S. (en route to the Ph.D.)** The M.S. degree is awarded upon satisfactory completion of a first-year research project, a predissertation research project, and a minimum of eight courses.

The Department of Psychology does not admit students for a terminal master’s degree. If, however, a student admitted to the Ph.D. program leaves the program prior to completion of the doctoral degree, the student may be eligible to receive a terminal master’s degree upon completion of the academic requirements as stated above.

Program materials are available online at <http://psychology.yale.edu>.

## COURSES

### **PSYC 509b, Social Cognition** John Bargh

A course in contemporary social cognition theory and research, in which students fully participate in each week's class discussion of the assigned readings. The goal of the course is to bring students up to speed, not only on the major themes and programs of research today, but also on the historical roots and context of that research – in other words, why that research is being done in the first place.

### **PSYC 518a, Multivariate Statistics** Julian Jara-Ettinger

This is a practical course in statistics that covers classical null-hypothesis significance testing (e.g., binomial and chi-squared tests), regression analyses (multiple regressions, generalized linear models, and mixed-effects models), modern statistical methods (bootstraps and cross-validation), basics of Bayesian data analysis (hierarchical Bayesian models, Bayes factors), and basics of machine learning for data analysis (principal component analysis and classifiers). This course focuses on how to intuitively understand what different tests do, how to run them using R, and how to interpret the results. The course favors intuitions over mathematical rigor, but it’s impossible to teach statistics without some math.

### **PSYC 523b, Cognitive Psychology** Staff

A comprehensive introduction to graduate-level cognitive psychology for first-year graduate students in psychology, with topics including learning, memory, perception, and attention. This course serves as the foundation for further study in more advanced graduate courses on specific topics within cognitive psychology.

### **PSYC 530a / INP 530a, Foundations of Neuroscience: Biological Bases of Human Behavior** Dylan Gee

The purpose of this course is to provide students with an understanding of the biological factors underlying human cognition and behavior. Particular emphasis is placed on the mechanisms associated with individual differences in healthy functions (including emotion regulation, stress sensitivity, higher cognition, reward sensitivity, impulsivity, and social functions) and their relations with psychiatric and neurological disorders. Biological factors to be covered include genetic, neuroanatomical, neurophysiological, neurochemical, hormonal, and neuropsychological influences. Several of the initial sessions are devoted to basic topics (e.g., neurons, neuronal signaling, brain systems), before we begin our discussion of the neural basis of behavior and cognition. We also cover seminal work on animal models for mechanistic insights into the neurobiology of human behavior. Graduate students with any neuroscience research interest are encouraged to take this course. Required of Psychology Ph.D. students in the neuroscience area.

### **PSYC 534a, Developmental Psychopathology** Fred Volkmar, Eli Lebowitz, and Denis Sukhodolsky

This course, designed for advanced undergraduates or beginning graduate students, provides an overview of developmental psychopathology during childhood and adolescence. It is team-taught by a child psychiatrist and psychologist and covers aspects of normal development, assessment methods, clinical disorders, treatment, and legal and social policy issues. We begin with a review of normative development and then a discussion of theoretical approaches to understanding developmental aspects of common mental health conditions in childhood. Relevant issues of culture and ethnicity in expression of psychopathology in childhood are also reviewed.

**PSYC 539a, Advanced Psychopathology** Jutta Joormann

The aim of this course is to have students master information on theory and assessment for major forms of psychopathology using cognitive-behavioral approaches. The focus is on learning how behavior can be conceptualized in cognitive-behavioral terms and to review recent models and empirical findings regarding clinical disorders. Students play an active role in this process by participating in class discussions and making presentations on etiological models and empirical findings for various clinical problems.

**PSYC 541b, Research Methods in Psychology** Tyrone Cannon

Research design, methodology, and evaluation considered in the context of clinical research. Emphasis on experimental and quasi-experimental designs, threats to validation, confounding, sources of artifact and bias, alternative assessment strategies, and data evaluation methods.

**PSYC 553a / MGMT 753a, Behavioral Decision-Making I: Choice** Ravi Dhar and Nathan Novemsky

The seminar examines research on the psychology of decision-making, focusing on judgment. Although the normative issue of how decisions should be made is relevant, the descriptive issue of how decisions are made is the main focus of the course. Topics of discussion include judgment heuristics and biases, confidence and calibration, issues of well-being including predictions and experiences, regret and counterfactuals. The goal of the seminar is threefold: to foster a critical appreciation of existing knowledge in behavioral decision theory, to develop the students' skills in identifying and testing interesting research ideas, and to explore research opportunities for adding to that knowledge. Students generally enroll from a variety of disciplines including cognitive and social psychology, behavioral economics, finance, marketing, political science, medicine, and public health.

**PSYC 558b / INP 558b, Computational Methods in Human Neuroscience** Nick Turk-Browne

This course provides training on how to use computational science for the advanced analysis of brain imaging data, primarily from functional magnetic resonance imaging (fMRI). Topics include scientific programming, high-performance computing, machine learning, network/graph analysis, real-time neurofeedback, nonparametric statistics, and functional alignment. Prerequisite: some prior experience with programming, data preprocessing, and basic fMRI analysis.

**PSYC 602b / MGMT 758b, Foundations of Behavioral Economics** Shane Frederick

The course explores foundational topics in behavioral economics and discusses the dominant prescriptive models (which propose what decision makers should do) and descriptive models (which aim to describe what decision makers actually do). The course incorporates perspectives from economics, psychology, philosophy, decision theory, and finance, and engages long-standing debates about rational choice.

**PSYC 605b, Social Emotions** Margaret Clark

The nature and function of emotions in social context. How emotions such as happiness, sadness, fear, and anger shape how we relate to others; how the ways in which we relate to others shape our experience and expression of these emotions. The nature and functions of additional emotions that seem to arise only within the context of social relationships: feelings of hurt, guilt, gratitude, empathic joy, and empathic sadness.

**PSYC 610b / PHIL 610b, The Self Over Time: Psychological and Philosophical Approaches** Paul Bloom and Laurie Paul

What makes someone the same person over time? Philosophers and psychologists have long been fascinated by identity and the nature of the self. Philosophers ask: Are there really such things as individuals who endure over time, from cradle to grave? Or is this an illusion – is a single life nothing but a string of related individuals? If so, is it rational to value who you are now over who you might become in the distant future? In any case, how can someone undergo profound change yet remain the same person? Psychologists explore beliefs and inclinations. What is our natural understanding of personal identity and the self, and how does this change through development? How does this understanding connect to how we think about moral responsibility, love, gratitude, and guilt? What can neuroscience and cognitive science tell us about the nature of a persisting self? In this course, we explore the nature of personal identity and see what happens when philosophy meets psychology. While the course begins with introductory material, we quickly get to contemporary debates of real interest. Prerequisite: some background in psychology, philosophy, or related disciplines. Permission of the instructor required.

**PSYC 625b, Social Perception** Brian Scholl

When exploring the structure of the mind, we typically think of visual perception as among the earliest and most basic of our cognitive processes, while we think of social cognition as among the most advanced forms of higher-level cognition. In this seminar we explore how these two aspects of the mind connect. Specific topics include 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 626a, Topics in Law and Psychology** Tom Tyler

This class is an introduction to topics in law and psychology. Topics include eyewitness identification; confessions; interrogation; jury decision-making; racism/sexism; media violence; and issues of culpability and mental illness. Enrollment limited to twenty. Self-scheduled examination or paper option. *Note: This course follows the Law School calendar.*

**PSYC 627b, The Rise and Fall of Wonder: When Early Passions for Exploration and Discovery Decay with Age** Frank Keil

Research on children's minds reveals early emerging abilities that help explain the developmental origins and early growth of wonder. We consider wonder as the joy of exploration and discovery. Preschoolers and even infants are driven to learn not just facts and statistics, but also underlying causal patterns that are at the heart of many sciences. They learn not just as individuals but also as members of knowledge communities and, early on, they sense how to "harvest" knowledge from these communities. Yet, those joyous moments of discovery and exploration often fade as children grow older and cease to wonder. We explore how this decline occurs and its consequences.

When people stop wondering, they fail to expand their grasps of the world and become ever more vulnerable to misunderstanding and manipulation by others. We examine possible ways to reverse the decline.

**PSYC 628a, Neuroscience of Decision-Making** Molly Crockett

An overview and examination of the neuroscience of decision-making. Interdisciplinary course highlighting research from cognitive neuroscience, psychology, behavioral economics, finance, marketing, computer science, and public health. Topics include utility and value, reinforcement learning, risky decision-making, impulsivity and self-control, social decision-making, psychopathology, and commercial applications (e.g., neuromarketing and neurofinance).

**PSYC 631a, Human Skill Learning**

Humans possess a remarkable ability to learn new skills and retain memories for those skills throughout their life span (e.g., learning to ride a bicycle). The ease with which humans acquire and sharpen skills belies the complexity involved in selecting and executing the correct actions in a given situation. This course considers both foundational and contemporary psychology and neuroscience research regarding skill learning, with an emphasis on motor and reinforcement learning. The overall goal is to gain an understanding of the different cognitive processes and algorithms that underlie skill acquisition. Prerequisite: PSYC 110. Recommended: PSYC 130, PSYC 160, PSYC 335, PSYC 376.

**PSYC 632a / LING 700a, The Cognitive Science of Sign Languages** Maria Pinango and Muye Zhang

Natural sign languages like American Sign Language have all of the structure and complexity of spoken languages. They are learned and processed like spoken languages, and they activate neural structures that maximally overlap with those activated by spoken languages. These findings have not only had important implications for the sociopolitical status of deaf people as a native, American minority community, but have also caused linguists and psychologists to reevaluate their most fundamental theories of language representation and processing in the mind and brain. The course introduces students to the analysis of sign languages at different levels of linguistic structure and related aspects of cognition in the visual modality. The primary goal is to encourage students#as linguists, psychologists, and cognitive scientists#to consider how natural sign languages can and must inform their linguistic theories (linguistics), models of language and cognition (psychology), and technological applications of language processing (computer science/artificial intelligence). We also consider the ways in which signing communities/deaf culture interact with the hearing world#often as marginalized minority groups#and reflect upon access to language and information as a basic human right. Prerequisite: some background in linguistic structure, cognitive science, any signed language, or permission of the instructor is preferred.

**PSYC 637b, Minds, Brains, and Machines** Julian Jara-Ettinger

Exploration of the implications that the brain is a kind of computer that gives rise to the mind. Readings combine classical and cutting-edge research in psychology, philosophy, and artificial intelligence.

**PSYC 638a / INP 638a, Computational Models of Human Behavior**

Why do we do the things we do? How do we adapt to changes in the environment? And how does our happiness depend on our choices and what happens to us? How can computational models help us to gain new insights into psychological processes? The goal of this course is to use computational models to understand human behavior and its relationship to our emotions. Data is collected in a variety of tasks, including new experiments designed by students, and is analyzed using computational models.

**PSYC 647b, Social Science and Institutional Design: The Empirical Evaluation of Legal Policies and Practices** Tom Tyler

The current legal system bases many of its policies and practices upon assumptions concerning human nature. What does research tell us about how those policies and practices actually operate? What alternative social science models are available and how would institutions be different if those models were used? This class considers deterrence models and compares them to models emphasizing legitimacy, morality, and social norms. Policing, the courts, and corrections are examined and evaluated against available empirical evidence. The class also considers alternative models of institutional design and evidence of their potential or actual effectiveness.

**PSYC 671a, The Cognitive Science of Mind Reading** Laurie Santos

Examination of theory of mind from a developmental, comparative, and neural perspective. Topics include whether different representational systems underlie theory of mind capacities, how infants come to represent others' mental states, whether nonhuman animals share humanlike theory of mind capacities, and how phenomena like conformity and metacognition can be reconciled with developmental and neural findings in the domain of mind reading.

**PSYC 684a, Introduction to Psychotherapy: Technique** Mary O'Brien

The focus of the seminar is on formulating and conceptualizing psychological problems from a cognitive-behavioral perspective. Special consideration is paid to individual and cultural diversity in conceptualizing cases and planning treatment. Also discussed are ways in which cognitive-behavioral perspectives can be integrated with other theoretical orientations (e.g., interpersonal theory, experiential therapy).

**PSYC 685b, Introduction to Psychotherapy** Mary O'Brien

Open only to doctoral students in clinical psychology. This course is designed to prepare students to conduct therapy as clinical scientists. The class blends theoretical and empirical readings with practical training in applying interventions. Evidence-based therapy processes as well as the development of nonspecific therapeutic techniques (such as communicating empathy and structuring therapy sessions) are emphasized so that these skills can be applied across a wide range of client populations and problem presentations. In this second term of the yearlong course we discuss and practice skills related to dialectical behavior therapy (DBT), psycho-educational family therapy with serious mental illness, and three evidence-based approaches to couple therapy: a cognitive behavioral approach taken by John and

Julie Gottman, an acceptance-enhanced CBT approach taken by Christensen and Jacobson, and Emotionally Focused couple work by Sue Johnson. The course includes discussion of multicultural and diversity issues as they apply to these therapeutic approaches.

**PSYC 689a, Psychopathology and Diagnostic Assessment** Mary O'Brien

Didactic practicum for first-year clinical students. Main emphasis is initial assessment. Treatment planning and evaluation of progress also covered. Students first observe and then perform initial interviews. Applicable ethics and local laws reviewed.

**PSYC 690b, Ethics, Diversity, Supervision, Consultation, and Professional Practice** Mary O'Brien

Introduction to ethical and legal guidelines for clinical practice. In addition, supervision on diagnostic interview using the Structured Clinical Interview for DSM-IV is provided.

**PSYC 702a or b, Current Work in Cognition** Ilker Yildirim

A weekly seminar in which students, staff, and guests report on their research in cognition and information processing.

**PSYC 704a or b, Current Work in Behavior, Genetics, and Neuroscience** BJ Casey

Examination of the current status of research and scientific knowledge bearing on issues of behavior, genetics, and neuroscience. Weekly speakers present research, which is examined methodologically; recent significant journal articles or technical books are also reviewed.

**PSYC 708a or b, Current Work in Developmental Psychology** Ilker Yildirim

A luncheon meeting of the faculty and graduate students in developmental psychology for reports of current research and discussion on topics of general interest.

**PSYC 710a or b, Current Work in Social Psychology and Personality** Molly Crockett

Faculty and students in personality/social psychology meet during lunchtime to hear about and discuss the work of a local or visiting speaker.

**PSYC 720a or b, Current Work in Clinical Psychology** Dylan Gee

Basic and applied current research in clinical psychology that focuses on the cognitive, affective, social, biological, and developmental aspects of psychopathology and its treatment is presented by faculty, visiting scientists, and graduate students. This research is examined in terms of theory, methodology, and ethical and professional implications. Students cannot simultaneously enroll in PSYC 718 or 719.

**PSYC 724a or b, Research Topics in Cognition, Emotion, and Psychopathology** Jutta Joormann

This weekly seminar focuses on the role of cognition and emotion in psychopathology. We discuss recent research on basic mechanisms that underlie risk for psychopathology such as cognitive biases, cognitive control, and biological aspects of psychological disorders. The seminar also focuses on the interaction of cognition and emotion, on the construct of emotion regulation, and on implications for psychopathology.

**PSYC 725a or b, Research Topics in Human Neuroscience** Gregory McCarthy

Discussion of current and advanced topics in the analysis and interpretation of human neuroimaging and neurophysiology.

**PSYC 727a or b, Research Topics in Clinical Neuroscience** Tyrone Cannon

Current research into the biological bases of schizophrenia and bipolar disorder, including topics related to etiology, treatment, and prevention.

**PSYC 729a or b, Research Topics in Language and Cognition** Paul Bloom

Seminar focusing on ongoing research projects in language, cognition, and development. Prerequisite: permission of the instructor.

**PSYC 731a or b, Research Topics in Cognition and Development** Frank Keil

A weekly seminar discussing research topics concerning cognition and development. Primary focus on high-level cognition, including such issues as the nature of intuitive or folk theories, conceptual change, relations between word meaning and conceptual structure, understandings of divisions of cognitive labor, and reasoning about causal patterns.

**PSYC 733a or b, Research Topics in Social Cognitive Development** Yarrow Dunham

Investigation of various topics in developmental social cognition. Particular focus on the development of representations of self and other, social groups, and attitudes and stereotypes.

**PSYC 735a or b, Research Topics in Thinking and Reasoning** Woo-Kyoung Ahn

In this lab students explore how people learn and represent concepts. Weekly discussions include proposed and ongoing research projects. Some topics include computational models of concept acquisition, levels of concepts, natural kinds and artifacts, and applications of some of the issues.

**PSYC 737a or b, Research Topics in Clinical and Affective Neuroscience** Avram Holmes

Seminar focusing on ongoing research projects in clinical, cognitive, and translation neuroscience. Prerequisite: permission of the instructor.

**PSYC 739a or b, Research Topics in Autism and Related Disorders** Fred Volkmar

Focus on research approaches in the study of autism and related conditions including both psychological and neurobiological processes. The seminar emphasizes the importance of understanding mechanisms in the developmental psychopathology of autism and related conditions.

**PSYC 741a or b, Research Topics in Emotion and Relationships** Margaret Clark

Members of this laboratory read, discuss, and critique current theoretical and empirical articles on relationships and on emotion (especially those relevant to the functions emotions serve within relationships). In addition, ongoing research on these topics is discussed along with designs for future research.

**PSYC 742a or b, Research Topics in Computation and Cognition** Julian Jara-Ettinger

Seminar-style discussion of recently published and unpublished research in cognitive development and computational models of cognition.

**PSYC 744a or b, Research Topics in Philosophical Psychology** Joshua Knobe

The lab group focuses on topics in the philosophical aspects of psychology.

**PSYC 745a, Research Topics in Disinhibitory Psychopathology** Arielle Baskin-Sommers

This laboratory course focuses on the study of cognitive and affective mechanisms contributing to disinhibition. We discuss various forms of disinhibition from trait (e.g., impulsivity, low constraint, externalizing) to disorder (e.g., antisocial personality disorder, psychopathy, substance use disorders), diverse methods (e.g., psychophysiology, self-report, neuroimaging, interventions), and multiple levels of analyses (e.g., neural, environmental, social). Members of this laboratory read and critique current articles, discuss ongoing research, and plan future studies.

**PSYC 752a or b, Research Topics in Neuroscience of Social Behavior** Steve Chang

A weekly seminar discussing recent advances in neuroscience of social behavior. We discuss recent progress in research projects by the lab members as well as go over recently published papers in depth. Primary topics include neural basis of social decision-making, social preference formation, and social information processing. Our lab studies these topics by combining neurophysiological and neuroendocrinological techniques in nonhuman animals.

**PSYC 753a or b, Research Topics in Legal Psychology** Tom Tyler

This seminar is built around student research projects. Students propose, conduct, and analyze empirical research relevant to law and psychology. Grades are based upon final papers. Permission of the instructor required.

**PSYC 754a or b, Research Topics in Clinical Affective Neuroscience and Development** Dylan Gee

This weekly seminar focuses on current research related to the developmental neurobiology of child and adolescent psychopathology. Topics include typical and atypical neurodevelopmental trajectories, the development of fear learning and emotion regulation, effects of early life stress and trauma, environmental and genetic influences associated with risk and resilience, and interventions for anxiety and stress-related disorders in youth.

**PSYC 755a or b, Research Topics in Intergroup Relations** Jennifer Richeson

Students in this laboratory course are introduced to and participate in social-psychological research examining interactions and broader relations between members of socioculturally advantaged and disadvantaged groups. For instance, we examine the phenomena and processes associated with one's beliefs about members of social groups (stereotypes), attitudes and evaluative responses toward group members (prejudice), and behaviors toward members of a social group based on their group membership (discrimination). We also study how these issues shape the experiences of social group members, especially when they are members of low-status and/or minority groups. We primarily focus on large societal groups that differ on cultural dimensions of identity, with a focus on race, ethnicity, and gender. Notably, we apply the theoretical and empirical work to current events and relevant policy issues.

**PSYC 756a or b, Research Topics in the Fundamentals of Adolescent Brain and Behavior** BJ Casey

We examine and discuss how the brain is sculpted by biological and experiential factors to adapt to the unique challenges of adolescence using behavioral, psychophysiological, genetic, and brain-imaging methods. Emphasis is on how the capacity for self-control changes with age and across different social and emotional situations.

**PSYC 757a or b, Research Topics in Social Neuroscience and Behavior** Molly Crockett

Seminar-style discussion of recent research in social neuroscience and behavior, covering both recent studies from the literature and ongoing research at Yale.

**PSYC 758a or b, Research Topics in Cognitive Neuroscience** Nick Turk-Browne

Seminar-style discussion of recent research in cognitive neuroscience, covering both recent studies from the literature and ongoing research at Yale.

**PSYC 759a or b, Research Topics in Affective Science and Culture** Maria Gendron

A seminar-style discussion of recent research and theory in affective science and culture. The lab group focuses on the social and cultural shaping of emotions. We also discuss the biological constraints on variation and consistency in emotion as revealed by physiological research on emotion (in both the central and peripheral nervous system). Some discussion of current and planned research in the lab group also takes place.

**PSYC 760a or b, Research Topics in Cognitive and Neural Computation** Ilker Yildirim

Lab meetings of the Cognitive & Neural Computation Laboratory at Yale.

**PSYC 762a or b, Research Topics in Skill Learning**

This weekly seminar covers various themes in human learning, with an emphasis on motor learning, motor memory, reinforcement learning, and decision-making. We discuss recently published and ongoing research on these topics, with special attention to behavioral studies, computational models of learning, and neural correlates.

**PSYC 763a or b, Research Topics in Implicit Social Cognition**

Weekly seminar on contemporary research projects in implicit social cognition, with a special focus on the topics of changing minds, prejudice, and self-control. Permission of the instructor required.

**PSYC 766a or b, Research Topics in Perception and Cognition** Brian Scholl

Seminar-style discussion of recent research in perception and cognition, covering both recent studies from the literature and the ongoing research in the Yale Perception and Cognition Laboratory.

**PSYC 771a or b, Research Topics in Nonconscious Processes** John Bargh

The lab group focuses on nonconscious influences of motivation, attitudes, social power, and social representations (e.g., stereotypes) as they impact on interpersonal behavior, as well as the development and maintenance of close relationships.

**PSYC 775a or b, Research Topics in Animal Cognition** Laurie Santos

Investigation of various topics in animal cognition, including what nonhuman primates know about tools and foods; how nonhuman primates represent objects and number; whether nonhuman primates possess a theory of mind. Prerequisite: permission of the instructor.

**PSYC 777a or b / WGSS 767a or b, Research Topics in Gender and Psychology** Marianne LaFrance

The "Gender Lab" meets weekly to consider research being done in the Psychology department that bears on some gender-related issue.

**PSYC 778a or b, Research Topics in Clinical and Affective Neuropsychology** Hedy Kober

Lab meeting is held once a week throughout the year and is attended by undergraduate and graduate students, research staff, postdoctoral fellows, and other researchers interested in the weekly topics. In a rotating fashion, both internal and external speakers present data and ideas from various research projects, and/or research and methods papers in related areas, including the use of functional magnetic resonance imaging to answer questions in clinical and affective psychology.

**PSYC 801a or b, Clinical Internship (Child)** Mary O'Brien

Advanced training in clinical psychology with children. Adapted to meet individual needs with location at a suitable APA-approved internship setting.

**PSYC 802a or b, Clinical Internship (Adult)** Mary O'Brien

Advanced training in clinical psychology with adults. Adapted to meet individual needs with location at a suitable APA-approved internship setting.

**PSYC 805a, Affective Bases of Behavior** Dylan Gee

Primary source readings and lectures by experts on broad and general topics in the affective bases of behavior. Open only to graduate students in clinical psychology.

**PSYC 811a or b, Mood and Anxiety Disorders Practicum** Mary O'Brien

This is a course for graduate students in clinical psychology. Group supervision of therapy provided at the Yale Psychology Department Clinic.

**PSYC 817a or b, Other Clinical Practica** Mary O'Brien

For credit under this course number, clinical students register for practicum experiences other than those listed elsewhere in clinical psychology, so that transcripts reflect accurately the various practicum experiences completed.

**PSYC 920a or b, First-Year Research** Staff

By arrangement with faculty.

**PSYC 923a or b, Individual Study: Theme Essay** Staff

By arrangement with faculty.

**PSYC 925a or b, Individual Tutorial** Staff

By arrangement with faculty and approval of DGS.

**PSYC 930a or b, Predissertation Research** Staff

By arrangement with faculty.