

# PSYCHOLOGY

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

## Chair

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**Professors** Woo-kyoung Ahn, John Bargh, Paul Bloom (*Emeritus*), Thomas Brown (*Emeritus*), Tyrone Cannon, Marvin Chun, Margaret Clark, John Dovidio (*Emeritus*), Melissa Ferguson, Edmund Gordon (*Emeritus*), Marcia Johnson (*Emerita*), Jutta Joormann, Alan Kazdin (*Emeritus*), Frank Keil, Joshua Knobe (*Philosophy*), Marianne LaFrance (*Emerita*), Gregory McCarthy, Jennifer Richeson, Peter Salovey, Laurie Santos, Brian Scholl, Nicholas Turk-Browne, Tom Tyler (*Law School*), Karen Wynn (*Emerita*)

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

**Assistant Professors** Dylan Gee, Maria Gendron, Julian Jara-Ettinger, Julia Leonard, Samuel McDougle, Robert Rutledge, Ilker Yildirim

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

**Affiliated Faculty** Alan Anticevic (*Psychiatry*), Amy Arnsten (*Neuroscience*), Christopher Benjamin (*Neurology*), Philip Corlett (*Psychiatry*), Maggie Davis (*Psychiatry*), Ravi Dhar (*School of Management*), Irina Esterlis (*Psychiatry*), Tamar Gendler (*Philosophy*), Phillip Atiba Goff (*African American Studies*), Elizabeth Goldfarb (*Psychiatry*), Carlos Grilo (*Psychiatry*), Ilan Harpaz-Rotem (*Psychiatry*), Jeannette R. Ickovics (*Public Health*), Robert Kerns (*Veterans Administration Medical Center*), Hedy Kober (*Psychiatry*), Michael Kraus (*School of Management*), John Krystal (*Psychiatry*), Daeyeol Lee (*Neurobiology*), Becca Levy (*Public Health*), Ifat Levy (*Neuroscience*), David Lewkowicz (*Child Study Center*), Linda Mayes (*Child Study Center*), Carolyn Mazure (*Psychiatry*), James McPartland (*Child Study Center*), Nathan Novemsky (*School of Management*), Laurie Paul (*Philosophy*), Christopher Pittenger (*Psychiatry*), Al Powers (*Psychiatry*), Helena Rutherford (*Child Study Center*), Wendy Silverman (*Child Study Center*), Dana Small (*Psychiatry*), Jane Taylor (*Psychiatry*), Tom Tyler (*Law School*), 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. Students must take PSYC 500, PSYC 501, PSYC 518, and then any 500-level course with adviser approval. The basic-level core 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 (PSYC 920) due by May 1 of the second term.
4. Completion of a predissertation research project (PSYC 930 and DISR 999), to be initiated not later than the second term and completed not later than May 10 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 the four required core courses. A satisfactory grade must be achieved in the predissertation research project.

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 master’s degree upon completion of the academic requirements as stated above.

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

## COURSES

### **PSYC 500a, Foundations of Psychology I: Cognitive Psychology and Neuroscience**

Julian Jara-Ettinger

An introduction to graduate-level cognitive psychology and the biological bases of human behavior for first-year graduate students in psychology. Topics include decision making, learning, memory, perception, and attention. Topics also include neuroanatomy, neuronal signaling, and neuronal encoding. This course serves as the foundation for further study in more advanced graduate courses on specific topics. This course is required for all Psychology PhD students.

**PSYC 518a, Multivariate Statistics** Samuel Paskewitz

Students learn both practical data analysis and the basic underlying theory. There is a slightly higher emphasis on probability theory than in many applied statistics courses, with the goal of making concepts such as confidence intervals and p-values easier to understand. However, care is taken to make this material accessible by providing numerous psychology-relevant examples and avoiding unnecessary mathematical details. To promote deeper understanding, commonly used statistical models and tests (t-tests, ANOVA, simple linear regression, multiple regression, ANCOVA) are explained as special cases of linear regression rather than separate procedures. Other topics include mixed effects models and generalized linear models (e.g. logistic regression) besides other material depending on time and student interest. Alongside statistical theory, students learn to use R, a computer programming language specialized for data analysis.

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

The purpose of this seminar is to provide Ph.D.-level coverage of the psychology of decision making, focusing on choice. Although the normative issue of how choices should be made is relevant, the descriptive issue of how choices *are* made is the main focus of the course. In addition to examining prior choice research, the goal of this seminar is to improve your ability to identify interesting research questions and develop effective experiments for testing them. Students generally enroll from a variety of disciplines, including cognitive and social psychology, behavioral economics, finance, marketing, political science, medicine, and public health.

**PSYC 562a, Research Methods in Human Neuroscience** Gregory McCarthy

This graduate-level course focuses on the major methods used in human neuroscience. For ethical reasons, these techniques are largely non-invasive. The purpose of the course is to provide instruction in these methods in a lecture/discussion/demonstration format. A major theme of the course is that all methods depend upon assumptions that relate measurable physiological phenomena to brain function and that these assumptions must be critically examined and understood to interpret results. Thus, we investigate the physical and physiological basis of these techniques. A second theme of the course is that methods shape how we think about brain function—for example, is function localized or distributed within the brain. In addition, students receive instruction on more general aspects of neuroscience research in humans, including ethical principles, experimental design, and statistical analysis. There are no prerequisites. While some general knowledge about the brain and about statistics are presumed, online resources are available if needed to fill in gaps.

**PSYC 576b, Social and Cultural Factors in Mental Health and Illness** Jeannette Ickovics

This course provides an introduction to mental health and illness with a focus on the complex interplay between risk and protective factors and social and cultural influences on mental health status. We examine the role of social and cultural factors in the etiology, course, and treatment of substance misuse; depressive, anxiety, and psychotic disorders; and some of the severe behavioral disorders of childhood. The social consequences of mental illness such as stigma, isolation, and barriers to care are explored, and their impact on access to care and recovery considered. The effectiveness of the current system of services and the role of public health and public health professionals in mental health promotion are discussed.

**PSYC 664a, Health and Aging** Becca Levy

This course explores the ways psychosocial and biological factors influence aging health. Topics include interventions to improve mental and physical health; effects of ageism on health; racial and gender health disparities in later life; and how health policy can best adapt to the growing aging population. Students have the opportunity to engage in discussions and to develop a research proposal on a topic of interest.

**PSYC 695a, History of Psychology: Racism and Colonial Power** Tariq Khan

This course examines the history of psychology with a focus on racism and colonial power embedded in psychology and the psychological sciences more broadly. Students will grapple with primary and secondary sources which prompt them to think critically about the past and present of psychology and the ways in which systems of race, gender, and class inequality interact with major institutions, systems, and their own research practices. Students will study the historical relationship between the “mind sciences” and the intertwined systems/institutions of white supremacy/racial hierarchy, cisheteropatriarchy, capitalism, empire, and colonialism from the 17th century to the present. Students will also examine the role some psychologists and related scientists and scholars have played in challenging and resisting those same intertwined systems and institutions. This course is interdisciplinary in that, in addition to studying works by psychologists, students will study, analyze, and critique works in other fields – such as history, anthropology, ethnic studies, and postcolonial studies – which are relevant to understanding the historical development of the psychological sciences.

**PSYC 702a, Current Work in Cognition** Woo-Kyoung Ahn

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

**PSYC 704a, Current Work in Behavior, Genetics, and Neuroscience** Kia Nobre

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, Current Work in Developmental Psychology** Julia Leonard

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, Current Work in Social Psychology and Personality** Wendy Berry Mendes

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, Current Work in Clinical Psychology** Tyrone Cannon

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, 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 727a, 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 728a / AFAM 778a, Research Topics in Racial Justice in Public Safety** Phillip Atiba Solomon

In this seminar, graduate students and postdoctoral fellows have a chance to present their research, and undergraduate research assistants learn about how to conduct interdisciplinary quantitative social science research on racial justice in public safety. The course consists of weekly presentations by members and occasional discussions of readings that are handed out in advance. The course is designed to be entirely *synchronous*. Presenters may request a video recording if they can benefit from seeing themselves present (e.g., for a practice talk). This course is intended for graduate students, postdocs, and undergraduates interested in conducting original quantitative social science research about race and public safety. Permission of the instructor is required.

**PSYC 731a, 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 732a, Research Topics in Cognitive and Computational Human Neuroscience** Marvin Chun

Examines recent research in human cognitive neuroscience. Topics include attention, visual perception, working memory, long-term memory, and cognitive control.

**PSYC 733a, 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, 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, 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, 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, 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, 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, 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, Research Topics in Social Neuroscience** Steve Chang

This weekly seminar discusses 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, 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, 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, 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 758a, 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, 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, Research Topics in Cognitive and Neural Computation** Ilker Yildirim

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

**PSYC 761a, Research Topics in Computational Decision and Affective Neuroscience**

Robb Rutledge

Seminar focusing on ongoing research projects in computational approaches to clinical, cognitive, and affective neuroscience.

**PSYC 762a, Research Topics in Skill Learning** Samuel McDougle

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, Research Topics in Implicit Social Cognition** Melissa Ferguson

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 764a, Research Topics in Children's Learning and Motivation** Julia Leonard

This weekly seminar covers cutting-edge research in cognitive science, developmental psychology, and neuroscience on young children's learning and motivation. We discuss how theoretically and empirically grounded science can be applied to the real world. Permission of the instructor required.

**PSYC 765a, Research Topics in Philosophy and Cognitive Science** Laurie Paul

A weekly meeting to discuss relevant philosophical and psychological topics. Permission of the instructor required.

**PSYC 766a, 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, 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, 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 783a, Research Topics in Logical Cognition and the Infant Mind** Nicolò Cesana-Arlotti

This weekly seminar discusses research topics concerning logical cognition and the infant mind. The seminar focus on the emergence of logical computations in different domains of human cognition and the origins of logical and abstract thought in the mind of infants and non-human cognition.

**PSYC 784a, Research Topics in Proactive Cognition** Kia Nobre

This weekly seminar discusses research topics concerning the psychological and brain mechanisms for controlling the flexible and proactive control of adaptive human behavior. None

**PSYC 785a, Research Topics in Emotion, Health, and Psychophysiology** Wendy Berry Mendes

This weekly seminar discusses research topics at the intersection of social psychology, affective science, biological psychology, and health. The seminar examines how the mind and body interact, emphasizing research in stress and health, emotions and psychophysiology, racial health disparities, and physiologic synchrony in dyads and groups.

**PSYC 801a, Clinical Internship (Child)** Staff

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

**PSYC 802a, Clinical Internship (Adult) Staff**

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

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

This course aims to provide a broad survey of the affective and developmental bases of behavior, drawing on key topics in affective science and developmental psychology. Readings include reviews and empirical articles that highlight core issues relevant to the topics, from early theoretical perspectives to recent advances in the field. Topics broadly fall into several domains, including evolutionary, cultural, and developmental perspectives on emotion; neurocognitive and affective development; early experiences, attachment, and sensitive periods; emotional reactivity and regulation; and the role of emotion in illness and well-being.

**PSYC 811a, 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, 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, First-Year Research Staff**

By arrangement with faculty.

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

By arrangement with faculty.

**PSYC 930a, Predissertation Research Staff**

By arrangement with faculty.