

PSYCHOLOGY AND NEUROSCIENCE

The Department of Psychology and Neuroscience at the University of Colorado Boulder offers a PhD degree with five subplans:

- Behavioral, Psychiatric, and Statistical Genetics
- Behavioral Neuroscience
- Clinical Psychology
- Cognitive Psychology/Cognitive Neuroscience
- Social Psychology

For detailed information about each field of study, visit the department's Graduate Program Subplans (<https://www.colorado.edu/psych-neuro/graduate-programs/graduate-program-areas/>) webpage.

Note: The department does not offer a terminal master's degree program.

Course codes for this program are PSYC and NRSC.

Doctoral Degrees

- Neuroscience - Doctor of Philosophy (PhD) (<https://catalog.colorado.edu/graduate/colleges-schools/arts-sciences/programs-study/psychology-neuroscience/neuroscience-doctor-philosophy-phd/>)
- Psychology - Doctor of Philosophy (PhD) (<https://catalog.colorado.edu/graduate/colleges-schools/arts-sciences/programs-study/psychology-neuroscience/psychology-doctor-philosophy-phd/>)

Faculty

While many faculty teach both undergraduate and graduate students, some instruct students at the undergraduate level only. For more information, contact the faculty member's home department.

Allen, David (https://experts.colorado.edu/display/fisid_114466/)
Teaching Associate Professor; PhD, University of California, Los Angeles

Alpern, Herbert P.
Professor Emeritus

Arch, Joanna (https://experts.colorado.edu/display/fisid_147415/)
Professor; PhD, University of California, Los Angeles

Bachtell, Ryan (https://experts.colorado.edu/display/fisid_146084/)
Associate Professor; PhD, Oregon Health Science University

Banich, Marie (https://experts.colorado.edu/display/fisid_120646/)
Professor; PhD, University of Chicago

Baratta, Michael V. (https://experts.colorado.edu/display/fisid_149599/)
Assistant Professor; PhD, University of Colorado Boulder

Barth, Daniel
Professor Emeritus

Benoit, Roland
Associate Professor; PhD, University College London

Bidwell, Cinnamon (https://experts.colorado.edu/display/fisid_155117/)
Associate Professor; PhD, University of Colorado Boulder

Blair, Irene (https://experts.colorado.edu/display/fisid_107261/)
Professor; PhD, Yale University

Blechman, Elaine A.
Professor Emerita

Bourne, Lyle E. Jr.
Professor Emeritus

Bryan, Angela (https://experts.colorado.edu/display/fisid_115216/)
Professor; PhD, Arizona State University

Campeau, Serge (https://experts.colorado.edu/display/fisid_115395/)
Professor; PhD, Yale University

Carter Carston, Ronald McKell (https://experts.colorado.edu/display/fisid_154921/)
Assistant Professor; PhD, California Institute of Technology

Cartwright, Desmond S.
Professor Emeritus

Collins, Allan C.
Professor Emeritus

Colunga, Eliana (https://experts.colorado.edu/display/fisid_129477/)
Associate Professor; PhD, Indiana University Bloomington

Correll, Joshua (https://experts.colorado.edu/display/fisid_151728/)
Associate Professor; PhD, University of Colorado Boulder

Cowell, Rosie
Associate Professor; PhD, University of Oxford

Cummings, Andrew (https://experts.colorado.edu/display/fisid_174362/)
Teaching Assistant Professor; PhD, University of Nevada Las Vegas

Curran, Timothy (https://experts.colorado.edu/display/fisid_118454/)
Professor Emeritus; PhD, University of Oregon

Curtis, Ryan (https://experts.colorado.edu/display/fisid_164483/)
Teaching Associate Professor; PhD, University of Maryland College Park Campus

Day, Heidi E.W. (https://experts.colorado.edu/display/fisid_116632/)
Teaching Professor of Distinction; PhD, University of Cambridge

Dimidjian, Sona (https://experts.colorado.edu/display/fisid_140084/)
Professor; PhD, University of Washington

Donaldson, Zoe (https://experts.colorado.edu/display/fisid_157087/)
Associate Professor; PhD, Emory University

Friedman, Naomi P. (https://experts.colorado.edu/display/fisid_109519/)
Associate Professor; PhD, University of Colorado Boulder

Grotzinger, Andrew (https://experts.colorado.edu/display/fisid_167222/)
Assistant Professor; PhD, University of Texas at Austin

Gruber, June L. (https://experts.colorado.edu/display/fisid_153634/)
Associate Professor; PhD, University of California, Berkeley

Harvey, Lewis Orvis (https://experts.colorado.edu/display/fisid_101173/)
Professor Emeritus

Healy, Alice F. (https://experts.colorado.edu/display/fisid_100418/)
Distinguished Professor Emeritus; PhD, The Rockefeller University

Hernandez, Theresa D. (https://experts.colorado.edu/display/fisid_102953/)
Professor; PhD, University of Texas at Austin

Hewitt, John K. (https://experts.colorado.edu/display/fisid_101035/)
Professor; PhD, University of London

Hill, Karl G. (https://experts.colorado.edu/individual/fisid_159803/)
Professor; PhD, Brandeis University

Huber, David
Professor; PhD, University of Indiana

Huibregtse Ketels, Brooke (https://experts.colorado.edu/display/fisid_159929/)
Teaching Assistant Professor; PhD, University of Colorado Boulder

Ito, Tiffany (https://experts.colorado.edu/display/fisid_113066/)
Professor; PhD, University of Southern California

Jessor, Richard
Professor Emeritus

Jones, Matthew (https://experts.colorado.edu/display/fisid_144611/)
Professor; PhD, University of Michigan Ann Arbor

Judd, Charles M.
Distinguished Professor Emeritus

Kaiser, Roselinde H. (https://experts.colorado.edu/display/fisid_164070/)
Associate Professor; PhD, University of Colorado Boulder

Kaufmann, Vyga G. (https://experts.colorado.edu/display/fisid_151089/)
Teaching Assistant Professor; PhD, University of Colorado Boulder

Keller, Matthew C. (https://experts.colorado.edu/display/fisid_144507/)
Professor; PhD, University of Michigan Ann Arbor

Kilimnik, Chelsea (https://experts.colorado.edu/display/fisid_169111/)
Assistant Professor; PhD, University of Texas at Austin

Kim, Albert E. (https://experts.colorado.edu/display/fisid_143740/)
Associate Professor; PhD, University of Pennsylvania

King, D. Brett (https://experts.colorado.edu/display/fisid_103815/)
Teaching Professor of Distinction; PhD, Colorado State University

Kintsch, Walter
Professor Emeritus

Knight, Erik (https://experts.colorado.edu/individual/fisid_167412/)
Assistant Professor; PhD, University of Oregon

Kodish, Tamar
Assistant Professor; PhD, University of California Los Angeles

Maier, Steven F.
Distinguished Professor; PhD, University of Pennsylvania

McClelland, Gary H.
Professor Emeritus

Miyake, Akira (https://experts.colorado.edu/display/fisid_107321/)
Professor; PhD, Carnegie Mellon University

Molas, Susanna
Assistant Professor; PhD, Pompeu Fabra University

Olson, Richard
Professor Emeritus

Park, Bernadette (https://experts.colorado.edu/display/fisid_103732/)
Professor Emeritus; PhD, Northwestern University

Pedersen, Eric (https://experts.colorado.edu/display/fisid_159278/)
Assistant Professor; PhD, University of Miami

Pierotti, Chelsea (https://experts.colorado.edu/individual/fisid_155551/)
Teaching Assistant Professor; PhD, University of Northern Colorado

Pietri, Evava
Associate Professor; PhD, Ohio State University

Pittman Wagers, Tina (https://experts.colorado.edu/display/fisid_117148/)
Emerita Teaching Professor of Distinction; PsyD, University of Denver

Polson, Peter G.
Professor Emeritus

Ramirez, Albert
Associate Professor Emeritus

Reynolds, Chandra
Professor; PhD, University of Southern California

Rhee, Soo H. (https://experts.colorado.edu/display/fisid_123401/)
Associate Professor; PhD, Emory University

Richardson, Emily (https://experts.colorado.edu/display/fisid_115007/)
Clinical Associate Professor; PhD, University of Iowa

Root, David H. (https://experts.colorado.edu/display/fisid_159444/)
Assistant Professor; PhD, Rutgers University

Rudy, Jerry W.
Professor Emeritus; PhD, University of Virginia

Saddoris, Michael Paul (https://experts.colorado.edu/display/fisid_152979/)
Assistant Professor; PhD, Johns Hopkins University

Smutzler, Natalie (https://experts.colorado.edu/individual/fisid_113933/)
Teaching Associate Professor; PhD, Indiana University Bloomington

Spencer, Robert L. (https://experts.colorado.edu/display/fisid_104362/)
Professor; PhD, University of Arizona

Stallings, Michael C. (https://experts.colorado.edu/display/fisid_108745/)
Professor; PhD, University of Southern California

Stratford, Jennifer M. (https://experts.colorado.edu/display/fisid_157880/)
Teaching Associate Professor; PhD, Florida State University

Taylor, Ronald G.
Professor Emeritus

Van Boven, Leaf D. (https://experts.colorado.edu/display/fisid_126291/)
Professor; PhD, Cornell University

Watkins, Linda R. (https://experts.colorado.edu/display/fisid_101513/)
Distinguished Professor; PhD, Virginia Commonwealth University

Wehner, Jeanne M.
Professor Emerita

Wertheimer, Michael
Professor Emeritus

Whisman, Mark (https://experts.colorado.edu/display/fisid_113391/)
Professor; PhD, University of Washington

Willcutt, Erik G. (https://experts.colorado.edu/display/fisid_113861/)
Professor; PhD, University of Denver

Wilson, James R.
Professor Emeritus

Yuan, Lei (https://experts.colorado.edu/individual/fisid_167699/)
Assistant Professor; PhD, Northwestern University

Courses

Neuroscience

NRSC 5015 (3) Affective Neuroscience

Experiencing and learning from affect—emotional value—is a fundamental part of the human experience. When people started thinking of brains as computers, research on emotion fell by the wayside. Recently however, this has changed, and there is an explosion of work on the brain mechanisms of affective value. Covers recent advances in understanding the emotional brain.

Equivalent - Duplicate Degree Credit Not Granted: NRSC 4015

Requisites: Restricted to Psychology and Neuroscience (PSYC NRSC) graduate students.

NRSC 5032 (3) Neurobiology of Learning and Memory

Provides a comprehensive treatment of how the brain acquires, stores, and retrieves memories. To do this we will consider (a) the methods used to address these issues, (b) what we know about how brain systems are organized to support memories of different types, and (c) the synaptic mechanisms that are involved.

Equivalent - Duplicate Degree Credit Not Granted: NRSC 4032

Requisites: Restricted to Psychology and Neuroscience (PSYC NRSC) graduate students.

Additional Information: Departmental Category: Biological

NRSC 5072 (3) Clinical Neuroscience: A Clinical and Pathological Perspective

Provides a review of the anatomy and physiology of the nervous system and then explores how alterations in these systems can result in neurologic or psychiatric disorders. Emphasizes pathological neuroanatomy, neurophysiology and neuropharmacology, which is essential for understanding problems related to health and disease.

Equivalent - Duplicate Degree Credit Not Granted: NRSC 4072

Requisites: Restricted to Psychology and Neuroscience (PSYC NRSC) graduate students.

Additional Information: Departmental Category: Biological

NRSC 5082 (3) Neural Circuits of Learning and Decision Making

Provides an in-depth survey of the neural mechanisms of learning, motivated behavior and decision making. Analysis will focus on the interaction of neural circuits underlying these processes with particular attention to the cellular, molecular and information-processing aspects of identified pathways and considered into the context learning-based and neuroeconomic models of choice.

Equivalent - Duplicate Degree Credit Not Granted: NRSC 4082

Requisites: Restricted to Psychology and Neuroscience (PSYC NRSC) graduate students.

Grading Basis: Letter Grade

NRSC 5092 (3-4) Behavioral Neuroendocrinology

Provides an introduction to neuroendocrinology with a focus on the interaction between hormones and brain function. In addition to attending and meeting all the requirements for the lecture portion of the course, graduate students meet for an additional hour each week to discuss in depth behavioral neuroendocrinology relevant research articles.

Equivalent - Duplicate Degree Credit Not Granted: NRSC 4092

Requisites: Restricted to Psychology and Neuroscience (PSYC NRSC) graduate students.

Additional Information: Departmental Category: Biological

NRSC 5100 (3) Introduction to Neuroscience I

This first course in the year-long sequence of introduction to neuroscience provides an intensive introduction to the principles of neuroscience, covering detailed neuroanatomy, physiology, neurophysiology, neurochemical and developmental characteristics of the central nervous system. Structure-function relationships in sensory and motor systems are then explored with neuroanatomical and electrophysiological perspectives.

Repeatable: Repeatable for up to 5.00 total credit hours.

Requisites: Restricted to Psychology and Neuroscience (PSYC NRSC) graduate students and students in the interdepartmental neuroscience program.

NRSC 5110 (3) Introduction to Neuroscience II

Provides an intensive interdisciplinary introduction to the principles of neuroscience. It is a sequel to NRSC 5100. Provides a detailed overview of neurochemistry, neurodevelopment, neuromotor control, neurogenetics, and cognitive neuroscience. Open to undergraduates with instructor permission.

Requisites: Requires a prerequisite course of NRSC 5100 or NRSC 4052 or PSYC 4052 (minimum grade C-). Restricted to Psychology and Neuroscience (PSYC NRSC) graduate students and students in the interdepartmental neuroscience program.

NRSC 5132 (3) Neuropharmacology

Study of drug action within the central nervous system. This course is designed to provide a fundamental understanding of the neurobiological and neurochemical mechanisms of drug action. Topics covered include the following: 1) principles of pharmacology; 2) brain neurotransmitter systems; 3) biochemical basis of psychiatric disorders and their pharmacological treatment.

Equivalent - Duplicate Degree Credit Not Granted: NRSC 4132

Repeatable: Repeatable for up to 6.00 total credit hours. Allows multiple enrollment in term.

Requisites: Restricted to Psychology and Neuroscience (PSYC NRSC) graduate students.

Additional Information: Departmental Category: Biological

NRSC 5262 (3) Mammalian Neuroanatomy

Provides a detailed overview of peripheral and central nervous system connective neuroanatomy targeted at delineating functional sensory, motor and motivational systems and the control of behavior and cognition. Emphasizes histological, anatomical and functional techniques employed in investigations of the nervous system. Formerly PSYC 5262.

Requisites: Requires a prerequisite course of NRSC 2100 or NRSC 5100 or NRSC 4052 or PSYC 4052 (minimum grade C-). Restricted to Psychology and Neuroscience (PSYC NRSC) graduate students.

Additional Information: Departmental Category: Biological

NRSC 5545 (3) Neurobiology of Addiction

Covers an intensive survey and synthesis of recent findings contributing to our understanding of the neurobiological basis of addiction. Analysis of both drug and behavioral addictions will be made at the molecular, cellular and neurocircuitry levels and synthesized into models utilizing common themes between various addictions and contributing pathologies.

Equivalent - Duplicate Degree Credit Not Granted: NRSC 4545

Requisites: Restricted to Psychology and Neuroscience (PSYC NRSC) graduate students.

NRSC 5911 (3) Teaching of Neuroscience

Offers a rich experience for students to develop and organize curriculum to complement the Neuroscience core courses. Offers a valuable teaching experience utilizing computational modeling to simulate experimental results. Any Neuroscience curriculum course, such as Intro to Neuroscience I or II, Neuropharmacology, Neurobiology of Learning and Memory or Behavioral Neuroscience may be appropriate.

Requisites: Restricted to Psychology and Neuroscience (PSYC NRSC) graduate students.

NRSC 6000 (1-3) Introduction to Laboratory Methods

Introduces methodology and techniques used in biological research. Designed as a tutorial between a few students and one faculty member. Students are expected to read original research papers, discuss findings, and to gain training in techniques necessary to plan and execute experiments in selected areas. These include but are not limited to, for example, surgical approaches, behavioral techniques, molecular biology approaches, and imaging.

Repeatable: Repeatable for up to 15.00 total credit hours. Allows multiple enrollment in term.

Requisites: Restricted to Behavioral Neuroscience program graduate students.

Grading Basis: Letter Grade

NRSC 6100 (2) Advances in Neuroscience Seminar

Designed for beginning graduate students interested in neuroscience. Students read, discuss, and evaluate the primary literature on a number of current topics in neuroscience as well as attend the seminar program in neuroscience.

Repeatable: Repeatable for up to 8.00 total credit hours.

Requisites: Restricted to Psychology and Neuroscience (PSYC NRSC) graduate students.

NRSC 6602 (1-3) Behavioral Neuroscience Professional Skills Development

Enrolled graduate students in the behavioral neuroscience program will be asked to prepare, present and receive feedback on scientific presentations of their own research or from review of a current research project.

Repeatable: Repeatable for up to 14.00 total credit hours. Allows multiple enrollment in term.

Requisites: Restricted to Psychology and Neuroscience (PSYC NRSC) graduate students.

Grading Basis: Letter Grade

NRSC 7102 (1-3) Topics in Neuroscience

Advanced seminar dealing with different specialized topics in neuroscience. Instructor consent required for students outside of the department.

Repeatable: Repeatable for up to 9.00 total credit hours. Allows multiple enrollment in term.

Requisites: Requires a prerequisite course of NRSC 5110 (minimum grade D-). Restricted to Psychology and Neuroscience (PSYC NRSC) graduate students.

NRSC 7152 (3) Special Topics in Neuroscience V

Advanced seminar dealing with several different specialized topics in Neuroscience.

Repeatable: Repeatable for up to 9.00 total credit hours. Allows multiple enrollment in term.

Requisites: Restricted to Psychology and Neuroscience (PSYC NRSC) graduate students.

Psychology**PSYC 5052 (4) Behavioral Neuroscience**

This advanced course the anatomy and physiology of the central nervous system in detail, and applies that understanding to the visual, auditory, and sensorimotor systems, demonstrating how the anatomy and physiology of the nervous system can be used to explain behavior. The laboratory uses live animals and computer simulations.

Equivalent - Duplicate Degree Credit Not Granted: PSYC 4052 and NRSC 4052 and NRSC 5052

Requisites: Restricted to Psychology and Neuroscience (PSYC NRSC) graduate students.

Additional Information: Departmental Category: Biological

PSYC 5082 (2-3) Seminar: Biological Psychology

Special topics concerning biological bases of behavior.

Repeatable: Repeatable for up to 3.00 total credit hours.

Requisites: Requires a prerequisite course of PSYC 4052 (minimum grade D-). Restricted to Psychology and Neuroscience (PSYC NRSC) graduate students.

Additional Information: Departmental Category: Biological

PSYC 5102 (3) Introduction to Behavioral Genetics

Provides introduction to basic principles of genetics in the study of behavior, methods used to examine the influences of genes and environment on behavior and interpretation of studies using these methods.

Requisites: Restricted to Behavioral, Psychiatric and Statistical Genetics PhD students.

Additional Information: Departmental Category: Biological

PSYC 5112 (3) Concepts in Behavioral Genetics

Examines selected topics in greater detail than is possible in the comprehensive undergraduate course in behavioral genetics (PSYC 3102). Topics covered may include inheritance of behavioral characteristics from perspectives of pharmacogenetics, transmission genetics, biochemical genetics, and evolutionary genetics.

Repeatable: Repeatable for up to 9.00 total credit hours. Allows multiple enrollment in term.

Requisites: Restricted to Behavioral, Psychiatric and Statistical Genetics PhD students.

Additional Information: Departmental Category: Biological

PSYC 5122 (3) Quantitative Genetics

Surveys principles of genetics of quantitative characteristics. Topics include gene frequencies, effects of mutation, migration, and selection. Also looks at correlations among relatives, heritability, inbreeding, crossbreeding, and selective breeding.

Requisites: Restricted to Behavioral, Psychiatric and Statistical Genetics PhD students.

Additional Information: Departmental Category: Biological

PSYC 5131 (3) Affective Science

Core graduate course on affective science and fulfills APA Cognitive and Affective Aspects of Behavior Requirement. Introduces students to a diverse array of theoretical and empirical issues related to the study of human emotion. Evolutionary theories of emotions; cognitive and behavioral aspects of emotion; neurobiological mechanisms; development of emotion; and psychopathology and emotion.

Requisites: Restricted to Clinical Psychology PhD students.

Additional Information: Departmental Category: General

PSYC 5145 (4) Advanced Cognitive Psychology

Advanced course in human cognitive processes. Covers key aspects of cognition, such as perception, attention, learning, memory, language and thinking. Discusses major theories and ideas in terms of the research they have inspired. Emphasis varies with instructor. One lab per week and a research project is required.

Equivalent - Duplicate Degree Credit Not Granted: PSYC 4145

Requisites: Restricted to Psychology and Neuroscience (PSYC NRSC) graduate students.

Additional Information: Departmental Category: Experimental

PSYC 5175 (4) Computational Cognitive Neuroscience

Introduction to cognitive neuroscience (how the brain gives rise to thought) using computer simulations based on the neural networks of the brain. Covers a full range of cognitive phenomena including perception and attention, learning and memory, language, and higher-level cognition based on both large-scale cortical neuroanatomy and detailed properties of cortical neural networks. One lab per week.

Equivalent - Duplicate Degree Credit Not Granted: PSYC 4175

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: Experimental

PSYC 5200 (3) Physiological Genetics and Genomics

Covers fundamental concepts in molecular genetics/genomics with physiological applications. Topics include structure and function of nucleic acids, genome structure, genetic and genomic research tools, methods for identifying disease-causing mutations, regulation of gene expression, pharmacogenetics, gene therapy and ethical issues in modern genomics. First course of a 3-course series recommended for IBG students. Includes a recitation section.

Equivalent - Duplicate Degree Credit Not Granted: IPHY 4200 and IPHY 5200

Requisites: Restricted to Integrative Physiology (IPHY or C-IPHY) or Psychology (PSYC) graduate students only.

Additional Information: Departmental Category: General

PSYC 5232 (2) Molecular Genetics and Physiology

Covers fundamental mechanisms of gene action, including genome structure and regulation of gene expression. Discusses molecular techniques used to examine human genetic diseases. Emphasizes genetic diseases with behavioral, neurologic, and physiologic abnormalities.

Requisites: Requires a prerequisite course of PSYC 5200 or IPHY 5200 (minimum grade D-). Restricted to Behavioral, Psychiatric and Statistical Genetics PhD students. Restricted to graduate students only.

Additional Information: Departmental Category: Biological

PSYC 5242 (3) Biometrical Methods in Behavioral Genetics

Studies development of structural models appropriate to behavioral genetics and the estimation procedures necessary for their application.

Requisites: Restricted to Psychology and Neuroscience (PSYC NRSC) graduate students.

Additional Information: Departmental Category: Biological

PSYC 5423 (3) Research Problems in Clinical Psychology

Provides an overview of fundamental research methods relevant to clinical psychology, including literature synthesis, hypothesis formulation and study design, measure selection, and data analysis. Students will gain specific experience writing scientific papers and funding proposals.

Requisites: Restricted to Clinical Psychology PhD students.

Additional Information: Departmental Category: Clinical

PSYC 5433 (3) Adult Psychopathology

Intensively surveys major theories, research findings, and behavioral characteristics associated with deviant reaction patterns.

Requisites: Restricted to Clinical Psychology PhD students.

Additional Information: Departmental Category: Clinical

PSYC 5453 (3) Developmental Psychopathology

Examines the development of psychopathology across the lifespan, including etiological influences, neurobiological correlates, symptom presentation, and clinical diagnosis and intervention.

Requisites: Restricted to Clinical Psychology PhD students.

Additional Information: Departmental Category: Clinical

PSYC 5541 (1-6) Special Topics in Psychology

Studies and analyzes special interest topics from the broad and diversified field of psychology. Particular section content is determined by instructor. Instructor consent required for students outside of the department.

Repeatable: Repeatable for up to 6.00 total credit hours. Allows multiple enrollment in term.

Requisites: Restricted to Psychology and Neuroscience (PSYC NRSC) graduate students.

Additional Information: Departmental Category: General

PSYC 5606 (3) Proseminar: Social-Personality Psychology

Provides a thorough introduction to methods and theories in social psychology concerned with topics such as the self, social cognition, judgment and decision making, attitude formation and change, small group processes, inter-group relations, health and social psychology, and others.

Repeatable: Repeatable for up to 12.00 total credit hours. Allows multiple enrollment in term.

Requisites: Restricted to Social Psychology PhD students.

Additional Information: Departmental Category: Social

PSYC 5656 (3) Advanced Graduate Research Methods

Provides training in the philosophical roots of empirical research, inference of causality, internal and external validity and reliability. These topics will be covered as they relate to a range of research designs including passive observational, experimental, quasi-experimental, meta-analytic and longitudinal. Additional topics include statistical inference and research ethics.

Requisites: Restricted to Social Psychology PhD students.

Grading Basis: Letter Grade

Additional Information: Departmental Category: Social

PSYC 5665 (2) Perception and Attention Proseminar

Required proseminar for students in the Cognitive Psychology Ph.D. program. Provides an introduction to current thinking about sensory and perceptual processing, object recognition and attention. Students will read peer-reviewed journal articles and make class presentations on appropriate topics, including methods of data collection and analysis.

Repeatable: Repeatable for up to 4.00 total credit hours. Allows multiple enrollment in term.

Requisites: Restricted to Psychology and Neuroscience (PSYC NRSC) graduate students.

Additional Information: Departmental Category: Experimental

PSYC 5685 (2-3) Research Methods Proseminar

Main topic is research methods in cognitive psychology, with an emphasis on experimental methods. Skills and knowledge will be gained that are necessary to A) critically evaluate existing research and B) design, conduct, analyze and write up experimental studies. Required for graduate students in Cognitive Psychology.

Repeatable: Repeatable for up to 4.00 total credit hours. Allows multiple enrollment in term.

Requisites: Restricted to Psychology and Neuroscience (PSYC NRSC) graduate students.

Additional Information: Departmental Category: Experimental

PSYC 5695 (2) Memory Proseminar

Provides beginning Ph.D. students with a basic introduction to (primarily human) memory research. One of the six required proseminar for students in the Cognitive Psychology Ph.D. program. Includes consideration of experimental, theoretical, behavioral and cognitive neuroscience perspectives on memory. Instructor consent required for students outside of the department.

Requisites: Restricted to Psychology and Neuroscience (PSYC NRSC) graduate students.

Additional Information: Departmental Category: Experimental

PSYC 5741 (4) General Statistics 1

is part 1 of the 2-semester course sequence, PSYC 5741 and PSYC 5751.

This course surveys probability and statistics in psychology, using the general linear model as a basic "recipe" for data analysis. After introducing a few powerful concepts that enable a range of questions to be asked, the course focuses on building and interpreting models using standard regression software. Restricted to Psychology and Neuroscience (PSYC & NRSC) graduate students. Instructor consent required for students outside of the department.

Requisites: Restricted to Psychology and Neuroscience (PSYC NRSC) graduate students.

Additional Information: Departmental Category: General

PSYC 5751 (4) General Statistics 2

is part 2 of the 2-semester course sequence, PSYC 5741 and PSYC 5751.

This course surveys probability and statistics in psychology, using the general linear model as a basic "recipe" for data analysis. After introducing a few powerful concepts that enable a range of questions to be asked, the course focuses on building and interpreting models using standard regression software.

Requisites: Restricted to Psychology and Neuroscience (PSYC NRSC) graduate students.

Additional Information: Departmental Category: General

PSYC 5761 (3) Structural Equation Modeling

Provides training in the use of structural equation modeling, a class of analytic techniques that include the estimation of unobserved, or latent, constructs and an estimation of relationships among latent constructs.

Requisites: Restricted to Psychology and Neuroscience (PSYC NRSC) graduate students.

Recommended: Prerequisite successful completion of graduate level statistics.

Additional Information: Departmental Category: General

PSYC 5771 (3) Bayesian Data Analysis

This course is a practical introduction to using Bayesian methods to analyze data in R. After we develop our general Bayesian approach, with an emphasis on simulation rather than calculus, we will focus on applications from regression basics to advanced multilevel models. Students outside of the department may contact the instructor for permission to enroll.

Requisites: Requires prerequisite courses of PSYC 5741 and PSYC 5751 (min grade C-). Restricted to Psychology and Neuroscience (PSYC NRSC) graduate students.

PSYC 5815 (2) Language Proseminar

Introduction to research on human language. A required proseminar for Cognitive Psychology Ph.D. students. Covers research at the cognitive, neural, and computational levels. Addresses phenomena at the levels of phonology, grammar, and meaning. Emphasizes interrelationships between language and other domains of cognition (perception, memory, executive function).

Repeatable: Repeatable for up to 4.00 total credit hours. Allows multiple enrollment in term.

Requisites: Restricted to Psychology and Neuroscience (PSYC NRSC) graduate students.

Additional Information: Departmental Category: Experimental

PSYC 5825 (2) Executive Function Proseminar

Provides beginning Ph.D. students with an introduction to the study of executive functions. Required proseminar for students in the Cognitive Psychology Ph.D. program. Includes consideration of working memory, inhibition, multi-tasking, monitoring, selection, lifespan changes and social/clinical applications at the cognitive, neural and computational levels.

Requisites: Restricted to Psychology and Neuroscience (PSYC NRSC) graduate students.

Additional Information: Departmental Category: Experimental

PSYC 5835 (2) Thinking Proseminar

Provides beginning Ph.D. students with a basic introduction to research on complex human cognition, including reasoning, problem solving, decision making, analogy, concept learning and knowledge representation. Includes consideration of theoretical, behavioral and cognitive neuroscience perspectives. One of six proseminar modules required of students in the Cognitive Psychology Ph.D. program.

Requisites: Restricted to Psychology and Neuroscience (PSYC NRSC) graduate students.

Additional Information: Departmental Category: Experimental

PSYC 6200 (3) Issues and Methods in Cognitive Science

Interdisciplinary introduction to cognitive science, examining ideas from cognitive psychology, philosophy, education, and linguistics via computational modeling and psychological experimentation. Includes philosophy of mind; learning; categorization; vision and mental imagery; consciousness; problem solving; decision making, and game-theory; language processing; connectionism. No background in computer science will be presumed.

Equivalent - Duplicate Degree Credit Not Granted: CSCI 6402 and EDUC 6504 and LING 6200 and PHIL 6310 and SLHS 6402

Requisites: Restricted to graduate students only.

Additional Information: Departmental Category: General

PSYC 6603 (1) Professional Issues in Clinical Psychology

Covers a range of topics important for professional development in clinical psychology, including preparation and delivery of research presentations, preparation of grant proposals/manuscripts and practicum experience (i.e., interviewing and assessment, treatment planning, intervention and documentation). Intended to prepare students for careers as research scientists and clinicians. Instructor consent required.

Repeatable: Repeatable for up to 10.00 total credit hours.

Requisites: Restricted to Clinical Psychology PhD students.

Additional Information: Departmental Category: Clinical

PSYC 6605 (1) Cognitive Psychology Research Update

Provides summaries of current research by graduate students and faculty members in the Cognitive Psychology program in the Department of Psychology and Neuroscience. Professional Development issues relevant to cognitive psychologists will also be discussed. Graduate students in all programs and advanced undergraduates welcome with instructor consent.

Repeatable: Repeatable for up to 12.00 total credit hours. Allows multiple enrollment in term.

Requisites: Restricted to Psychology (PSYC) and Neuroscience (NRSC) PhD Students only.

PSYC 6606 (1) Professional Issues in Social Psychology

Covers a range of topics important for professional development in social psychology, including preparation and delivery of research presentations, preparation of grant proposals and manuscripts, and peer review of manuscripts. Intended to prepare students for careers as research scientists.

Repeatable: Repeatable for up to 6.00 total credit hours.

Requisites: Restricted to Social Psychology PhD students.

Additional Information: Departmental Category: Social

PSYC 6761 (3) Topics in Advanced Structural Equations Modeling

Covers topics in advanced structural equation modeling, including modeling with nonlinear observed variables, latent variable interactions, longitudinal models, mixture models and transition analysis. Other topics will be covered by request.

Requisites: Restricted to Psychology and Neuroscience (PSYC NRSC) graduate students.

Recommended: Prerequisite PSYC 5761.

Additional Information: Departmental Category: General

PSYC 6831 (2) Interdisciplinary Social Science Professional Socialization

Trains graduate students and provides professional socialization in interdisciplinary social science research. Open to all interested students, with programming provided by the Institute of Behavioral Science. Sessions include IBS-housed colloquia and workshops in professional socialization, technological tools, interdisciplinary research, ethics, grant writing, etc. Students workshop and submit a research paper.

Equivalent - Duplicate Degree Credit Not Granted: SOCY 6851 and PSCI 6851

Repeatable: Repeatable for up to 4.00 total credit hours.

Requisites: Restricted to graduate students only.

PSYC 6841 (1-3) Independent Study

Repeatable: Repeatable for up to 7.00 total credit hours. Allows multiple enrollment in term.

Additional Information: Departmental Category: General

PSYC 6911 (1-3) Research Practicum

Department consent required to enroll.

Repeatable: Repeatable for up to 18.00 total credit hours.

Additional Information: Departmental Category: General

PSYC 6941 (1-3) Master's Candidate for Degree

Repeatable: Repeatable for up to 7.00 total credit hours. Allows multiple enrollment in term.

Grading Basis: Pass/Fail

PSYC 6951 (1-6) Master's Thesis

Repeatable: Repeatable for up to 6.00 total credit hours. Allows multiple enrollment in term.

Additional Information: Departmental Category: General

PSYC 7012 (1-3) Research in Behavioral Genetics

Individual research projects.

Repeatable: Repeatable for up to 7.00 total credit hours. Allows multiple enrollment in term.

Requisites: Restricted to Behavioral, Psychiatric and Statistical Genetics PhD students.

Additional Information: Departmental Category: Biological

PSYC 7102 (2-3) Seminar: Behavioral Genetics

Intensive study of selected topics in behavioral genetics. Emphasizes recent research. Attention to both human and animal studies. Instructor consent required for students outside of the Behavioral, Psychiatric, and Statistical Genetics program.

Repeatable: Repeatable for up to 12.00 total credit hours. Allows multiple enrollment in term.

Requisites: Restricted to Behavioral, Psychiatric and Statistical Genetics PhD students.

Additional Information: Departmental Category: Biological

PSYC 7215 (3) Seminar: Experimental Psychology

Advanced seminar dealing with different specialized topics, at the discretion of the instructor, in different years. Topics chosen are within the broad range of experimental psychology.

Repeatable: Repeatable for up to 9.00 total credit hours. Allows multiple enrollment in term.

Requisites: Restricted to Psychology and Neuroscience (PSYC NRSC) graduate students.

Additional Information: Departmental Category: Experimental

PSYC 7291 (3) Multivariate Analysis

Familiarizes students with scientific concepts, matrix theory, and computer techniques of multivariate analyses for psychological research. Topics include cluster and factor analysis, multiple regression, and discriminant functions. Emphasizes research technology rather than mathematical theory.

Requisites: Restricted to Psychology and Neuroscience (PSYC NRSC) graduate students.

Additional Information: Departmental Category: General

PSYC 7315 (2) Advanced Research Seminar on Human Memory

Addresses topics in the experimental psychology of human memory. Specific content varies from semester to semester. Both theoretical issues and contemporary empirical work will be reviewed. Each student will be required to engage in laboratory work outside of class, which will include an original experiment.

Requisites: Restricted to Psychology and Neuroscience (PSYC NRSC) graduate students.

Additional Information: Departmental Category: Experimental

PSYC 7415 (2) Cognitive Science Research Applications Seminar 1

Independent, interdisciplinary research project in cognitive science for advanced graduate students pursuing a joint PhD in an approved core discipline and cognitive science. Research projects integrate at least two areas within the cognitive sciences: psychology, computer science, linguistics, education, philosophy. Students need commitments from two mentors for their project.

Equivalent - Duplicate Degree Credit Not Granted: CSCI 7412 and EDUC 6506 and LING 7415 and PHIL 7415 and SLHS 7418

Requisites: Requires a prerequisite course of CSCI 6402 or EDUC 6504 or LING 6200 or PHIL 6310 or PSYC 6200 (minimum grade B). Restricted to graduate students only.

Recommended: Prerequisite EDUC 6505.

Additional Information: Departmental Category: Experimental

PSYC 7425 (2) Cognitive Science Research Applications Seminar 2

Independent, interdisciplinary research project in cognitive science for advanced graduate students pursuing a joint PhD in an approved core discipline and cognitive science. Research projects integrate at least two areas within the cognitive sciences: psychology, computer science, linguistics, education, philosophy. Students need commitments from two mentors for their project.

Equivalent - Duplicate Degree Credit Not Granted: CSCI 7422 and EDUC 6516 and LING 7425 and PHIL 7425 and SLHS 7428

Requisites: Requires a prerequisite course of LING 7415 or PSYC 7415 or CSCI 7412 or EDUC 6506 (minimum grade B). Restricted to graduate students only.

Additional Information: Departmental Category: Experimental

PSYC 7536 (1-3) Personality and Social Psychology

Selected topics in the area of social-personality psychology. Students may register for more than one section of this course within the term and/or within their graduate career. These seminars may be on one of the following topics: stereotyping and prejudice, social neuroscience, person perception, social psychology and the self, health and social psychology, race and ethnic identity, or social cognition.

Repeatable: Repeatable for up to 8.00 total credit hours. Allows multiple enrollment in term.

Requisites: Restricted to Social Psychology PhD students.

Additional Information: Departmental Category: Social

PSYC 7663 (1) Intellectual Assessment Laboratory

Practice administration of common intellectual and neuropsychological tests.

Requisites: Requires corequisite courses of PSYC 7683.

Additional Information: Departmental Category: Clinical

PSYC 7673 (3) Adult Psychotherapy

Provides an intensive introduction to the science and practice of psychological treatments for adult psychopathology. Will focus on selected treatments and address the relevant theoretical and empirical base for each approach and the specific principles and procedures utilized. Aim of course is for students to acquire both a scientific and applied knowledge of evidence-based practice in clinical psychology, with a focus on intervention for adult mental disorders. Instructor consent required for students outside of the Clinical Psychology program.

Requisites: Restricted to Clinical Psychology PhD students.

Additional Information: Departmental Category: Clinical

PSYC 7683 (1-3) Intellectual Assessment, with Practicum, in Clinical Psychology

Focuses on administering and interpreting objective test commonly used in clinical psychology practice. Includes case study approach and direct clinical experience.

Repeatable: Repeatable for up to 8.00 total credit hours.

Additional Information: Departmental Category: Clinical

PSYC 7693 (3) Personality Measurement

Covers theory and basic applications of psychological assessment, with an emphasis on measurement theory and the assessment of psychopathology and personality.

Requisites: Restricted to Clinical Psychology PhD students.

Additional Information: Departmental Category: Clinical

PSYC 7703 (1-3) Seminar: Clinical Psychology

Selected topics in the area of clinical psychology. Instructor consent required for students outside of the Clinical Psychology program.

Repeatable: Repeatable for up to 21.00 total credit hours. Allows multiple enrollment in term.

Requisites: Restricted to Clinical Psychology PhD students.

Additional Information: Departmental Category: Clinical

PSYC 7713 (1-3) Practicum in Clinical Psychology

Provides direct clinical experience for clinical graduate students only.

Repeatable: Repeatable for up to 18.00 total credit hours.

Requisites: Restricted to Clinical Psychology PhD students.

Additional Information: Departmental Category: Clinical

PSYC 7775 (1) Topics in Cognitive Science

Reading of interdisciplinary innovative theories and methodologies of cognitive science. Students participate in the LCS Distinguished Speakers series that hosts internationally recognized cognitive scientists who share and discuss their current research. Session discussions include analysis of leading edge and controversial new approaches in cognitive science. Restricted to students enrolled in LCS Cognitive Science Academic Programs.

Equivalent - Duplicate Degree Credit Not Granted: CSCI 7772 and EDUC 7775 and LING 7775 and PHIL 7810 and SLHS 7775

Repeatable: Repeatable for up to 4.00 total credit hours.

Additional Information: Departmental Category: Experimental

PSYC 7793 (1-3) Child Assessment Practicum

Allows students who have already learned adult assessment measures to broaden their knowledge and skills in order to complete psychoeducational evaluations with children. The course covers the background of common childhood disorders, general testing strategies with children, and specific test administration.

Repeatable: Repeatable for up to 8.00 total credit hours.

Requisites: Restricted to Clinical Psychology PhD students.

Recommended: Prerequisite PSYC 7683.

Additional Information: Departmental Category: Developmental

PSYC 8991 (1-10) Doctoral Dissertation

All doctoral students must register for not fewer than 30 hours of dissertation credit as part of the requirements for the degree. For a detailed discussion of doctoral dissertation credit, refer to the Graduate School section.

Repeatable: Repeatable for up to 30.00 total credit hours.

Requisites: Restricted to Psychology and Neuroscience (PSYC NRSC) graduate students.

Additional Information: Departmental Category: General