

DEPARTMENT OF PSYCHOLOGY

Professors

- Edward S. Awh
- Jean Decety
- David A. Gallo
- Susan Goldin-Meadow
- Leslie M. Kay
- Boaz Keysar
- Katherine D. Kinzler
- Susan Cohen Levine
- Daniel Margoliash, Organismal Biology and Anatomy
- Howard C. Nusbaum
- Shigehiro Oishi
- Brian Prendergast
- Steven K. Shevell
- Richard Shweder, Comparative Human Development
- Edward K. Vogel
- Amanda Woodward

Associate Professors

- Marc G. Berman
- Sarah London
- Greg J. Norman
- Monica D. Rosenberg
- Alex Shaw

Assistant Professors

- Xuechunzi Bai
- Wilma A. Bainbridge
- Lin Bian
- Akram Bakkour
- Lydia Emery
- Yuan Chang Leong
- Jai Yu

Emeritus Faculty

- Abraham Bookstein, Humanities Division
- Norman M. Bradburn
- William Goldstein
- Jerre Levy
- Frederick F. Lighthall, Education
- John A. Lucy, Comparative Human Development
- Martha McClintock
- David McNeill
- Joel M. Pokorny, Ophthalmology and Visual Science
- Vivianne Smith, Ophthalmology and Visual Science
- Nancy Lou Stein

Department website: <http://psychology.uchicago.edu>

The Department of Psychology has been for over a century a leading center of scholarship, research and teaching in psychology and related fields. Among its distinguished faculty and students have been James Rowland Angell, John Dewey, George Herbert Mead, John B. Watson, the founder of behaviorism, L. L. Thurstone, a pioneer in psychological measurement, Karl Lashley, Klüver and Bucy, Kleitman, discoverer of REM sleep, Frank Beach, founder of behavioral endocrinology, W. C. Allee who viewed biology as a social

phenomenon, and Roger Sperry, Nobel Prize winner for his work in cerebral lateralization. The present Department of Psychology is conscious of its distinguished intellectual forebears and continues to reflect its heritage in its commitment to research, the scope of its inquiry, and the diversity of its programs of graduate study.

The Department of Psychology is organized into specialized programs that reflect the contemporary state of the discipline and the wide-ranging interests of its own faculty. The areas of concentration are cognition, computational cognitive neuroscience, developmental psychology, integrative neuroscience, and social psychology. Consistent with the multidisciplinary traditions of the University of Chicago, many faculty members serve on more than one of the department's programs. Faculty and students participate in courses, colloquia, workshops and joint research ventures with scholars in other departments. These include biology, computer science, education, human development, linguistics, neuroscience, philosophy, and others, as well as the University's professional schools of business, public policy, law, medicine, and social service administration.

Doctoral study in the University of Chicago's Department of Psychology typically spans five years and includes a common curriculum of eight courses with other requirements set by the student's area of specialization. In addition, each student will complete a trial research project under the guidance of a faculty advisor or advisors, and complete a dissertation. Students are evaluated yearly to determine progress. Advisors are a critical component of students' experience in the doctoral program, providing guidance and collaboration in conducting research and academic advising.

DEGREES

Programs of graduate study offered by the department lead to the PhD degree at the University of Chicago. The Department of Psychology does not offer courses of study leading to the degree of Master of Arts (MA). However, students admitted to doctoral study may take the MA degree as an optional step in the doctoral program. Similarly, a student admitted who must leave the program, for whatever reason, may apply for a terminal MA degree, providing the student has met the program requirements of the particular program of the Department of Psychology.

PSYCHOLOGY-BUSINESS JOINT PHD PROGRAM

The Joint Program in Psychology and Business was established in 2009, and is overseen jointly by the Behavioral Science dissertation area (<https://www.chicagobooth.edu/phd/dissertation-areas/behavioral-science/>) at Chicago Booth and the Department of Psychology. The aim of this program is to connect the large number of social, cognitive, and organizational psychologists at Chicago Booth and within the Department of Psychology. To qualify for the joint program, a student must be admitted into either the Psychology or the Business graduate program. PhD students in Psychology or Business who want to take the Joint Degree will need an adviser in both schools. The adviser from the program the student was initially admitted into will be a primary adviser and the one from the other program, the secondary adviser. Normally this would be done, after arrival, during the first year of studies. Once the student and the faculty member agree on the advising relationship, and after successfully completing at least one year in the primary program, the student applies to the secondary program. The application is then reviewed by the faculty in the program that the student wants to join.

ADMISSION

Students are admitted by application to the Department of Psychology to pursue courses of doctoral study that are formulated by the individual programs. Candidates for admission are expected to have some background in psychology as well as mathematics and statistics.

The application process for admission for the Psychology graduate program is administered through the Dean of Students Office in the Division of the Social Sciences. The application for admission, with instructions, deadlines and department-specific information, is available online at: <http://apply-ssd.uchicago.edu/apply/>.

GENERAL REQUIREMENTS FOR DOCTORAL STUDENTS

The doctoral curriculum includes courses taken to fulfill the common graduate curriculum, research requirements, pedagogical training, and other requirements set by the student's area of specialization. In exceptional cases, a student may design an individual sequence of courses. This sequence must be approved by the curriculum and student affairs committee before the student undertakes it. Completion of these course requirements is a prerequisite for Ph.D. candidacy.

COMMON GRADUATE CURRICULUM

The common curriculum consists of eight courses. Other requirements for graduate students will be set by the student's area of specialization.

Proseminar

One-quarter course in which faculty members whose primary affiliation is the Department of Psychology give a summary of their ongoing research and students write a research proposal, to be submitted for an NSF graduate fellowship if the student is eligible for this funding. Professional development topics are also covered.

Statistics Requirement: Three courses passed with a grade of B or better

STAT 22000	Statistical Methods and Applications (or BUSN 41000 or equivalent approved by the Graduate Curriculum Committee. More advanced courses, for which these courses are prerequisites, also fulfill this requirement.)	100
PSYC 37300	Experimental Design and Statistical Modeling I	100
PSYC 37900	Experimental Design and Statistical Modeling II	100

TRIAL RESEARCH SEMINAR

All graduate students are required to take the trial research seminar in the spring of the first year. The purpose of this seminar is to help students formulate and complete their trial research projects.

BREADTH REQUIREMENT

Students are required to take a minimum of three doctoral level courses in Psychology, extending across different areas of psychological science. These courses should be chosen in consultation with the student's advisor and program area. These courses must be passed with a grade of B or better.

DEPARTMENT OF PSYCHOLOGY RESEARCH REQUIREMENTS

TRIAL RESEARCH PROJECT

Each student will complete a trial research project under the guidance of a faculty advisor or advisors by the end of Spring quarter of the second year.

At the start of the project, each student must form a trial research committee, composed of three faculty members. Typically, the chair of the committee is the student's primary research advisor. The chair of the committee must be a faculty or emeritus faculty member in the Psychology Department. At least one other member of the committee must be a faculty, emeritus faculty or affiliated faculty member in the Psychology Department. The third member of the committee may be from outside of the Psychology Department, provided that the chair of the trial research committee gives his or her approval.

The student should initiate discussion of their trial research project with members of their trial research committee as soon as possible, but preferably no later than the end of Autumn quarter of their second year. By the end of Autumn quarter of the second year, the student's trial research committee should meet to approve the proposed trial research project. At a minimum, this meeting consists of a student presentation of the proposed work and discussion of the plan with the committee.

The student will submit the trial research paper prior to the end of the Spring quarter of the second year and defend the trial research paper at a hearing with their trial research committee prior to the end of Spring quarter of their second year. At the hearing, the committee will also assess the depth and breadth of students' knowledge of their research problem.

Successful completion of the trial research project is a prerequisite for PhD candidacy.

DISSERTATION

To begin the dissertation process, a student must form a three-member dissertation committee consisting of a chairperson and two other faculty members. Typically, the chair is the student's primary research advisor. The chair of the dissertation committee must be a faculty or emeritus faculty member in the Psychology Department. At least one other member of the committee must be a faculty, emeritus faculty or affiliated faculty member in the Psychology Department. The third member of the committee must be from the University of Chicago, but may be from outside of the Psychology Department, provided that the chair of the dissertation committee gives his or her approval.

Once a dissertation committee exists, the student must formulate an independent research project to be carried out under the committee's guidance. The student will then prepare a written dissertation proposal and submit it to his or her committee. When the student's advisor agrees, the student may schedule an oral defense of the proposal.

To be admitted to PhD candidacy, a student must have successfully completed: (a) the Common Graduate Curriculum (including the statistics and breadth requirement); (b) the course requirements specified by a program or an individual course of study approved by the Curriculum Committee; (c) a trial research project; (d) approval of the dissertation proposal by all members of the student's dissertation committee following the oral defense.

The completed thesis must be submitted to all three committee members. When the student's advisor agrees, the student may schedule an oral defense of the dissertation. The oral exam is administered by four members of the University community: the three members of the dissertation committee and an outside reader. The outside

reader may be a faculty member at the University of Chicago, or a scientist at another institution. The outside reader must be approved by the thesis advisor. If, after the oral defense, all committee members approve the thesis, the student has met the Psychology Department's requirements for the PhD degree.

The completed dissertation must be formatted and submitted to the dissertation office by the quarterly deadline for graduation established by the dissertation office. For information about formatting the dissertation and submission deadlines, please visit the dissertation office's website (<https://www.lib.uchicago.edu/research/scholar/phd/>).

DOCTORAL PROGRAM MENTORED TEACHING REQUIREMENTS

Practical pedagogical experience is a program requirement in the doctoral programs in the Division of the Social Sciences.

MENTORING PLAN

The department's mentoring plan outlines the timing of the expected milestones of students in the program, and the roles of the faculty advisors, the director of graduate studies, the area chairs, and the department chair. Students who do not meet the expected milestones by the deadlines listed above and fully described in the mentoring plan may petition the appropriate faculty leader (director of graduate studies for general curriculum and research requirements; area heads for area requirements) for an extension to a deadline. Students who do not complete the requirements by the approved deadlines may be placed on probation. A notice of probation will include the necessary steps and timeline to return to good academic standing. Students who do not complete the steps to return to good academic standing will be withdrawn from the program.

AREAS OF SPECIALIZATION

The Department of Psychology is organized into five areas of specialization: Cognition, Computational Cognitive Neuroscience, Developmental Psychology, Integrative Neuroscience, and Social Psychology.

COGNITION PROGRAM

The goal of the doctoral program in Cognitive Psychology is to train graduate students to be well-rounded researchers and scholars. Our unique approach fosters integrative thinking that crosses disciplinary boundaries, and focuses on research questions that have both theoretical and practical significance. Faculty, students, and post docs collaborate on projects spanning a variety of cognitive domains, such as human memory, language and communication, perception, attention and action, and conflict resolution and negotiation. Not only do we focus on fundamentally cognitive questions, but we also situate these questions within a broader context, including the biological bases and the social manifestations of cognitive phenomena. Our integrative approach allows graduate students to benefit from the university as a whole, by interacting with faculty from the Biological Sciences, the Humanities and the Social Sciences.

Curriculum

There are three elements in the graduate curriculum of the Cognition Program.

1. Departmental curriculum. Students must complete the departmental core graduate curriculum.
2. Basic courses. Three basic courses. The following list includes possible courses, including those that are not offered every year. The purpose of this requirement is to develop a deeper understanding of the theories and methods used to scientifically study cognition, and how these approaches are central to many areas of psychological inquiry. Pre-approved courses are:

PSYC 37400 Long Term Memory

PSYC 38655 Environmental Neuroscience

PSYC 40107 Behavioral Neuroscience

PSYC 41115 Social Cognitive Development

PSYC 42350 Advanced Topics in Human Neuroimaging

PSYC 42570 Integrating the Real World into Perception and Memory

PSYC 42950 Memory and Decision Making

PSYC 43200 Seminar in Language Development

Students may also propose other courses, based on course offerings in a given year. Such student-proposed courses should be approved by the cognition area chair prior to taking them.

3. Advanced courses and seminars. Students are strongly encouraged to participate in advanced courses and seminars, particularly in their area of interest.

THE COMPUTATIONAL COGNITIVE NEUROSCIENCE PROGRAM

The brain, and particularly the human/primate brain, is arguably one of the most complex systems in the known universe. Huge progress has been made in the fields of Psychology and Neuroscience to understand the workings of the brain and its relationship to behavior. With the advent of new imaging technologies to record non-invasively and at much lower cost, datasets at huge scales are available to researchers across the world. At the same time, behavioral data from social media, cellphone, and credit cards are accessible at unprecedented temporal and spatial scales with millions and even billions of datapoints. Coupled with these enormous and complex datasets, the analysis tools to analyze these data have also become more complex, such as deep neural networks, Bayesian networks and Boltzmann machines. The Computational Cognitive Neuroscience program provides the requisite skills to become proficient at handling these large and complex data, along with the complex computational analysis tools needed to make progress in our understanding of brain and behavior. The Computational Cognitive Neuroscience graduate program at the University of Chicago is designed to provide the training and research opportunities for the next generation of computational cognitive neuroscientists. The program will provide students with training in basic neuroscience, cognition and computational techniques to tackle the incredible and daunting challenge in trying to understand such a complex system and complex multidimensional behavior

Curriculum

1. Students must complete the Common Graduate Curriculum (<https://psychology.uchicago.edu/content/phd-curriculum/>) in Psychology.

2. Students must take PSYC 43030 Introduction to Psychoinformatics: Computer Science for Psychologists (offered in 2024-25); this requirement will be waived if student has sufficient programming experience.

3. Two Core Neuroscience courses. From the four options below, students should complete two courses.
 CPNS 30000 Cellular Neurobiology
 CPNS 30107 Behavioral Neuroscience
 CPNS 30116 Survey of Systems Neuroscience
 CPNS 34231 Methods in Computational Neuroscience

4. Three advanced courses, one of which will be required to be a breadth course outside of the student's main discipline. These courses will also fulfill the breadth courses required as part of the common graduate curriculum. Eligible courses will include all graduate level seminars taught by faculty in the Psychology Department, as well as a list of courses in other departments that are deemed relevant for the computational cognitive neuroscience curriculum. These outside courses will provide additional opportunities for computational and analytic training.

Below is a list of the "advanced courses" in computational cognitive neuroscience students can choose from in Psychology (note this is not a complete list). Computational courses offered by other programs (MACS, CPNS) may also meet these requirements.

PSYC 31900 The Neuroscience of Narratives. (Leong)
 PSYC 32750 Advanced Topics in Chronobiology. (Prendergast)
 PSYC 34133 (Wei, Maunsell, Sherman, Shevell)
 PSYC 34810 Neuroeconomics. (Bakkour)
 PSYC 37400 Long Term Memory. (Gallo)
 PSYC 37250 Foundations of Neuroscience: Historical Perspective. (Kay)
 PSYC 41210 Psychophysiology: Methods, Concepts, and Applications. (Norman)
 PSYC 42350 Advanced Topics in Human Neuroimaging (Bainbridge, Rosenberg)
 PSYC 42570 Integrating the Real World into Perception and Memory. (Bainbridge)
 PSYC 42650 Working Memory. (Awh)
 PSYC 42950 Memory and Decision Making (Bakkour)
 PSYC 43110 Affective Neuroscience. (Norman)
 PSYC 43130 Stress and the Social Brain (Norman)
 PSYC 43780 Basics of conducting EEG and ERP research. (Vogel)
 PSYC 43910 Current Topics in Working Memory and Attention (Vogel)
 PSYC 44550 Cognitive Neuroscience Core Course (Awh/Vogel)
 PSYC 45500 Cognitive and Social Neuroscience of Aging. (Gallo)
 PSYC 46050 Principles of Data Science and Engineering for Laboratory Research (Yu)

THE DEVELOPMENTAL PSYCHOLOGY PROGRAM

The Developmental Program provides a rich environment for scientific inquiry, mentorship, and training. Our faculty pursue a wide range of topics that span cognitive, emotional and social development. In cognitive development, our work focuses on infants' and children's mathematical, spatial, and language development along with interventions to improve educational outcomes. In terms of social and emotional development, we examine infants' and children's affective, intentional, and moral understanding. Other research examines how interacting with their environment affects children's cognition and social behavior, and how their bodies can shape learning and thinking. Not only do our faculty, post-docs, and students investigate

multiple exciting questions with behavioral methods, but they also supplement this approach with other methods including behavioral economics, gestural analyses, functional MRI, eye tracking, and EEG/ERPs. Moreover, the faculty interact with faculty from other disciplines, bringing rich interdisciplinary expertise to bear on their research questions. The faculty are also involved with the Science of Learning Center (<https://scienceoflearning.uchicago.edu/>), Center for Gesture Sign and Language (<https://gscenter.uchicago.edu>), Committee on Education (<https://coe.uchicago.edu>), and the Child Neurosuite (<http://www.childneurosuite.org/>). (<https://ldp.uchicago.edu>) These diverse perspectives and methodologies provide a comprehensive picture of how the mind works and is shaped throughout development.

Curriculum

1. The following requirements are in addition to the Common Graduate Curriculum required of all graduate students.
2. Students must take an advanced course in the three areas of Developmental Psychology listed below. Certain seminars may also fulfill these requirements. Below are a few examples of courses that will fulfill these requirements. Students may petition the developmental area chair to count courses not included on this list.
 - a) Cognitive/Intellectual Development:
PSYC 42550 Topics in Cognitive Development; PSYC 32450 Seminar on Mathematical Development; PSYC 33600 Cognition in Infancy
 - b) Language Development:
PSYC 43200 Seminar in Language Development; PSYC 43680 Topics in Language and Gesture
 - c) Social/Emotional Development:
PSYC 41115 Social Cognitive Development; PSYC 33165 Multidisciplinary Perspectives on Morality; PSYC 32220 Understanding Inequality as a Psychologist
3. Students are expected to attend the weekly developmental brown bag seminar (Topics in Developmental Psychology) each quarter.
4. Students are encouraged to take additional coursework in areas of interest and in statistics or methods as needed.
5. In their third year, students will present their trial research findings in the developmental brown bag seminar.
6. By the spring of the third year students must write and submit a theoretical review paper to their adviser and a reader. Ideally, this review could be a publishable article, suitable for a journal such as Psychological Bulletin or Developmental Review and will help in formulating the dissertation. Students will do a presentation of the theoretical review paper in the developmental brown bag seminar by the end of their fourth year.

INTEGRATIVE NEUROSCIENCE

The notion that 100 billion neurons give rise to human behavior proved daunting up through the 20th Century because neuroscientists were limited by existing technologies to studying the properties of single neurons or small groups of neurons. Characterizing simple neural circuits has led to an understanding of a variety of sensory processes, such as the initial steps in vision, and motor processes, such as the generation of locomotion patterns. However, unraveling the neural substrates of more complex behaviors, such as the ability to pay attention to relevant events in its surroundings or the ability to understand the likely events going through the mind of another, remains one of the major challenges for the neurosciences in the twenty-first century. In contrast to simple behaviors, these complex behaviors depend on interactions within a network of different brain structures. Studying the neural bases of complex behaviors, thus, requires an integrative neuroscience approach.

The Integrative Neuroscience graduate program at the University of Chicago is designed to provide the training and research opportunities for the next generation of behavioral, cognitive, and social neuroscientists. Behavioral, cognitive, and social neuroscience represent three complementary and partially overlapping aspects of this integrative neuroscience of mind and behavior. Behavioral neuroscience places an emphasis on the biological mechanisms underlying basic behavioral processes; cognitive neuroscience places an emphasis on the biological mechanisms underlying cognition, with a specific focus on the neural substrates of mental processes and their behavioral manifestations; and social neuroscience places an emphasis on the biological mechanisms underlying social processes and behavior, including the ability to perceive and communicate mental states including the beliefs and desires of others and to form and maintain interpersonal and group relationships. The University of Chicago is optimally positioned to meet this challenge because its unique academic structure facilitates interactions across disciplinary perspectives.

Curriculum

Students must complete the departmental core graduate curriculum.

As part of this curriculum and with one additional course, IN students complete:

TWO PSYCHOLOGY DEPARTMENT BREADTH COURSES

IN students will take two advanced courses within the Department of Psychology.

TWO OF THREE CORE NEUROSCIENCE COURSES

CPNS 30000 Cellular Neurobiology

CPNS 30107 Behavioral Neuroscience

CPNS 30116 Survey of Systems Neuroscience

It is suggested that most students take at least Cellular and Behavioral, but we understand that needs depend on research focus.

IN students are encouraged to take additional advanced courses. The program offers the following advanced courses. All of these courses will not be offered every year.

- PSYC 32750 Advanced Topics in Chronobiology
- PSYC 31900 The Neuroscience of Narratives
- PSYC 34133
- PSYC 36655 Advanced Topics in Epigenetics of the Brain
- PSYC 37250 Foundations of Neuroscience: Historical Perspective
- PSYC 37400 Long Term Memory
- PSYC 41210 Psychophysiology: Methods, Concepts, and Applications
- PSYC 42350 Advanced Topics in Human Neuroimaging
- PSYC 42650 Working Memory
- PSYC 42950 Memory and Decision Making
- PSYC 43110 Affective Neuroscience
- PSYC 43130 Stress and the Social Brain
- PSYC 43780 Basics of conducting EEG and ERP research
- PSYC 34810 Neuroeconomics
- PSYC 43910 Current Topics in Working Memory and Attention
- PSYC 44550 Cognitive Neuroscience Core Course
- PSYC 45500 Cognitive and Social Neuroscience of Aging
- PSYC 46050 Principles of Data Science and Engineering for Laboratory Research

THE SOCIAL PSYCHOLOGY PROGRAM

Social psychology is the scientific study of how social environments shape our thinking, feeling, and behavior on one hand, and how our thinking, feeling, and behavior shape our social environments on the other hand. It is the scientific study of how the social world and psyche make each other up.

At the University of Chicago, the faculty and students are committed to making scientific and practical contributions to society. The primary goal of the UChicago social psychology program is to address pressing societal issues using social psychological theorizing and methods. This makes the UChicago social psychology program distinct. Our inquiry is inspired by the real world. Our findings will inspire the solutions to real-world problems and enhance the well-being of the individual and society. The faculty and students will investigate a variety of topics including racism, police violence, mass incarceration, income inequality, achievement gaps, interpersonal and intergroup conflicts, self-regulation, social support, happiness, meaning in life, prosocial behavior, politics, morality, religion, globalization, immigration, climate changes, natural disasters, culture, and evolution. We are diverse in terms of personal and cultural backgrounds, theoretical orientations, and preferred methodologies, but united in our commitment to and belief in the benefits of social psychological research for the individual and society. The Chicago School of Social Psychology is the social psychology that matters!

1. General Courses:
 - a. PSYC 40600 Advanced Seminar in Social Psychology: An overview of social psychology.
2. Students must attend the weekly social psychology talk series (PSYC 44600) each quarter.
3. At least three seminars (in addition to PSYC 40600) in social psychology.
4. Students must present their trial research findings in the social psychology talk series.
5. A theory paper or comprehensive exam. By the spring of the third year, students must write and submit a theoretical review paper to their advisor and a reader. If a student chooses the theory paper option, this review could be a publishable article, suitable for a journal such as Psychological Bulletin or Personality and Social Psychology Review, and will help in formulating the dissertation. Students will do a presentation of the theoretical review paper in the social psychology talk series by the end of their fourth year. If a student

chooses the comprehensive exam, they will be provided a reading list by the end of the third year. The exam will be taken in September of the fourth year, i.e., right before the start of the fourth year.

PSYCHOLOGY COURSES

PSYC 30289. Intermediate Regression and Data Science. 100 Units.

This course is designed to provide intermediate-level training in research methods that would pick up immediately after traditionally introductory-level classes that end with multiple regression. This course is designed to be a standalone package of training that will provide tools of immediate use in students' own research or to make them more capable RAs in larger projects. I expect the course will provide the most utility to advanced BA and MA students that will not have time to complete many advanced, specialized courses. However, it would also serve as a useful bridge to more advanced statistical coursework. Students will also learn how to present findings in competent and accessible ways suitable for poster or conference presentations.

Instructor(s): M. Jean Terms Offered: Spring Winter

Prerequisite(s): Applied statistics at the level of multiple regression

Note(s): Students are encouraged to bring a laptop to this class to follow along with certain lessons

Equivalent Course(s): EDSO 23089, EDSO 30289, MAPS 30289, SOCI 30289, SOCI 20289

PSYC 30401. Psycholinguistics: Language Processing. 100 Units.

This is an advanced introduction to the field of psycholinguistics. We will do an in-depth overview of both the empirical findings and the methodologies used on various topics in language comprehension/production, including areas of speech perception, lexical processing, syntactic parsing, and semantic/pragmatic processing. Models at both the computational and the mechanistic levels will also be examined.

Instructor(s): Monica Do Terms Offered: Autumn

Equivalent Course(s): LING 30401

PSYC 30510. Computing for the Social Sciences. 100 Units.

This is an applied course for social scientists with little-to-no programming experience who wish to harness growing digital and computational resources. The focus of the course is on learning the basics of programming and on generating reproducible research. Topics include coding concepts (e.g., data structures, control structures, functions, etc.), data visualization, data wrangling and cleaning, version control software, exploratory data analysis, etc. Students will leave the course with basic programming skills for the social sciences and will gain the knowledge of how to adapt and expand these skills as they are presented with new questions, methods, and data. The course is taught in R. Requirements: At least one prior course that made use of a programming language (e.g., Python, R, Stata, SPSS, etc.) in some capacity. If you are unsure or had some informal exposure, email the instructor to see if the course is a good fit.

Instructor(s): Jean Clipperton Terms Offered: Autumn Spring Winter

Note(s): MACS students have priority.

Equivalent Course(s): CHDV 30511, MAPS 30500, ENST 20550, MACS 20500, SOSC 26032, SOCI 20278, MACS 30500, PLSC 30235, SOCI 40176

PSYC 30650. MA Psychological Research. 100 Units.

Student-initiated experimental research done under the supervision of principal investigator in a laboratory or research setting. Includes the practical application of knowledge and skills in research design, statistical and experimental methods, and data analysis.

Instructor(s): M. Berman Terms Offered: Autumn Spring Winter

PSYC 30700. 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): K. Ledoux Terms Offered: Winter

Equivalent Course(s): PSYC 20700, NSCI 20140

PSYC 31150. Psychology of Race and Racism. 100 Units.

This upper-level seminar will focus on the psychology of race and racism. We will discuss both structural and individual level factors that create and maintain racism in the U.S. context. While this course will focus on social psychology, we will also draw from other areas of psychology. We will discuss social structures and institutions that perpetuate racism, policies that shape societal attitudes and behaviors, and psychological frameworks for understanding racism. We will begin the course with a discussion of the origins of race and racism. We will then transition to contemporary expressions of racism. The goals of this course are to analyze structural contexts influencing racist attitudes and behaviors, evaluate the impact of racism on racially minoritized groups, and to examine strategies and interventions to address racism.

Instructor(s): K. Henderson Terms Offered: Autumn

Equivalent Course(s): RDIN 31150, PSYC 21150, RDIN 21150

PSYC 31900. The Neuroscience of Narratives. 100 Units.

Narratives have a powerful hold over the human mind. People are more often convinced by a compelling story than by concrete facts. More broadly, people use narratives to organize their thoughts and communicate their

ideas. Recent advances in natural language processing (NLP) tools and neuroscience methods provide exciting new opportunities to study how the brain understands and constructs narratives. The goal for this seminar is to provide an in-depth look into the cutting-edge research on the neuroscience of narratives. We will begin with a review of the burgeoning literature on the use of narratives in cognitive and social neuroscience. We will then introduce NLP approaches that provide a framework to model narratives computationally, and discuss how NLP models can be combined with neuroscience measures in a synergistic manner. Finally, we will discuss how studying the neuroscience of narratives can provide insights into people's mental models of the world. This class is designed as a graduate seminar, however, advanced undergraduate students with backgrounds in either cognitive neuroscience or natural language processing can register with instructor consent.

Instructor(s): Y.C. Leong Terms Offered: Spring

PSYC 32220. Understanding Inequality as a Psychologist. 100 Units.

Inequality within and across social groups has risen sharply in the past few decades. What are the early traces and psychological mechanisms of this pervasive phenomenon? In this seminar, we will discuss these questions from multiple angles, integrating developmental, social and cognitive psychology. Specifically, this course will cover topics in early social cognition, including social categorization, essentialism, structural reasoning, normative reasoning, stereotypes and prejudice, etc. Students will evaluate past studies throughout the course and propose original research at the end.

Instructor(s): L. Bian Terms Offered: Autumn

Prerequisite(s): Undergraduates must have completed PSYC 20500 Developmental Psychology or gain the consent of the instructor.

Equivalent Course(s): PSYC 22220, EDSO 32220, EDSO 22220

PSYC 33000. Cultural Psychology. 100 Units.

There is a substantial portion of the psychological nature of human beings that is neither homogeneous nor fixed across time and space. At the heart of the discipline of cultural psychology is the tenet of psychological pluralism, which states that the study of "normal" psychology is the study of multiple psychologies and not just the study of a single or uniform fundamental psychology for all peoples of the world. Research findings in cultural psychology thus raise provocative questions about the integrity and value of alternative forms of subjectivity across cultural groups. In this course we analyze the concept of "culture" and examine ethnic and cross-cultural variations in mental functioning with special attention to the cultural psychology of emotions, self, moral judgment, categorization, and reasoning.

Instructor(s): R. Shweder Terms Offered: Winter

Prerequisite(s): Undergraduates must be in third or fourth year.

Note(s): CHDV Distribution: B, C

Equivalent Course(s): CHDV 31000, ANTH 24320, CHDV 21000, CRES 21100, PSYC 23000, GNSE 21001, ANTH 35110, AMER 33000, KNOW 31000, GNSE 31000

PSYC 33165. Multidisciplinary Perspectives on Morality. 100 Units.

Morality is essential for societal functioning and central to human flourishing. It has evolved to facilitate group living, regulate social interactions, minimize aggression, and promote cooperation beyond kinship. We are motivated by morality because it is advantageous at the individual level - a non-zero-sum game. These moral concerns are not located in an abstract world characterized by ivory tower speculations. We are inherently and deeply social animals, and nearly all manifestations of morality involve, build upon, influence, and often govern our relationships with others. The ability to think and act in accordance with moral norms is a hallmark of our species. The course is organized into 9 weeks, covering specific topics in morality from a multidisciplinary perspective, including evolutionary anthropology, psychology (developmental, cognitive & social), cognitive neuroscience, and behavioral economics.

Instructor(s): J. Decety Terms Offered: Autumn

Equivalent Course(s): KNOW 33165, PSYC 23165

PSYC 33662. The Disordered Mind. 100 Units.

What are disorders of the mind? What are some of the theoretical and practical issues surrounding the identification, classification, and treatment of such disorders? What do mental disorders have to teach us about the typically-functioning mind? This seminar course will address these and other questions within biological, psychological, and sociocultural perspectives to attempt to understand the current and historical paradigms that have influenced our perception of what it means for the mind to be "disordered." Included will be discussion of behavioral, emotional, cognitive, and developmental disorders.

Instructor(s): K. Ledoux Terms Offered: Spring

Equivalent Course(s): PSYC 23660

PSYC 33830. 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. Vogel, E. Awh Terms Offered: Winter

Prerequisite(s): PQ: NSCI 20101 (Foundations of Neuroscience) is required for Neuroscience majors only.

Equivalent Course(s): NSCI 21600, PSYC 23820

PSYC 33910. Hormones, Brains, and Behavior. 100 Units.

This is an advanced course in behavioral neuroscience, with the goal of understanding the complex interactions among the brain, the endocrine system, and behavior (Behavioral Endocrinology). Reproductive hormones, stress hormones and hormone-brain interactions over development will be emphasized. The class will cover multiple levels of analysis/explanation from molecular, to organismal, to evolutionary, and the material will be primary research articles drawn from studies in a broad range of organisms, including humans. The course format will consist of weekly lectures and student-led discussions. Prior coursework in neuroscience (at or beyond the level of PSYC 20300) and a strong background in biology are prerequisites.

Instructor(s): B. Prendergast Terms Offered: Spring

Prerequisite(s): Undergraduates may register with consent of instructor. Prerequisite of PSYC 20300 Biological Psychology, or equivalent.

Equivalent Course(s): PSYC 23910

PSYC 34060. Understanding Practical 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 in philosophy and psychological science, how its meaning has changed, and what its essential components might be. We will discuss how current philosophical and 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. The course will include lectures by philosophers and psychologists. This course is offered in association with the Chicago Moral Philosophy Project and the Good Life program (the Hyde Park Institute).

Instructor(s): A. Henly; H. Nusbaum Terms Offered: Spring

Prerequisite(s): Third- or fourth-year standing.

Equivalent Course(s): PSYC 24060, RLST 24055, CHDV 24050, BPRO 24050

PSYC 34810. Neuroeconomics. 100 Units.

In this seminar, we will review recent research spanning across the fields of neuroscience, psychology, and economics that inform our understanding of how the brain makes decisions. We will focus on the neural processes that give rise to choice behavior in different contexts. Topics include decisions that are based on learned rewards and punishments, decisions under risk and uncertainty, social preferences, and strategies in games.

Instructor(s): A. Bakkour Terms Offered: Spring

Prerequisite(s): courses in neuroscience, psychology and/or behavioral economics

Note(s): Undergraduates with consent of instructor.

PSYC 35201. Communication in humans and non-humans. 100 Units.

This seminar will compare communication in humans and non-humans. Topics to be covered include the reliance of communication on more general cognitive processes, the learnability of communicative systems, referential intent, honest signaling, and deception. These issues will be explored through readings that cover recent work at the intersection of human and animal communication.

Instructor(s): J. Mateo

Note(s): Not offered in 2023-2024

Equivalent Course(s): CHDV 35201

PSYC 36008. Principles and Methods of Measurement. 100 Units.

Accurate measurement of key theoretical constructs with known and consistent psychometric properties is one of the essential steps in quantitative social and behavioral research. However, measurement of phenomena that are not directly observable (such as psychological attributes, perceptions of organizational climate, or quality of services) is difficult. Much of the research in psychometrics has been developed in an attempt to properly define and quantify such phenomena. This course is designed to introduce students to the relevant concepts, principles, and methods underlying the construction and interpretation of tests or measures. It provides in-depth coverage of test reliability and validity, topics in test theory, and statistical procedures applicable to psychometric methods. Such understanding is essential for rigorous practice in measurement as well as for proper interpretation of research. The course is highly recommended for students who plan to pursue careers in academic research or applied practice involving the use or development of tests or measures in the social and behavioral sciences.

Instructor(s): Yanyan Sheng Terms Offered: Spring

Prerequisite(s): Course work or background experience in statistics through inferential statistics and linear regression.

Equivalent Course(s): PSYC 28962, SOSC 26008, SOSC 36008, CHDV 26008, CHDV 36008

PSYC 36210-36211. Mathematical Methods for Biological Sciences I-II.**PSYC 36210. Mathematical Methods for Biological Sciences I. 100 Units.**

This course builds on the introduction to modeling course biology students take in the first year (BIOS 20151 or 152). It begins with a review of one-variable ordinary differential equations as models for biological processes changing with time, and proceeds to develop basic dynamical systems theory. Analytic skills include stability analysis, phase portraits, limit cycles, and bifurcations. Linear algebra concepts are introduced and developed, and Fourier methods are applied to data analysis. The methods are applied to diverse areas of biology, such as ecology, neuroscience, regulatory networks, and molecular structure. The students learn to implement the models using Python in the Jupyter notebook platform.

Instructor(s): D. Kondrashov Terms Offered: Autumn. L.

Prerequisite(s): BIOS 20151 or BIOS 20152 or equivalent quantitative experience by consent of instructor, and three courses of a Biological Sciences Fundamentals Sequence or consent of the instructor.

Equivalent Course(s): BIOS 26210, CPNS 31000

PSYC 36211. Mathematical Methods for Biological Sciences II. 100 Units.

This course is a continuation of BIOS 26210. The topics start with optimization problems, such as nonlinear least squares fitting, principal component analysis and sequence alignment. Stochastic models are introduced, such as Markov chains, birth-death processes, and diffusion processes, with applications including hidden Markov models, tumor population modeling, and networks of chemical reactions. In computer labs, students learn optimization methods and stochastic algorithms, e.g., Markov Chain, Monte Carlo, and Gillespie algorithm. Students complete an independent project on a topic of their interest.

Instructor(s): D. Kondrashov Terms Offered: Winter. L.

Prerequisite(s): BIOS 26210 or equivalent.

Note(s): CB.

Equivalent Course(s): BIOS 26211, CPNS 31100

PSYC 36455. Relationships and Health: The Need to Belong. 100 Units.

This seminar will explore the theory that the need to belong is a fundamental human motivation. In our discussions of relevant psychology journal articles, we will examine the connections between relationships and health, how the need to belong is related to empathy, reactions to rejection, and substitutes for belonging.

Instructor(s): Hamilton, Hannah Terms Offered: Autumn Spring

Equivalent Course(s): MAPS 36455, CHDV 36455, MAPS 26455

PSYC 36520. Mind, Brain and Meaning. 100 Units.

What is the relationship between physical processes in the brain and body and the processes of thought and consciousness that constitute our mental life? Philosophers and others have puzzled over this question for millennia. Many have concluded it to be intractable. In recent decades, the field of cognitive science--encompassing philosophy, psychology, neuroscience, computer science, linguistics, and other disciplines--has proposed a new form of answer. The driving idea is that the interaction of the mental and the physical may be understood via a third level of analysis: that of the computational. This course offers a critical introduction to the elements of this approach, and surveys some of the alternative models and theories that fall within it. Readings are drawn from a range of historical and contemporary sources in philosophy, psychology, linguistics, and computer science. (B) (II)

Instructor(s): Jason Bridges; Leslie Kay; Chris Kennedy Terms Offered: Autumn

Equivalent Course(s): LING 36520, PHIL 36520, PHIL 26520, SIGN 26520, COGS 20001, NSCI 22520, PSYC 26520, LING 26520

PSYC 37400. Long Term Memory. 100 Units.

This course surveys the scientific study of human memory, emphasizing both theory and applications. Lectures will cover current research and methods in cognitive psychology and cognitive neuroscience, as well as historical precursors and classic studies. Topics include consciousness and nonconscious processes, corresponding neural systems, and various phenomena such as amnesia, memory distortion, mnemonics, and metacognition.

Instructor(s): D. Gallo Terms Offered: Spring

PSYC 37950. 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.

Instructor(s): D. Maestriperi Terms Offered: Autumn

Note(s): CHDV Distribution: Undergraduate subject area: A, Graduate distribution: 1

Equivalent Course(s): ECON 14810, CHDV 37950, CHDV 27950, PSYC 27950

PSYC 38780. Adolescent Development in Context. 100 Units.

This course focuses on developmental pathways from middle childhood through adolescence within the context of school, family, community, and culture. Because human development is an applied field, we will be paying special attention to how sociocultural and historical influences affect academic, socioemotional, and identity

development in the context of real-world challenges and opportunities faced by adolescents. In addition to learning about developmental and sociocultural theories, students will apply research to policy and practice by creating resources geared toward youth, parents, or those who work with youth. By the end of this course sequence, students should be able to: 1. Describe and apply key theories of middle childhood and adolescent development; 2. Identify developmental opportunities and challenges during middle childhood and adolescence; 3. Discuss the role of identity development in constructing or authoring one's life story; 4. Reframe adolescent risk-taking as a form of creativity and individual expression; 5. Understand how relationships can influence positive youth development; and 6. Translate theory and research into developmentally appropriate and culturally sensitive resources for youth, families, and those who work with youth.

Terms Offered: TBD

Equivalent Course(s): SSAD 68700, EDSO 28700, CHDV 48700, EDSO 68700

PSYC 38960. The Development of Communicative Competence. 100 Units.

This course examines the emergence of communicative skills in humans. We will focus on how children glean information about language structure and language use from their home environments. We will also discuss the proposed cognitive and evolutionary roots of communicative behaviors, with a focus on current gaps in our knowledge and possible pathways forward. The course will consider these issues from multiple perspectives including linguistics, psychology, and linguistic anthropology. We will also briefly cover a range of methods associated with these different areas of study. It is expected that, by the end of the course, you should be able to think and write critically about how human communication and human language are intertwined in both adults and children.

Instructor(s): M. Casillas Terms Offered: Spring

Note(s): Subject area: UG: B, C; Grad: 2

Equivalent Course(s): EDSO 38950, CHDV 38950, LING 38951

PSYC 40107. Behavioral Neuroscience. 100 Units.

This course provides an introduction to neuroethology, examining brain activity relative to behaviors and organisms evaluated from an adaptive and evolutionary perspective. It starts with a brief introduction to classical ethology, and then develops a series of example animal model systems. Both invertebrate and vertebrate models are considered although there is a bias towards the latter. Many of these are "champion" species. There is a heavier demand for reading original data papers than typical in introductory graduate level courses. An integral part of the course is a series of assignments where you develop grant proposals describing novel science experiments in the animal models, thereby challenging your knowledge of the material and teaching aspects of scientific writing. In recent years there has been more computational material presented. The course is not available to undergraduates without prior approval of the instructor.

Instructor(s): D. Margoliash Terms Offered: Spring

Note(s): The course is not available to undergraduates without prior approval of the instructor.

Equivalent Course(s): CPNS 30107, NURB 30107

PSYC 40301. Topics in Psychology. 100 Units.

Current research in psychology.

Instructor(s): Staff Terms Offered: Autumn Spring Winter

PSYC 40450-40451-40452. Topics in Cognition I-II-III.

Broadly speaking, this workshop will address fundamental topics in cognitive psychology such as attention, memory, learning, problem solving, and language. One unique aspect of this workshop is that we will not only explore topics central to the study of cognition, but we will also explore how the study of cognitive psychology can be used to enhance human potential and performance in a variety of contexts. These contexts range from an exploration of optimal teaching practices to enhance the acquisition of mathematical knowledge in the classroom, to issues regarding how individuals communicate best to foster the optimal exchange of information in, for instance, medical settings, to the optimal strategies older adults can use to help stave off the deleterious effects of aging on cognitive functioning and the performance of everyday activities.

PSYC 40450. Topics in Cognition I. 100 Units.

Discussion of current research in psychology.

Instructor(s): W. Bainbridge Terms Offered: Autumn

PSYC 40451. Topics in Cognition II. 100 Units.

Discussion of current research in psychology.

Instructor(s): W. Bainbridge Terms Offered: Winter

PSYC 40452. Topics in Cognition III. 100 Units.

Discussion of current research in psychology.

Instructor(s): W. Bainbridge Terms Offered: Spring

PSYC 40460. Computation and the Identification of Cultural Patterns. 100 Units.

Culture is increasingly becoming digital, making it more and more necessary for those in both academia and industry to use computational strategies to effectively identify, understand, and (in the case of industry) capitalize on emerging cultural patterns. In this course, students will explore interdisciplinary approaches for defining and mobilizing the concept of "culture" in their computational analyses, drawing on relevant literature from the fields of Anthropology, Psychology and Sociology. Additionally, they will receive hands-on experience

applying computational approaches to identify and analyze a wide range of cultural patterns using the Python programming language. For instance, students will learn to identify emerging social movements using social media data, predict the next fashion trends, and even decipher ancient symbols using archaeological databases.

Instructor(s): Clindaniel, Jon Terms Offered: Autumn Winter

Prerequisite(s): No previous coding experience required. A Python boot camp will be held at the beginning of the quarter to teach the coding skills necessary to succeed in the course. Open to Advanced Undergraduates with Instructor Permission.

Equivalent Course(s): CHDV 40404, MACS 20400, MAPS 40401, MACS 40400

PSYC 40710. Early Childhood: Human Capital 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. Our substantive foci will be on early childhood poverty, the role of parenting and the home environment in shaping children's development, and the evidence base for intervention in early childhood for economically disadvantaged children. The course will cover evidence from neuroscience, psychology, economics, sociology, and public policy as it bears on these questions. In particular, 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 discuss 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): Kalil, A Terms Offered: Winter

Equivalent Course(s): PPHA 40700, CHDV 40770

PSYC 40851-40852-40853. Topics in Developmental Psychology I-II-III.

Brown-bag discussion of current research in psychology.

PSYC 40851. Topics in Developmental Psychology I. 100 Units.

Brown-bag discussion of current research in psychology.

Instructor(s): A. Shaw Terms Offered: Autumn

PSYC 40852. Topics in Developmental Psychology II. 100 Units.

Brown-bag discussion of current research in psychology.

Instructor(s): A. Shaw Terms Offered: Winter

PSYC 40853. Topics in Developmental Psychology III. 100 Units.

Brown-bag discussion of current research in psychology.

Instructor(s): K. Kinzler Terms Offered: Spring

PSYC 41135. Electrophysiological studies of hierarchical memory representations. 100 Units.

In this class we will examine the limits of an observer's ability to track items in dynamic visual displays, such as in a multiple object tracking paradigm. We will focus on behavioral and electrophysiological analyses of these tasks, with an eye towards characterizing the cognitive capacity limits and the neural signatures that track those limits.

Instructor(s): E. Awh Terms Offered: Autumn

Prerequisite(s): Instructor consent.

PSYC 41400. Evolutionary Cognitive Psychology. 100 Units.

TBD

PSYC 41901. Advanced Topics in Language, Culture and Thought. 100 Units.

This course examines more deeply topics discussed in CHDV 31901, Language, Culture, and Thought. Topical issues include the phylogenetic and ontogenetic emergence of language, the impact of language variation on thought, the influence of language advances in middle childhood (e.g., reported speech, narrative structure, metapragmatics, etc.) on cognitive growth (e.g., formal reasoning, theory of mind, etc.) especially as mediated through institutional structures and ideologies (e.g., education, standard language, etc.). Readings will include a mix of basic theory, contemporary literature reviews, and case studies.

Instructor(s): J. Lucy Terms Offered: Spring

Prerequisite(s): Permission of Instructor

Note(s): CHDV Grad Distribution: 2, 3

Equivalent Course(s): ANTH 47605, CHDV 41900

PSYC 41920. The Evolution of Language. 100 Units.

This course is designed to review critically some of the literature on the phylogenetic emergence of Language, in order to determine which questions have been central to the subject matter, which ones have recurred the most, and to what extent the answers to these are now better informed. The class will also review new questions such as the following: What is the probable time of the emergence of modern language(s)? Should we speak of the emergence of Language or of languages, in the plural?

Instructor(s): Salikoko Mufwene Terms Offered: Winter

Equivalent Course(s): CHDV 21920, EVOL 41920, CHDV 41920, COGS 22007, ANTH 47305, CHSS 41920, LING 21920, LING 41920

PSYC 42100. Trial Research Seminar. 100 Units.

PSYC 42100 is required of first-year Psychology graduate students. The purpose of this seminar is to assist students in formulating their trial research project.

Instructor(s): G. Norman Terms Offered: Spring

PSYC 42350. Advanced Topics in Human Neuroimaging. 100 Units.

This course will discuss advanced topics in human neuroimaging, reviewing recent papers using state-of-the-art methods, including multi-voxel pattern analysis, Big Data, connectivity analyses, and inter-subject correlations. We will discuss how these new methods fit into the current landscape of human neuroscience and support new theoretical ideas, and also conduct tutorials so students can use these methods in their own analyses.

Instructor(s): W. Bainbridge, M. Rosenberg Terms Offered: Winter

Prerequisite(s): The course will be geared towards PhD students, but open to MA students and undergraduates who receive instructor permission to enroll.

Equivalent Course(s): NSCI 23815

PSYC 43030. Introduction to Python Programming in the Behavioral Sciences. 100 Units.

This course introduces you to basic computer programming principles and their application to common problems in Psychology research such as creating simple experiments, data acquisition, and basic analysis. We will focus on the high-level programming language Python. Over a series of lectures and try-it-yourself sessions, you will learn to use Python to display stimuli and record responses, process, analyze, and plot data. The course is designed for students with little to no background in computer programming but wish to take advantage of the power it affords to ask research questions in the behavioral and biological sciences.

Instructor(s): A. Bakkour, J. Yu Terms Offered: Autumn

Prerequisite(s): Consent required for all but Psychology PhD students.

Equivalent Course(s): NSCI 23355, PSYC 23030

PSYC 43760. Sensitive Periods: How the Timing of Experience Alters Its Effect. 100 Units.

Sensitive periods are defined as phases in life when experience has the most effect on a particular brain system. Typically occurring during development, experience during sensitive periods has long-term implications for sensory processing, affective development, cognitive processes, and production of complex learned behavior such as language. We will combine an investigation of biological underpinnings with behavioral consequences of sensitive periods and ask questions such as: How are sensitive periods defined during development? Are sensitive periods for a variety of behaviors different or the same? How does experience intersect with the brain to encode and modify a sensitive period? Can we re-open sensitive periods after their normal end - and do we want to?

Instructor(s): S. London Terms Offered: Winter

Equivalent Course(s): NURB 33760, CHDV 43760

PSYC 43780. Basics of conducting EEG and ERP research. 100 Units.

EEG recordings are a popular and long-standing approach to gather information about human brain activity that are used to address questions in many areas of Psychology. In this seminar, we will cover many of the basics of conducting human EEG research, including basic principles of recordings (e.g., detection and removal of artifacts, baseline correction, filtering and averaging) along with basic analytical approaches to measuring EEG (e.g., calculating and measuring ERPs; time-frequency analyses, etc). We will also cover research that has utilized EEG signals from multiple research domains, with the aim of giving the student exposure to a wide swath of well characterized neural tools from the existing literature. Throughout the course, we will emphasize how best to design experiments that can yield robust and interpretable data and avoid the common pitfalls in using this powerful approach.

Instructor(s): E. Vogel Terms Offered: Spring

PSYC 43921. Current Topics in Working Memory. 100 Units.

This seminar will cover a broad range of topics in the literature on working memory.

Instructor(s): E. Awh Terms Offered: Winter

Prerequisite(s): We strongly advise students without a prior background in these areas to consider auditing our undergraduate course "Attention and working memory in the mind and brain."

PSYC 44000. Moral Psychology and the Anthropology of Morality. 100 Units.

Three types of questions about morality can be distinguished: (1) philosophical, (2) psychological, and (3) epidemiological. The philosophical question asks, whether and in what sense (if any) "goodness" or "rightness" are real or objective properties that particular actions possess in varying degrees. The psychological question asks, what are the mental states and processes associated with the human classification of actions as moral or immoral, ethical or unethical. The epidemiological question asks, what is the actual distribution of moral judgments across time (developmental time and historical time) and across space (for example, across cultures). In this seminar we will read classic and contemporary philosophical, psychological, and anthropological texts that address those questions.

Instructor(s): R. Shweder Terms Offered: Autumn

Prerequisite(s): Advanced undergraduates may enroll with permission of instructor

Note(s): CHDV Distribution: B, C; 3

Equivalent Course(s): CHDV 45601

PSYC 44600. Topics in Social Psychology. 100 Units.

Discussion of current topics in Social Psychology.

Instructor(s): S. Oishi, Autumn; L. Emery, Winter; X. Bai, Spring Terms Offered: Autumn Spring Winter

PSYC 44800. EEG measures of attention. 100 Units.

TBD.

Instructor(s): E. Vogel Terms Offered: Spring

PSYC 45300. When Cultures Collide: The Multicultural Challenge in Liberal Democracies. 100 Units.

Coming to terms with diversity in an increasingly multicultural world has become one of the most pressing public policy projects for liberal democracies in the early 21st century. One way to come to terms with diversity is to try to understand the scope and limits of toleration for variety at different national sites where immigration from foreign lands has complicated the cultural landscape. This seminar examines a series of legal and moral questions about the proper response to norm conflict between mainstream populations and cultural minority groups (including old and new immigrants), with special reference to court cases that have arisen in the recent history of the United States.

Instructor(s): R. Shweder Terms Offered: Winter

Prerequisite(s): Undergraduates students: 4th year standing and instructor consent only

Note(s): Subject area: Grad: 2, 3

Equivalent Course(s): CHDV 45699, GNSE 45600, KNOW 45699, ANTH 45600, HMRT 35600

PSYC 45500. Cognitive and Social Neuroscience of Aging. 100 Units.

As the baby boom generation ages, the rising prevalence of aging-related cognitive decline has become a major challenge for individuals, families and society. However, not all cognitive systems are negatively impacted by aging, and aging also causes complex social and emotional changes. How does aging affect our brains and our minds, and are these changes inevitable? This seminar provides an introduction to the scientific literature of the aging mind, focusing on both normal and pathological (e.g., Alzheimer's disease) changes in late adulthood. We will cover contemporary research from cognitive and social neuroscience perspectives. Topics include different psychological domains (e.g., attention, memory, metacognition, affective control) and applied issues (e.g., physical exercise, mental training, stereotype threat).

Instructor(s): D. Gallo Terms Offered: Winter

PSYC 46050. Principles of Data Science and Engineering for Laboratory Research. 100 Units.

The quantity of data gathered from laboratory experiments is constantly increasing. This course will explore the latest concepts, techniques and best-practice to create efficient data analysis pipelines. We will focus on the python ecosystem. By the end of the course, you are expected to be able to apply appropriate tools to streamline your own data analysis.

Instructor(s): J. Yu Terms Offered: Autumn

Prerequisite(s): Familiarity with coding in python.

Equivalent Course(s): NURB 36050, CPNS 36050

PSYC 46800. Relationship Science. 100 Units.

In 1999, Ellen Berscheid wrote that "relationships are both the foundation and the theme of the human condition." In this advanced graduate seminar, we will explore theory and research on the science of romantic relationships: what makes them work, why they can encounter challenges, and how they underlie who we are as humans. We will examine topics such as attachment, interdependence, love, self-growth, and diversity in the context of close relationships. By the end of the course, students will be knowledgeable about the state of relationship science research and able to generate original research on the topic.

Instructor(s): L. Emery Terms Offered: Autumn

PSYC 47001-47002. Language in Culture I-II.

This two-quarter course presents the major issues in linguistics of anthropological interest. These courses must be taken in sequence.

PSYC 47001. Language In Culture I. 100 Units.

The first quarter of the two-quarter Language in Culture sequence introduces a number of analytic concepts developed out of the study of "language" and its limits. We begin with the study of "interaction order" in its multifunctional complexity, teasing out its constitution through the real-time unfolding of indexical (pragmatic) and reflexive (metapragmatic) signs/functions as coherent "text." We use this attention to the dialectics of indexicality and its various implications to investigate various problematics in the philosophy of language (reference, performativity), linguistics (poetics, grammatical sense, variation, register), and sociocultural anthropology (racialization, relativity, subjectivity/identity, temporality, institutionality).

Instructor(s): Constantine Nakassis

Prerequisite(s): Consent of instructor for Undergrads

Note(s): CHDV Distribution: 5*

Equivalent Course(s): ANTH 37201, LING 31100, CHDV 37201

PSYC 47002. Language in Culture II. 100 Units.

This is the second part of a two-quarter sequence on the role of language in social life. Building on the first quarter's focus on the interaction order, this quarter explores how ideologies regiment and reflexively mediate between discursive/expressive practices of the interaction order and the wider organization of

social life. How are people's ideas about ways of speaking and modes of expression shaped by their social positions and values? And how do their ideas shape interaction and vice versa? How is difference, in language and in social life, made - and unmade? How and why are some differences persuasive as the basis for action, while other differences are ignored or erased? The course proposes that ideologies are neither true nor false, they are positioned and partial visions of the world, relying on comparison and perspective; they exploit differences in expressive features - linguistic and otherwise - to construct convincing images of people, spaces and activities in sociopolitical processes.

Instructor(s): Susan Gal Terms Offered: Winter

Prerequisite(s): Language in Culture-1

Note(s): CHDV Distribution: 5*

Equivalent Course(s): CHDV 37202, ANTH 37202, LING 31200

PSYC 48000. Proseminar in Psychology. 100 Units.

Required of first-year Department of Psychology graduate students. Department of Psychology faculty members present and discuss their research. This introduces new students to the range of research areas in the department.

Instructor(s): X. Bai Terms Offered: Autumn

PSYC 48001-48002-48003. Mind and Biology Proseminar I-II-III.

Seminar series at the Institute for Mind and Biology meets three to four times per quarter. Sign up for three quarters; receive credit at the end of Spring Quarter.

PSYC 48001. Mind and Biology Proseminar I. 000 Units.

Students receive credit in spring quarter after attending 3 quarters of seminars.

Instructor(s): S. Shevell Terms Offered: Autumn

PSYC 48002. Mind and Biology Proseminar 2. 000 Units.

Seminar series at the Institute for Mind and Biology meets three to four times per quarter. Sign up for three quarters; receive credit at the end of Spring Quarter.

Instructor(s): S. Shevell Terms Offered: Winter

PSYC 48003. Mind and Biology Proseminar 3. 100 Units.

Seminar series at the Institute for Mind and Biology meets three to four times per quarter. Sign up for three quarters; receive credit at the end of Spring Quarter.

Instructor(s): S. Shevell Terms Offered: Spring

PSYC 49700. Readings: Psychology. 100 Units.

PSYC 49800. Research: Psychology. 300.00 Units.

PSYC 70000. Advanced Study: Psychology. 300.00 Units.

Advanced Study: Psychology

