Psychology

Department Website: http://psychology.uchicago.edu

Program of Study

Psychology is the study of the mental states and processes that give rise to behavior. It seeks to understand the basic mechanisms and functions of perception, cognition, emotion, and attitudes in guiding behavior. Although it focuses on the level of the individual, individual behavior depends on the social relationships and structures in which people are embedded and the biological systems of which we are comprised. Thus, psychological study encompasses a broad set of topics that overlap with a number of disciplines across the social and biological sciences. The requirements of the major are designed to acquaint students with the research methods psychologists use and to provide a foundation of core knowledge covering the major areas of psychology. This broad foundation allows students to pursue a more advanced understanding of subfields related to their own particular interests and goals for the major. The program may serve as preparation for graduate work in psychology or related fields (e.g., neuroscience, education), as well as for students interested in careers in social work, public policy, business, or medicine. Students are encouraged to become actively engaged in research in the department and should consult with the director of undergraduate research about their interests as early as possible.

Program Requirements

Although no special application is required for admission to the major, majors are required to:

1. Inform the Department of Psychology by completing an enrollment form available from the department student affairs administrator in Beecher 109 and inform their College adviser.

2. Subscribe to the Psychology Majors Listhost at https://lists.uchicago.edu/web/info/psychology-majors. The listhost is the primary means of communication between the program and its majors or students interested in being majors. We use it to notify students of events relevant to psychology majors, such as research opportunities, job postings, fellowship announcements, and any changes in the course schedule, or curriculum updates.

NOTE: The following revised requirements are in effect for students who matriculated September 2014 and after. Students who matriculated prior to September 2014 should consult the College Catalog archives for the requirements that pertain to them.

NOTE: When planning your course schedule, please consult Class Search at registrar.uchicago.edu/classes and the Courses section (http://psychology.uchicago.edu/content/courses-2017-18) of the Psychology Department Undergraduate Program website for any changes in the course offerings.

Statistics/Methodology Sequence

Psychology majors are required to complete PSYC 20100 Psychological Statistics and PSYC 20200 Psychological Research Methods by the end of their third year. However, it is strongly recommended that these courses be taken as early as possible as they provide foundational concepts that facilitate understanding of subject area courses. These two courses cover the conceptual and methodological issues (Psy Rech Meth) and the statistical methods (Psych Stats) used in psychological science and are typically taught in Autumn and Winter Quarters. These two courses may be taken in any order.

Beginning with the Class of 2019, students with AP examination credit for STAT 22000 Statistical Methods and Applications may not count that credit toward the major and should instead replace that requirement with a higher-level statistics course or an additional psychology elective. Students interested in graduate programs in Psychology or other empirical sciences are strongly encouraged to take a higher level statistics course.

Breadth Requirement

Students are required to take four of the following five courses, each of which will be offered every year:

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<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>PSYC 20300</td>
<td>Biological Psychology</td>
<td></td>
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<tr>
<td>PSYC 20400</td>
<td>Cognitive Psychology</td>
<td>100</td>
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<tr>
<td>PSYC 20500</td>
<td>Developmental Psychology</td>
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<tr>
<td>PSYC 20600</td>
<td>Social Psychology</td>
<td>100</td>
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<tr>
<td>PSYC 20700</td>
<td>Sensation and Perception</td>
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Additional Courses

At least six additional courses (for a total of twelve in the major) must be chosen from among the courses offered by the Department of Psychology. Courses without a psychology number must be approved by the Curriculum Committee; petitions must be submitted to the undergraduate program chair. Only one independent study course can count toward the twelve courses required of students who are majoring in psychology (PSYC 29200 Undergrad Rds: Psychology or PSYC 29700 Undergraduate Research in Psychology). In addition to the six electives, students pursuing honors in psychology must also take the PSYC 29800 Honors Seminar: Psychology. Independent study courses can be taken for P/F grading, but all other courses must be taken for a quality grade. NOTE: Before registering for an elective, students should confirm that they have met any prerequisites for the course.
Research

Students are required to take PSYC 20200 Psychological Research Methods. Students are encouraged to gain additional experience by working on a research project under the guidance of a faculty member.

Calculus

Students are required to take two quarters of calculus as part of the College general education requirements.

NOTE: For psychology students, a maximum of three courses can be transferred into the major from outside the University of Chicago.

Summary of Requirements

GENERAL EDUCATION

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>MATH 13100-13200</td>
<td>Elementary Functions and Calculus I-II (or higher) †</td>
<td>200</td>
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<td></td>
<td>Total Units</td>
<td>200</td>
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MAJOR

One of the following: 200

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>PSYC 20100 &amp; PSYC 20200</td>
<td>Psychological Statistics and Psychological Research Methods *</td>
</tr>
<tr>
<td>STAT 22000 &amp; PSYC 20200</td>
<td>Statistical Methods and Applications and Psychological Research Methods *</td>
</tr>
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Four of the following: 400

<table>
<thead>
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<tr>
<td>PSYC 20300</td>
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<td>PSYC 20600</td>
<td>Social Psychology</td>
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<tr>
<td>PSYC 20700</td>
<td>Sensation and Perception</td>
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<tr>
<td>Six electives +</td>
<td></td>
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<td></td>
<td>Total Units</td>
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† Credit may be granted by examination.

* Examination Credit for PSYC 20100 Psychological Statistics or STAT 22000 Statistical Methods and Applications will not count toward the requirements for the major. Students with credit for PSYC 20100 or STAT 22000 should replace that requirement with a higher level Statistics course or an additional psychology elective.

+ Courses without a psychology number must be approved by the Curriculum Committee; petitions must be submitted to the undergraduate program chair.

Grading

All courses in the major must be taken for quality grades except for the independent study course, which is available for either a quality grade or for P/F grading.

Honors

To qualify for honors, students must meet the following requirements:

1. Students must have a GPA of at least 3.0 overall, and a GPA of at least 3.5 in the major by the beginning of the quarter in which they intend to graduate.

2. Students should arrange to write an honors paper with a faculty advisor from the Department of Psychology. Papers must represent a more substantial research project than the average term paper. After the paper has been approved by the faculty sponsor, the paper must then be read and approved by a second faculty member.

3. Students are required to take an PSYC 29800 Honors Seminar: Psychology in Winter Quarter of their third or fourth year. This is in addition to the twelve required courses for the major. It is expected that students will be actively working on the thesis project during the quarter they are taking the honors research seminar.

4. Students are required to present their findings in Spring Quarter of their fourth year at an honors day celebration. For details, visit psychology.uchicago.edu.

Specialized Courses of Study

Faculty members (or the undergraduate program chair) are available to help individual students design a specialized course of study within psychology. For example, particular course sequences within and outside of psychology may be designed for students who wish to pursue specializations in particular areas. These areas include, but are not limited to, cognitive neuroscience, language and communication, computational psychology, behavioral neuroscience and endocrinology, sensation and perception, and cultural psychology.
Double Majors
Students pursuing honors in more than one major should note that:

1. The student’s thesis adviser for psychology cannot be the same person as his or her thesis adviser for the second major.
2. The student must meet all the requirements listed in the preceding Honors section, including taking the Honors Seminar and presenting at an honors day celebration.

Earl R. Franklin Research Fellowship
The Earl R. Franklin Research Fellowship is awarded to a third-year student who is majoring in psychology. It provides financial support during the summer before his or her fourth year to carry out psychological research that will be continued as a senior honors project. Applications, which are submitted at the beginning of Spring Quarter, include a research proposal, personal statement, transcript, and letter of recommendation.

Psychology Courses

**PSYC 20000. Fundamentals of Psychology. 100 Units.**
This course introduces basic concepts and research in the study of behavior. Principal topics are sensation, perception, cognition, learning, motivation, and personality theories.
Instructor(s): K. O’Doherty Terms Offered: Spring

**PSYC 20100. Psychological Statistics. 100 Units.**
Psychological research typically involves the use of quantitative (statistical) methods. This course introduces the methods of quantitative inquiry that are most commonly used in psychology and related social sciences. PSYC 20100 and 20200 form a two-quarter sequence that is intended to be an integrated introduction to psychological research methods. PSYC 20100 introduces explanatory data analysis, models in quantitative psychology, concept of probability, elementary statistical methods for estimation and hypothesis testing, and sampling theory. PSYC 20200 builds on the foundation of PSYC 20100 and considers the logic of psychological inquiry and the analysis and criticism of psychological research. It is recommended that students complete MATH 13100 and MATH 13200 (or higher) before taking this course.
Instructor(s): D. Yurovsky Terms Offered: Autumn

**PSYC 20200. Psychological Research Methods. 100 Units.**
This course introduces concepts and methods used in behavioral research. Topics include the nature of behavioral research, testing of research ideas, quantitative and qualitative techniques of data collection, artifacts in behavioral research, analyzing and interpreting research data, and ethical considerations in research.
Instructor(s): A. Henly Terms Offered: Winter

**PSYC 20209. Adolescent Development. 100 Units.**
Adolescence represents a period of unusually rapid growth and development. At the same time, under the best of social circumstances and contextual conditions, the teenage years represent a challenging period. The period also affords unparalleled opportunities with appropriate levels of support. Thus, the approach taken acknowledges the challenges and untoward outcomes, while also speculates about the predictors of resiliency and the sources of positive youth development.
Instructor(s): M. Spencer Terms Offered: Winter
Prerequisite(s): Students will have previously taken one other course in CHDV
Note(s): CHDV Distribution: B, D
Equivalent Course(s): CHDV 20209

**PSYC 20300. Biological Psychology. 100 Units.**
What are the relations between mind and brain? How do brains regulate mental, behavioral, and hormonal processes; and how do these influence brain organization and activity? This course introduces the anatomy, physiology, and chemistry of the brain; their changes in response to the experiential and sociocultural environment; and their relation to perception, attention, behavioral action, motivation, and emotion.
Instructor(s): L. Kay, B. Prendergast Terms Offered: Winter
Prerequisite(s): Some background in biology and psychology.
Note(s): This course does not meet requirements for the Biological Sciences Major.
Equivalent Course(s): CHDV 20300, BIOS 29300

**PSYC 20400. Cognitive Psychology. 100 Units.**
Viewing the brain globally as an information processing or computational system has revolutionized the study and understanding of intelligence. This course introduces the theory, methods, and empirical results that underlie this approach to psychology. Topics include categorization, attention, memory, knowledge, language, and thought.
Instructor(s): M. Berman Terms Offered: Spring
PSYC 20500. Developmental Psychology. 100 Units.
This is an introductory course in developmental psychology, with a focus on cognitive and social development in infancy through early childhood. Example topics include children's early thinking about number, morality, and social relationships, as well as how early environments inform children's social and cognitive development. Where appropriate, we make links to both philosophical inquiries into the nature of the human mind, and to practical inquiries concerning education and public policy.
Instructor(s): K. O'Doherty Terms Offered: Spring
Note(s): CHDV Distribution, B
Equivalent Course(s): CHDV 25900

PSYC 20600. Social Psychology. 100 Units.
This course examines social psychological theory and research that is based on both classic and contemporary contributions. Topics include conformity and deviance, the attitude-change process, social role and personality, social cognition, and political psychology.
Instructor(s): W. Goldstein Terms Offered: Autumn
Equivalent Course(s): CHDV 26000

PSYC 20700. Sensation and Perception. 100 Units.
What we see and hear depends on energy that enters the eyes and ears, but what we actually experience—perception—follows from human neural responses. This course focuses on visual and auditory phenomena, including basic percepts (for example, acuity, brightness, color, loudness, pitch) and also more complex percepts such as movement and object recognition. Biological underpinnings of perception are an integral part of the course.
Instructor(s): S. Shevell Terms Offered: Winter
Equivalent Course(s): NSCI 20140

PSYC 20850. Introduction to Human Development. 100 Units.
This course introduces the study of lives in context. The nature of human development from infancy through old age is explored through theory and empirical findings from various disciplines. Readings and discussions emphasize the interrelations of biological, psychological, and sociocultural forces at different points of the life cycle.
Instructor(s): E. Raikhel Terms Offered: Autumn
Prerequisite(s): CHDV majors or intended majors.
Note(s): Required Course for Comparative Human Development Majors
Equivalent Course(s): CHDV 20000

PSYC 21100. Human Development Research Designs in Social Sciences. 100 Units.
This course aims to expose students to a variety of examples of well-designed social research addressing questions of great interest and importance. One goal is clarify what it means to do “interesting” research. A second goal is to appreciate the features of good research design. A third goal is to examine the variety of research methodologies in the social sciences, including ethnography, clinical case interviewing, survey research, experimental studies of cognition and social behavior, behavior observations, longitudinal research, and model building. The general emphasis is on what might be called the aesthetics of well-designed research.
Instructor(s): Mueller, Anna Terms Offered: Winter
Note(s): Required Course for Comparative Human Development Majors
Equivalent Course(s): CHDV 20100

PSYC 21135. Zero to Infinity: The Psychology of Numbers. 100 Units.
Can monkeys do math? Are babies statistical experts? Will I ever be good at calculus? What are we born with and what do we learn? Before children are ever taught formal mathematics in a classroom, they are confronted with situations where they must use their intuitive understanding of numbers, geometry, and space to successfully navigate their environments. In this course we read and discuss both foundational and cutting-edge articles from neuroscience, cognitive science, education and psychology to understand how humans bridge this gap between the informal and formal mathematical worlds. In doing so, we will try to understand where numbers come from, a question that bridges several areas of psychology, including how humans build theories about the world and how language affects our thinking. We will also tackle questions such as: How do culture and varying social contexts affect numerical understanding? What do we know about gender differences in math achievement? How do stereotypes, prejudice, and math anxiety affect math performance?
Instructor(s): D. Gibson Terms Offered: Spring
Prerequisite(s): PSYC 20000 or Mind recommended.

PSYC 21650. Developmental Psychology: Theories and Techniques. 100 Units.
PSYC 21750. Biological Clocks and Behavior. 100 Units.
This course will address physiological and molecular biological aspects of circadian and seasonal rhythms in biology and behavior. The course will primarily emphasize biological and molecular mechanisms of CNS function, and will be taught at a molecular level of analysis from the beginning of the quarter. Those students without a strong biology background are unlikely to resonate with the course material.
Instructor(s): B. Prendergast Terms Offered: Spring
Prerequisite(s): A quality grade in PSYC 20300 Introduction to Biological Psychology. Additional biology courses are desirable. Completion of Core biology will not suffice as a prerequisite.
Equivalent Course(s): BIOS 24248
PSYC 21950. Language, Culture, and Thought. 100 Units.
Survey of research on the interrelation of language, culture, and thought from the evolutionary, developmental, historical, and culture-comparative perspectives with special emphasis on the mediating methodological implications for the social sciences.
Instructor(s): J. Lucy Terms Offered: Spring
Note(s): CHDV Distribution, B, C
Equivalent Course(s): CHDV 31901, LING 27605, LING 37605, CHDV 21901, ANTH 37605, ANTH 27605, PSYC 31900

PSYC 22350. Social Neuroscience. 100 Units.
Social species, by definition, create emergent organizations beyond the individual - structures ranging from dyads and families to groups and cultures. Social neuroscience is the interdisciplinary field devoted to the study of neural, hormonal, cellular, and genetic mechanisms, and to the study of the associations and influences between social and biological levels of organization. The course provides a valuable interdisciplinary framework for students in psychology, neuroscience, behavioral economics, and comparative human development. Many aspects of social cognition will be examined, including but not limited to attachment, attraction, altruism, contagion, cooperation, competition, dominance, empathy, isolation, morality, and social decision-making.
Instructor(s): J. Decety Terms Offered: Spring
Equivalent Course(s): BIOS 24137, ECON 21830, NSCI 21000, CHDV 22350

PSYC 22580. Child Development in the Classroom. 100 Units.
This discussion-based, advanced seminar is designed to investigate how preschool and elementary students think, act, and learn, as well as examine developmentally appropriate practices and culturally responsive teaching in the classroom. This course emphasizes the application of theory and research from the field of psychology to the realm of teaching and learning in contemporary classrooms. Course concepts will be grounded in empirical research and activities geared towards understanding the nuances and complexities of topics such as cognitive development (memory, attention, language), early assessment systems, standardized testing, "mindset", "grit", exercise/nutrition, emotion regulation, and more.
Instructor(s): R. Shweder Terms Offered: Autumn
Prerequisite(s): Undergraduates must be in third or fourth year.
Note(s): CHDV Distribution: B, C
Equivalent Course(s): GNSE 31000, PSYC 33000, AMER 33000, ANTH 35110, GNSE 21001, CHDV 31000, CHDV 21000, ANTH 24320

PSYC 23160. The Moral Brain. 100 Units.
The past decade has seen an explosion of empirical research in the study of morality. Amongst the most exciting and novel findings and theories, evolutionary biologists and comparative psychologists have shown that moral cognition has evolved to facilitate cooperation and smooth social interactions, and that certain components of morality are present in non-human animals. Developmental psychologists came up with ingenious paradigms, demonstrating that the elements that underpin morality are in place much earlier than we thought, and clearly in place before children turn two. Social neuroscientists have begun to map brain circuits implicated in moral decision-making and identify the contribution of neupeptides to moral sensitivity. Changes in the balance of brain chemistry, or in connectivity between regions can cause changes in moral behavior. The lesson from all this new knowledge is clear: Human moral behavior cannot be separated from human biology, its development, and past evolutionary history. As our understanding of the human brain improves, society at large, and justice and the law in particular, are and will be increasingly challenged. The goal of this seminar is to provide an overview of the current research on the moral brain, and examine this fascinating topic from a range of relevant interdisciplinary perspectives. These perspectives will include anthropology and neuro-philosophy, evolution, development, social neuroscience, psychopathology, and justice and the law.
Instructor(s): J. Decety Terms Offered: Autumn
Equivalent Course(s): PSYC 33160

PSYC 23200. Introduction to Language Development. 100 Units.
This course addresses the major issues involved in first-language acquisition. We deal with the child's production and perception of speech sounds (phonology), the acquisition of the lexicon (semantics), the comprehension and production of structured word combinations (syntax), and the ability to use language to communicate (pragmatics).
Instructor(s): S. Goldin-Meadow Terms Offered: Winter
Equivalent Course(s): PSYC 33200, LING 31600, CHDV 23900, CHDV 31600, LING 21600
PSYC 23290. Linguistic Perspectives on Language Disorders. 100 Units.
Language disorders provide a fascinating look at the nature of many aspects of linguistic structure, and in some cases provide key data for answering questions about the nature of human language. In this class, we discuss several common speech and language disorders (such as aphasia, dysarthria, and specific language impairment) as well as more general neurodevelopmental disorders (such as autism spectrum disorder) which can impact language. While we will discuss clinical characterizations of these disorders to some degree, the focus of the class will be on working directly with language data from speakers in order to understand specific linguistic patterns associated with these disorders, and to explore how these patterns can inform questions about, for example, the nature of phonological representations, the structure of the lexicon, and the relationship between semantics and pragmatics in language processing. The course is designed to give students exposure to research on language disorders (including several novel experimental techniques for studying disordered language) while also giving them an opportunity to refine their analytical skills in linguistics.
Equivalent Course(s): LING 23800

PSYC 23330. Language, Thought, and Action. 100 Units.
Language is typically thought of as a channel for transmitting our thoughts, but it can also shape our thoughts and change how we represent and interact with our social world. How we talk not only reflects who we are, what we think, and how we feel, but it also affects our attitudes, emotions, and beliefs. This course will explore the social, emotional, and cognitive effects of language and how we use it. We will review foundational questions regarding the relationship between language and thought and examine empirical research findings from a wide variety of fields. As a research seminar, the course will emphasize understanding how research methods can affect the kinds of questions we ask, the theories we propose, and the conclusions we reach. Please feel free to contact the instructor if you have any questions.
Instructor(s): E. Awh, E. Vogel Terms Offered: Winter

PSYC 23350. Social Connectedness. 100 Units.
Without friends no one would choose to live, though he had all other goods."—Aristotle. Many of us would wholeheartedly agree with Aristotle's assertion that social relationships are what make life worth living. Indeed, our greatest moments in life and our most treasured memories are inextricably linked to close friends and family members, from holiday dinners to birthday bashes. But, it is also the case that close relationships are also the source of some of our darkest moments. After all, romantic relationships dissolve, family members become estranged, and friendships fail. As rewarding as social relationships can be, sometimes they just plain hurt. Given the complexity of navigating the social world, how do we maintain a sense of social belonging in the face of social threats? In this advanced seminar we'll tackle this very question, drawing primarily from a burgeoning literature in social psychology. In the first part of the course, we'll learn about the psychological and physiological benefits of maintaining close social ties and we'll study the major theories that discuss how we may regulate this core social need. In the second part of the course, we'll examine empirical evidence relevant to each of these theories by examining how people respond to social threats at a physiological, neurological, cognitive, and behavioral level.
Instructor(s): L. Majka Terms Offered: Spring

PSYC 23800. Introduction to Learning and Memory. 100 Units.
This course examines basic questions in learning and memory. We discuss the historical separation and division of these two areas as well as the paradigmatic differences in studying learning and memory. We also discuss basic research methods for investigating learning and memory and survey established and recent research findings, as well as consider several different kinds of models and theories of learning and memory. Topics include skill acquisition, perceptual learning, statistical learning, working memory, implicit memory, semantic vs. episodic memory, and memory disorders.
Instructor(s): D. Gallo Terms Offered: Spring

PSYC 23820. Attention and Working Memory in the Mind and Brain. 100 Units.
This course will provide a broad overview of current work in psychology and neuroscience related to attention and working memory. We will discuss evidence for sharp capacity limits in an individual's ability to actively monitor and maintain information in an "online" mental state. Readings will be primarily based on original source articles from peer-reviewed journals, with a focus on behavioral and neural approaches for measuring and understanding these basic cognitive processes.
Instructor(s): E. Awh, E. Vogel Terms Offered: Winter

PSYC 23860. Beyond Good and Evil: The Psychology of Morality. 100 Units.
Morality is a mysterious and possibly uniquely human capacity that influences how we make decisions in a number of domains. In this course we will explore how and why human beings have the moral intuitions that they do and also where these intuitions come from—what about our moral intuitions are built in and how are these intuitions shaped by experience? To achieve these goals, we will discuss literature from developmental, social, and evolutionary psychology, as well as some literature from behavioral economics and experimental philosophy. We will briefly review the history of moral psychology, but spend the bulk of our time discussing contemporary debates and findings from research on moral psychology.
Instructor(s): A. Shaw Terms Offered: Autumn

PSYC 23900. Political Psychology. 100 Units.
This course explores the psychological processes that underlie political thought and behavior. Over the course of the semester, we will review the contributions of social and cognitive psychology to the understanding of political judgments, decisions, and behavior. We will consider a broad array of topics, including political socialization, the development and maintenance of belief systems and attitudes, the role of self-interest in political preferences, the role of values and the impact of value-conflict, political cognition and candidate appraisal, social identity and inter-group conflict, race and politics, the role of affect and emotion in political judgments and behavior, and the psychology of political atrocities.
Instructor(s): P. Visser Terms Offered: Not offered in 2011-12
Equivalent Course(s): PSYC 33900
PSYC 24055. The Psychological Foundations of Wisdom. 100 Units.
Thinking about the nature of wisdom goes back to the Greek philosophers and the classical religious sages, but the concept of wisdom has changed in many ways over the history of thought. While wisdom has received less scholarly attention in modern times, it has recently re-emerged in popular discourse with a growing recognition of its potential importance for addressing complex issues in many domains. But what is wisdom? It's often used with a meaning more akin to "smart" or "clever". Is it just vast knowledge? This course will examine the nature of wisdom-how it has been defined, how its meaning has changed, and what its essential components might be. We will examine how current psychological theories conceptualize wisdom and consider whether, and how, wisdom can be studied scientifically; that is, can wisdom be measured and experimentally manipulated to illuminate its underlying mechanisms and understand its functions? Finally, we will explore how concepts of wisdom can be applied in business, education, medicine, the law, and in the course of our everyday lives. Readings will be drawn from a wide array of disciplines including philosophy, classics, history, psychology, behavioral economics, medicine, and public policy.
Instructor(s): A. Henly, H. Nusbaum Terms Offered: Spring
Prerequisite(s): Third- or fourth-year standing.

PSYC 24133. Neuroscience of Seeing. 100 Units.
This course focuses on the neural basis of vision, in the context of the following two questions: 1. How does the brain transform visual stimuli into neuronal responses? 2. How does the brain use visual information to guide behavior? The course covers signal transformation throughout the visual pathway, from retina to thalamus to cortex, and includes biophysical, anatomical, and computational studies of the visual system, psychophysics, and quantitative models of visual processing. This course is designed as an advanced neuroscience course for undergraduate and graduate students. The students are expected to have a general background in neurophysiology and neuroanatomy.
Instructor(s): W. Wei, J. Maunsell, M. Sherman, S. Shevell Terms Offered: Winter
Prerequisite(s): NSCI 20110 or BIOS 24110 or consent of instructor
Equivalent Course(s): NSCI 22400, BIOS 24133

PSYC 24231. Methods in Computational Neuroscience. 100 Units.
Topics include (but are not limited to): Hodgkin-Huxley equations, Cable theory, Single neuron models, Information theory, Signal Detection theory, Reverse correlation, Relating neural responses to behavior, and Rate vs. temporal codes.
Instructor(s): S. Bensmaia Terms Offered: Winter.
Prerequisite(s): BIOS 26210 and BIOS 26211 which must be taken concurrently, or consent of instructor.
Equivalent Course(s): CPNS 34232, BIOS 24231

PSYC 24280. The Psychology and Neurobiology of Emotion. 100 Units.
What is emotion? How can we measure it? In this course we will trace this universal yet abstract concept through its evolutionary origins, biological underpinnings, and associations with other subjects in psychology. Topics include autonomic and neural correlates of emotions, features of negative and positive emotions, variation across methods of measurement, and the relationships to cognition, social behavior, culture, and health. This course emphasizes the study of interdisciplinary research and multilevel analysis, as well as critical evaluation of empirical research articles. Background experience in psychology and/or biology is encouraged but not required.
Instructor(s): K. Faig Terms Offered: Autumn

PSYC 24860. The Musical Mind. 100 Units.
This course aims to provide undergraduate students with a broad, yet comprehensive survey of music's impact in cognitive, developmental, and social psychology. Lectures, assignments, and course readings will focus on both theoretical and empirical accounts of how music - used as a natural lens - can provide us with insights about basic psychological processes. We will also frequently compare music to other forms of communication (i.e. language), in order to discuss whether the mechanisms used to perceive and understand music are domain-specific, or domain-general. Specific issues that will be addressed throughout the course include: why can music so easily elicit emotional responses from listeners? Does music have its own grammar? How does learning a musical system affect our cognitive, social, and neural development? No previous knowledge of music theory is assumed. Given that a majority of the readings are from empirical journals, however, previous coursework in statistics and research methods is suggested.

PSYC 25101. The Psychology of Decision Making. 100 Units.
We constantly make decisions, determine our preferences, and choose among alternatives. The importance of our decisions range from ordering a meal at a restaurant to choosing what college to attend. How do we make such decisions? What are the rules that guide us and the biases that shape our decisions? What determines our preferences? What impacts our willingness to take risks? In this course we consider how the way we go about gathering information affects our judgment, and how the way we frame problems affects our perceptions and shapes the solutions to problems. We learn what governs choice and the systematic way it deviates from normative rules. We consider how we think about the future and how we learn from the past. The course focuses on the psychology behind making decisions with implications for a wide range of areas such as public policy, law, and medicine.
Instructor(s): B. Keysar Terms Offered: Autumn
Prerequisite(s): Third- or fourth-year students only
Note(s): It is recommended that students take this course before PSYC 25700 The Psychology of Negotiation.
PSYC 25120. Child Development and Public Policy. 100 Units.
The goal of this course is to introduce students to the literature on early child development and explore how an understanding of core developmental concepts can inform social policies. This goal will be addressed through an integrated, multidisciplinary approach. The course will emphasize research on the science of early child development from the prenatal period through school entry. The central debate about the role of early experience in development will provide a unifying strand for the course. Students will be introduced to research in neuroscience, psychology, economics, sociology, and public policy as it bears on questions about "what develops?", critical periods in development, the nature vs. nurture debate, and the ways in which environmental contexts (e.g., parents, families, peers, schools, institutions, communities) affect early development and developmental trajectories. The first part of the course will introduce students to the major disciplinary streams in the developmental sciences and the enduring and new debates and perspectives within the field. The second part will examine the multiple contexts of early development to understand which aspects of young children's environments affect their development and how those impacts arise. Throughout the course, we will explore how the principles of early childhood development can guide the design of policies and practices that enhance the healthy development of young children, particularly for those living in adverse circumstances, and thereby build a strong foundation for promoting equality of opportunity, reducing social class disparities in life outcomes, building human capital, fostering economic prosperity, and generating positive social change. In doing so, we will critically examine the evidence on whether the contexts of children's development are amenable to public policy intervention and the costs and benefits of different policy approaches.
Instructor(s): A. Kalil
Prerequisite(s): Attendance on the first day of class is required or registration will be dropped.
Equivalent Course(s): PBPL 25120, CHDV 25120

PSYC 25280. The Psychology of Close Relationships. 100 Units.
This course is an exploration of the psychology of close relationships. We will first examine various methodological issues in the study of close relationships before examining numerous different approaches to relational research. We will learn about a variety of close relationships— from intimate relationships to friendships to familial bonds. We will examine the development of interpersonal attraction, theories of love and relationship development, and common problems in relationships (jealousy, loneliness, conflict). In addition to discussing central topics in the study of close relationships, we will review empirical articles to understand how interpersonal relationships impact aspects such as our self-concept, health, and interactions with technology.
Instructor(s): A. Barakzai
Terms Offered: Winter

PSYC 25300. Social Context, Biology, and Health. 100 Units.
We take for granted our relationships with other people as fundamental. Yet when these connections are absent or disrupted, our minds and biology are likewise disrupted. Epidemiological studies have now clearly established a relationship between social isolation and both mental and physical health. This course adopts an integrative interdisciplinary approach that spans the biological to sociological levels of analysis to explore the interactions involved and possible mechanisms by which the social world gets under the skin to affect the mind, brain, biology, and health.
Instructor(s): J. Cacioppo, M. McClintock, L. Waite
Terms Offered: Not offered in 2018-2019
Prerequisite(s): Third- or fourth-year standing
Equivalent Course(s): BPRO 23600

PSYC 25550. Educational Neuroscience. 100 Units.
This course is designed to introduce upper division undergraduate students to research being conducted at the intersection of cognitive science and education. Broadly speaking, this class serves as an advanced introduction to central concepts in psychology and neuroscience such as attention, memory, and emotion, with a focus on how knowledge of these concepts can inform educational practice and policy.
Instructor(s): S. Beilock
Terms Offered: Spring

PSYC 25700. The Psychology of Negotiation. 100 Units.
Negotiation is ubiquitous in interpersonal interactions, from making plans for a trip with friends or family, to determining working conditions with an employer, to managing international conflicts. In this course we examine the structure of different negotiations and the psychology that governs the processes and outcomes of a negotiation. For instance, we consider the role of perceptions, expectations, intuitions, and biases. We evaluate the role of information processing, modes of communication, and power in influencing a negotiated outcome. We see how the psychology of trust, reciprocity, fairness, cooperation, and competition can affect our ability to benefit from an exchange or contribute to the escalation of conflict. To better understand the dynamics of the negotiation process, we learn both through engaging in a variety of negotiation role-plays and relating these experiences to research findings.
Instructor(s): B. Keysar
Terms Offered: Winter. Third- or fourth-year students only
Note(s): It is recommended that students take PSYC 25101 The Psychology of Decision Making before this course, as it provides the conceptual foundations.

PSYC 25750. The Psychology and Neurobiology of Stress. 100 Units.
This course explores the topic of stress and its influence on behavior and neurobiology. Specifically, the course will discuss how factors such as age, gender, and social context interact to influence how we respond to stressors both physiologically and behaviorally. The course will also explore how stress influences mental and physical health.
Instructor(s): G. Norman
Terms Offered: Spring
Equivalent Course(s): BIOS 29271
PSYC 25901. Psychology for Citizens. 100 Units.
This course will examine aspects of the psychology of judgment and decision making that are relevant to public life and citizenship. Judgment and decision making are involved when people evaluate information about electoral candidates or policy options, when they vote, and when they choose to behave in ways that affect the collective good. Topics considered in the course will include the following. (1) What is good for people? What do we know about happiness? Can/should happiness be a goal of public policy? (2) How do people evaluate information and make decisions? Why does public opinion remain so divided on so many issues? (3) How can people influence others and be influenced (e.g., by policy makers)? Beyond persuasion and coercion, what are more subtle means of influence? (4) How do individuals' behaviors affect the collective good? What do we know about pro-social behavior (e.g., altruism/charitable giving) and anti-social behavior (e.g., cheating)? (5) How do people perceive and get along with each other? What affects tolerance and intolerance?
Instructor(s): W. Goldstein Terms Offered: Winter
Equivalent Course(s): CHDV 26901

PSYC 26350. Clinical Cognitive Neuroscience: Function and Dysfunction. 100 Units.
In this course we will examine the relationships between brain, behavior, and cognitive function/dysfunction. Initial lectures will consist of a general introduction to neuroanatomy, cortical organization and methods used by cognitive neuroscientists. These introductory lectures will be followed by lectures focusing on specific cognitive functions and dysfunctions (e.g., attention and neglect, memory and amnesia, language and aphasia etc). Emphasis will be placed on the consequences of specific forms of brain injuries. Classes will consist of lecture, discussions (within lecture), case studies and videos demonstrating impairment in the cognitive abilities outlined in lecture.
Instructor(s): K. Krpan Terms Offered: Spring
Prerequisite(s): 3rd and 4th year students only.

PSYC 26665. Epigenetics in Brain and Behavior. 100 Units.
Epigenetic mechanisms alter the function of the genome without altering the base sequence of genomic DNA (the As, Cs, Ts, and Gs we are familiar with), thus can be flexibly modified in response to the environment. Once considered a domain of cancer, we now recognize that epigenetic processes affect neurodevelopment, cognitive processes, mental disorders, and behavior. Through a combination of introductory lectures and student-led discussion of primary literature, we will explore a variety of epigenetic modifications, consider how they encode personal and transgenerational experiences, and examine how they influence brain function and behavior.
Instructor(s): S. London Terms Offered: Winter
Prerequisite(s): At least one course in cell, molecular, or systems biology is highly encouraged.
Equivalent Course(s): CHDV 26665, NSCI 21500, BIOS 24134

PSYC 27010. Psycholinguistics. 100 Units.
This is a survey course in the psychology of language. We will focus on issues related to language comprehension, language production, and language acquisition. The course will also train students on how to read primary literature and conduct original research studies.
Instructor(s):Staff Terms Offered: Autumn
Equivalent Course(s): LING 27010

PSYC 27950. Evolution and Economics of Human Behavior. 100 Units.
This course explores how evolutionary biology and behavioral economics explain many different aspects of human behavior. Specific topics include evolutionary theory, natural and sexual selection, game theory, cost-benefit analyses of behavior from an evolutionary and a behavioral economics perspective, aggression, power and dominance, cooperation and competition, biological markets, parental investment, life history and risk-taking, love and mating, physical attractiveness and the market, emotion and motivation, sex and consumer behavior, cognitive biases in decision-making, and personality and psychopathology.
Note(s): CHDV Distribution, A*
Equivalent Course(s): CHDV 37950,PSYC 27950,PSYC 37950,BIOS 29265,ECON 14810
Instructor(s): D. Maestripieri Terms Offered: Winter
Note(s): CHDV Distribution, A
Equivalent Course(s): ECON 14810, CHDV 27950, BIOS 29265, CHDV 37950, PSYC 37950

PSYC 28790. Psychology for Policy Designers. 100 Units.
Many policies are aimed at influencing people's behavior. The most well-intentioned policies can fail, however, if they are not designed to be compatible with the way people actually think and make decisions. This course will draw from the fields of cognitive, social, and environmental psychology to (1) examine the ways in which human behavior deviates from the standard rational actor model typically assumed by economics, and (2) provide strategies for improving the design, implementation, and evaluation of public-facing policies. The basic premise of this course is that a foundational understanding of human behavior can lead not only to more effective policies, but enhanced decision-making and well-being.
Instructor(s): K. Wolske Terms Offered: TBD
Equivalent Course(s): PBPL 28790
PSYC 28810. From Fossils to Fermi's Paradox: Origin and Evolution of Intelligent Life. 100 Units.
The course approaches Fermi's question, "Are we alone in the universe?", in the light of recent evidence primarily from three fields: the history and evolution of life on Earth (paleontology), the meaning and evolution of complex signaling and intelligence (cognitive science), and the distribution, composition and conditions on planets and exoplanets (astronomy). We also review the history and parameters governing extrasolar detection and signaling. The aim of the course is to assess the interplay between convergence and contingency in evolution, the selective advantage of intelligence, and the existence and nature of life elsewhere in the universe - in order to better understand the meaning of human existence.
Instructor(s): P. Sereno; L. Rogers; S. London Terms Offered: Winter
Prerequisite(s): Third or fourth-year standing
Equivalent Course(s): BPRO 28800, ASTR 18700

PSYC 28850. The Biological Nature of Psychological Problems. 100 Units.
This course is based on the strong assumption that psychology is a biological science, albeit with elements of the social sciences. The course uses a combination of lectures and classroom discussion of primary and secondary source readings assigned for each class meeting. It presents a strong biological science perspective on individual differences in emotions, motivations, and cognitions that cause distress or interfere with adaptive life functioning, but does so in a non-stigmatizing manner. The course begins with a description and discussion of the nature of psychological problems. The course will survey what is known about the genetic, environmental, and epigenetic bases of such problems and the methods used to study genetic influences and gene-environment interactions. Next, students will review what is currently known about the neural and other biological mechanisms involved in maladaptive individual difference in emotion, motivation, and cognitive processes, with discussion of the methods of studying such mechanisms in humans and nonhumans. The pros and cons of the medical model of 'mental illness' will be discussed as the major contrast with the natural science view advocated by the instructor.
Instructor(s): B. Lahey Terms Offered: Spring
Prerequisite(s): BIOS 10130. NO BIOLOGICAL SCIENCES MAJORS OR NON-MAJOR PRE-MED STUDENTS, except by petition.
Equivalent Course(s): BIOS 16120

PSYC 28910. Animal Models in the Study of Cognition. 100 Units.
This course will be a combination of lecture and seminar. In the first half of the course we will read and discuss seminal literature in the study of cognitive questions using animal models (primarily rodents). In the second half of the course we will learn about study design and design two different types of studies in smaller groups. Evaluation will be through short weekly papers, class discussion and a final paper.
Instructor(s): L. Kay Terms Offered: Spring
Prerequisite(s): Completion of PSYC 20300 Biological Psychology or equivalent background in neuroscience and/or biological psychology.

PSYC 29200. Undergrad Rdgs: Psychology. 100 Units.
Students are required to submit the College Reading and Research Course Form. Available for either quality grades or for P/F grading. Only one independent study course may count toward the twelve courses required of students majoring in psychology.
Terms Offered: Autumn, Spring, Winter

PSYC 29700. Undergraduate Research in Psychology. 100 Units.
Students are required to submit the College Reading and Research Course Form. Available for either quality grades or for P/F grading. Only one independent study course may count toward the twelve courses required of students majoring in psychology.
Terms Offered: Autumn, Spring, Winter

PSYC 29800. Honors Seminar: Psychology. 100 Units.
This course is a reading and discussion of general papers on writing and research, and individual students present their own projects to the group. A literature review, data from ongoing or completed empirical projects, or portions of the thesis paper itself can be presented. Students are expected to give thoughtful feedback to others on their presentations and written work.
Instructor(s): B. Prendergast Terms Offered: Winter
Note(s): Open to third- or fourth-year students who are majoring in psychology and have begun their thesis project. Available for either quality grades or for P/F grading.
Font Notice

This document should contain certain fonts with restrictive licenses. For this draft, substitutions were made using less legally restrictive fonts. Specifically:

- Times was used instead of Trajan.
- Times was used instead of Palatino.

The editor may contact Leepfrog for a draft with the correct fonts in place.