Psychology (PSYCH)

Courses

PSYCH 7A. Introduction to Psychology. 4 Units.
Introduction to field of psychology, addressing the application of scientific methods to the study of human development, learning, memory, problem solving, perception, biological mechanisms, emotions and motivation, personality, psychopathology, and effects of diverse social and cultural contexts on human behavior.

Same as PSY BEH 9.
Overlaps with PSY BEH 11A, PSY BEH 11B, PSY BEH 11C, PSYCH 9A, PSYCH 9B.

Restriction: Criminology, Law and Society Majors have first consideration for enrollment. Public Health Sciences Majors have first consideration for enrollment. Social Ecology Majors have first consideration for enrollment. Urban Studies Majors have first consideration for enrollment. PSY BEH 9 and PSYCH 7A may not be taken for credit if taken after PSY BEH 11A, PSY BEH 11B, PSY BEH 11C, PSYCH 9A, PSYCH 9B, or PSYCH 9C.

(III)

PSYCH 9A. Psychology Fundamentals. 4 Units.
Designed to provide freshman with an in-depth survey of general psychology. Topics include biological bases of behavior, sensation, perception, cognition, development, personality, psychopathology, and social psychology.

Same as PSY BEH 11A.

Restriction: Lower-division students only. Cognitive Sciences Majors have first consideration for enrollment. Criminology, Law and Society Majors have first consideration for enrollment. Psychology and Social Behavior Majors have first consideration for enrollment. Psychology Majors have first consideration for enrollment. Social Ecology Majors have first consideration for enrollment. Urban Studies Majors have first consideration for enrollment. PSY BEH 9 and PSYCH 7A may not be taken for credit if taken after PSY BEH 11A, PSY BEH 11B, PSY BEH 11C, PSYCH 9A, PSYCH 9B, or PSYCH 9C.

(III)

PSYCH 9B. Psychology Fundamentals. 4 Units.
Designed to provide freshman with an in-depth survey of general psychology. Topics include biological bases of behavior, sensation, perception, cognition, development, personality, psychopathology, and social psychology.

Same as PSY BEH 11B.

Restriction: Lower-division students only. Cognitive Sciences Majors have first consideration for enrollment. Criminology, Law and Society Majors have first consideration for enrollment. Psychology and Social Behavior Majors have first consideration for enrollment. Psychology Majors have first consideration for enrollment. Social Ecology Majors have first consideration for enrollment. Urban Studies Majors have first consideration for enrollment. PSY BEH 9 and PSYCH 7A may not be taken for credit if taken after PSY BEH 11A, PSY BEH 11B, PSY BEH 11C, PSYCH 9A, PSYCH 9B, or PSYCH 9C.

(III)

PSYCH 9C. Psychology Fundamentals. 4 Units.
Designed to provide freshman with an in-depth survey of general psychology. Topics include biological bases of behavior, sensation, perception, cognition, development, personality, psychopathology, and social psychology.

Same as PSY BEH 11C.

Restriction: Lower-division students only. Cognitive Sciences Majors have first consideration for enrollment. Criminology, Law and Society Majors have first consideration for enrollment. Psychology and Social Behavior Majors have first consideration for enrollment. Psychology Majors have first consideration for enrollment. Social Ecology Majors have first consideration for enrollment. Urban Studies Majors have first consideration for enrollment. PSY BEH 9 and PSYCH 7A may not be taken for credit if taken after PSY BEH 11A, PSY BEH 11B, PSY BEH 11C, PSYCH 9A, PSYCH 9B, or PSYCH 9C.

(III)
**PSYCH 10A. Probability and Statistics in Psychology I. 4 Units.**
An introduction to probability and statistics. Emphasis on thorough understanding of the probabilistic basis of statistical inference. Examples drawn primarily from psychology.

Restriction: Psychology Majors have first consideration for enrollment.

(Va)

**PSYCH 10B. Probability and Statistics in Psychology II. 4 Units.**
An introduction to probability and statistics. Emphasis on thorough understanding of the probabilistic basis of statistical inference. Examples drawn primarily from psychology.

Prerequisite: PSYCH 10A

Restriction: Psychology Majors have first consideration for enrollment.

(Va)

**PSYCH 10C. Probability and Statistics in Psychology III. 4 Units.**
An introduction to probability and statistics. Emphasis on thorough understanding of the probabilistic basis of statistical inference. Examples drawn primarily from psychology.

Prerequisite: PSYCH 10B

Restriction: Psychology Majors have first consideration for enrollment.

(Vb)

**PSYCH 21A. Adolescent Psychology. 4 Units.**
Focuses on psychosocial dynamics of today's adolescents in America emphasizing the quest for identity, independence, values, and sexual orientation. The influence of society, family, school, and peers is analyzed. Strategies for helping troubled adolescents are discussed.

Overlaps with PSY BEH 112D.

(III)

**PSYCH 46A. Introduction to Human Memory. 4 Units.**
Covers the core concepts of modern research and theorizing about human memory, including structural subdivisions (e.g., perceptual memory, short-term memory, long-term memory), different measures of memory (e.g., recall, reorganization), and some practical applications of memory research (e.g., mnemonics).

(III)

**PSYCH 56L. Acquisition of Language. 4 Units.**
What children say, what they mean, and what they understand. Theories about the learning of language by one-, two-, and three-year olds. Comparison of kinds of data on which these theories are based.

Same as LINGUIS 51.

(III)

**PSYCH 78A. Self-Identity and Society. 4 Units.**
Studies sociological contributions to theory and research in social psychology, with focus on the social influences on personality, attitudes, beliefs, and behavior; socialization, human groups, and social interaction.

Same as SOCIOL 31.

(III)

**PSYCH 89. Special Topics in Lower-Division Psychology. 4 Units.**
Studies in selected areas of psychology at the lower-division level. Topics addressed vary each quarter.

Prerequisite: Prerequisites vary.

Repeatability: Unlimited as topics vary.
PSYCH H101A. Honors Seminar in Psychology I. 4 Units.
Focuses on the research activities and honors thesis research projects of each student and the research of various Cognitive Sciences faculty. Students discuss their research interests in the early and later stages of their projects. Research projects and write-ups required.

Grading Option: Pass/no pass only.
Repeatability: May be taken for credit 2 times.
Restriction: Psychology Majors only. Cognitive Sciences Majors only. Social Science Honors students only.

PSYCH H101B. Honors Seminar in Psychology II. 4 Units.
Focuses on the research activities and honors thesis research projects of each student and the research of various Cognitive Sciences faculty. Students discuss their research interests in the early and later stages of their projects. Research projects and write-ups required.

Prerequisite: PSYCH H101A
Grading Option: Pass/no pass only.
Repeatability: May be taken for credit 2 times.
Restriction: Psychology Majors only. Cognitive Sciences Majors only. Social Science Honors students only.

PSYCH H101C. Honors Seminar in Psychology III. 4 Units.
Focuses on the research activities and honors thesis research projects of each student and the research of various Cognitive Sciences faculty. Students discuss their research interests in the early and later stages of their projects. Research projects and write-ups required.

Prerequisite: PSYCH H101B
Repeatability: May be taken for credit 2 times.
Restriction: Psychology Majors only. Cognitive Sciences Majors only. Social Science Honors students only.

PSYCH 111BW. Honors Advanced Experimental Psychology. 4 Units.
Design and analysis of multivalent, factorial, and correlational studies. Students prepare proposals for independent research.

Corequisite: PSYCH H111B
Prerequisite: PSYCH H111A and (PSYC H11A or PSYCH 112A). Satisfactory completion of the Lower-Division Writing requirement.

Restriction: Psychology Majors only. Social Science Honors students only.

PSYCH H111A. Honors Experimental Psychology. 4 Units.
Emphasis on design of experiments and analysis of results. Experiments are conducted in laboratory sections.

Prerequisite: ((PSYCH 9A and PSYCH 9B and PSYCH 9C) or (PSY BEH 11A and PSY BEH 11B and PSY BEH 11C)) and ((PSYCH 10A and 10B and 10C) or (MATH 2A and MATH 2B and (MATH 7 or STATS 7))).

Overlaps with PSYCH 112A.

Restriction: Psychology and Cognitive Sciences Honors Program students only.

PSYCH H111B. Honors Advanced Experimental Psychology Laboratory. 2 Units.
Design and analysis of multivalent, factorial, and correlational studies. Students prepare proposals for independent research.

Corequisite: PSYCH 111BW

PSYCH H111C. Honors Research in Experimental Psychology. 4 Units.
Each student conducts a research project in experimental psychology. The projects are discussed in a seminar format. Written reports on each project are submitted at the end of the quarter.

Prerequisite: PSYCH 111BW or PSYCH 112B

Restriction: Psychology Majors only. Social Science Honors students only.
PSYCH 112A. Experimental Psychology. 4 Units.
Emphasis on design of experiments and analysis of results. Experiments are conducted in laboratory sections.

Corequisite: PSYCH 112LA
Prerequisite: ((PSYCH 9A and PSYCH 9B and PSYCH 9C) or (PSY BEH 11A and PSY BEH 11B and PSY BEH 11C)) and ((PSYCH 10A and PSYCH 10B and PSYCH 10C) or (MATH 2A and MATH 2B and (MATH 7 or STATS 7)) )
Overlaps with PSYCH H111A, PSYCH 112F, PSYCH 112G.
Restriction: Psychology Majors have first consideration for enrollment.

PSYCH 112BW. Advanced Experimental Psychology. 4 Units.
Design and analysis of multivalent, factorial, and correlational studies. Students prepare proposals for independent research.

Prerequisite: PSYCH 112A and PSYCH 112LA. Satisfactory completion of the Lower-Division Writing requirement.
Overlaps with PSYCH 112F, PSYCH 112FW, PSYCH 112G, PSYCH 112GW.
Restriction: Psychology Majors have first consideration for enrollment.

PSYCH 112C. Research in Experimental Psychology. 4 Units.
Each student conducts a research project in experimental psychology. The projects are discussed in a seminar format. Written reports on each project are submitted at the end of the quarter.

Corequisite: PSYCH 112LC
Prerequisite: PSYCH 112B and PSYCH 112LB
Overlaps with PSYCH 112F, PSYCH 112FW, PSYCH 112G, PSYCH 112GW.
Restriction: Psychology Majors have first consideration for enrollment.

PSYCH 112D. Effective Graphical Presentation of Data. 4 Units.
Learn to use MATLAB to produce graphical displays of data based on psychological principles for effective design. Approach is problem-oriented, with emphasis on case-studies using data from psychological experiments and real-world corpora. Assessment via independent individual projects.

Corequisite: PSYCH 112LD
Prerequisite: (PSYCH 9A and PSYCH 9B and PSYCH 9C) or (PSY BEH 11A and PSY BEH 11B and PSY BEH 11C) and (PSYCH 10C or SOC SCI 10C or ANTHRO 10C or POL SCI 10C or SOCIOL 10C) or (MATH 2B and STATS 7)
Restriction: Cognitive Sciences Majors have first consideration for enrollment. Psychology Majors have first consideration for enrollment.

PSYCH 112LA. Experimental Psychology Laboratory. 2 Units.
Required laboratory section and co-requisite for Psych 112A.
Corequisite: PSYCH 112A
Restriction: Psychology Majors have first consideration for enrollment.

PSYCH 112LB. Advanced Experimental Psychology Laboratory. 2 Units.
Required laboratory section for PSYCH 112B and PSYCH 112BW.
Restriction: Psychology Majors have first consideration for enrollment.

PSYCH 112LC. Research in Experimental Psychology.
Required laboratory section and co-requisite for PSYCH 112C.
Corequisite: PSYCH 112C

PSYCH 112LD. Effective Graphical Presentation of Data Lab. 2 Units.
Lab to learn to use MATLAB to produce graphical displays of data based on psychological principles for effective design. Approach is problem-oriented, with emphasis on case-studies using data from psychological experiments and real-world corpora. Assessment via independent individual projects.
Corequisite: PSYCH 112D
Restriction: Psychology Majors have first consideration for enrollment. Cognitive Sciences Majors have first consideration for enrollment.
PSYCH 112LM. Research Methods in Psychology Laboratory. 2 Units.
Required laboratory section and co-requisite for PSYCH 112M.

Corequisite: PSYCH 112M

Restriction: Psychology Majors have first consideration for enrollment.

PSYCH 112LR. Cognitive Robotics Laboratory. 2 Units.
Required laboratory section and corequisite for PSYCH 112R.

Corequisite: PSYCH 112R

Restriction: Psychology Majors have first consideration for enrollment. Cognitive Sciences Majors have first consideration for enrollment.

PSYCH 112M. Research Methods in Psychology. 4 Units.
Research methods in psychology for majors who wish to fulfill this requirement separately from upper-division writing. Covers both experimental and descriptive research methods, analysis of results, and reading the psychological literature. Research experience is provided in laboratory sections.

Corequisite: PSYCH 112LM
Prerequisite: (PSYCH 9A and PSYCH 9B and PSYCH 9C) or (PSY BEH 11A and PSY BEH 11B and PSY BEH 11C) and (PSYCH 10C or SOC SCI 10C or ANTHRO 10C or POL SCI 10C or SOCIOL 10C) or (MATH 2B and STATS 7)

Restriction: Psychology Majors have first consideration for enrollment.

PSYCH 112R. Cognitive Robotics. 4 Units.
Introduces concepts on experimental design, embodiment, robot construction, and computer programming. Concepts of embodied intelligence and case studies of cognitive robotics are covered in lecture. Simple robots are constructed and programmed to carry out different behavioral experiments in lab.

Corequisite: PSYCH 112LR
Prerequisite: (PSYCH 9A and PSYCH 9B and PSYCH 9C) or (PSY BEH 11A and PSY BEH 11B and PSY BEH 11C) and (PSYCH 10C or SOC SCI 10C or ANTHRO 10C or POL SCI 10C or SOCIOL 10C) or (MATH 2B and STATS 7)

Restriction: Cognitive Sciences Majors have first consideration for enrollment. Psychology Majors have first consideration for enrollment.

PSYCH 114M. MATLAB Programming. 4 Units.
MATLAB is a mathematical software package for solving quantitative problems often encountered in experimental psychology. Topics include rudiments of programming, statistical analysis of data, matrix algebra, signal processing, graphic visualization, and simulated models of cognitive and perceptual processes.

Restriction: Psychology Majors have first consideration for enrollment. Cognitive Sciences Majors have first consideration for enrollment.

PSYCH 119. Special Topics in Research Methodologies. 1-4 Units.
Studies in selected areas of research methodologies. Topics addressed vary each quarter.

Prerequisite: Prerequisites vary.

Repeatability: Unlimited as topics vary.

Restriction: Psychology Majors have first consideration for enrollment.

PSYCH 120A. Abnormal Psychology. 4 Units.
Introduction to psychopathology and behavioral deviations, and the concepts of theories regarding these conditions.

Prerequisite: (PSYCH 7A or PSY BEH 9) or (PSYCH 9C or PSY BEH 11C)

Overlaps with PSY BEH 102C.

Restriction: Psychology Majors have first consideration for enrollment. Cognitive Sciences Majors have first consideration for enrollment.

PSYCH 120D. Developmental Psychology. 4 Units.
A general introduction to the study of the physical, intellectual, social, and emotional development of the child from birth to adulthood.

Prerequisite: (PSYCH 7A or PSY BEH 9) or (PSYCH 9A or PSY BEH 11A)

Overlaps with PSY BEH 111D.

Restriction: Psychology Majors have first consideration for enrollment. Cognitive Sciences Majors have first consideration for enrollment. Nursing Science Majors have first consideration for enrollment.
PSYCH 120H. History of Psychology. 4 Units.
A history of the development of various schools and systems of psychological thought.
Prerequisite: (PSYCH 7A or PSY BEH 9) or (PSYCH 9C or PSY BEH 11C)
Restriction: Cognitive Sciences Majors have first consideration for enrollment. Psychology Majors have first consideration for enrollment.

PSYCH 120P. Personality Theories. 4 Units.
A survey of the evolution of personality theory during this century. An overview of major perspectives in the field, with special attention to Freud, Jung, and Adler.
Prerequisite: (PSYCH 7A or PSY BEH 9) or (PSYCH 9C or PSY BEH 11C)
Overlaps with PSY BEH 170S.
Restriction: Psychology Majors have first consideration for enrollment. Cognitive Sciences Majors have first consideration for enrollment.

PSYCH 121M. Theories of Motivation. 4 Units.
Factors affecting the behavioral performance of organisms. A survey of theoretical and empirical approaches to the physiological, psychological, and social factors which generate behavior.
Prerequisite: (PSYCH 7A or PSY BEH 9) and (PSYCH 9A and PSYCH 9B and PSYCH 9C) or (PSY BEH 11A and PSY BEH 11B and PSY BEH 11C)
Overlaps with PSY BEH 176S.
Restriction: Psychology Majors have first consideration for enrollment.

PSYCH 121P. Positive Psychology. 4 Units.
Positive psychology, at the subjective level, is about valued subjective experiences; at the individual level, it is about positive individual traits; and at the group level, it is about the civic virtues and institutions that move individuals toward better citizenship.
Prerequisite: (PSYCH 9A and PSYCH 9B and PSYCH 9C) or (PSY BEH 11A and PSY BEH 11B and PSY BEH 11C)
Restriction: Psychology Majors have first consideration for enrollment.

PSYCH 121S. Psychology of Sleep and Consciousness. 4 Units.
Covers the physiology, neurochemistry, and neuroanatomy associated with sleep, contemporary sleep theory, REM and NREM, phenomenology, sleep disorders, examination of differences between conscious and unconscious cognitive function, the history of sleep and dream theories from ancient time to present day.
Restriction: Psychology Majors have first consideration for enrollment.

PSYCH 122C. Clinical Psychology. 4 Units.
Provides overview of the clinical psychology field including theories and techniques used in counseling and testing.
Overlaps with PSY BEH 150C.
Restriction: Psychology Majors have first consideration for enrollment.

PSYCH 122I. Organizational/Industrial Psychology. 4 Units.
Introduction to applied psychology in organizations, including personnel testing, selection, training and evaluation, job and classification analysis, job satisfaction and motivation, organizational development, leadership, market research, and consumer psychology. Potential ethical problems are discussed.
Prerequisite: (PSYCH 7A or PSY BEH 9) or (PSYCH 9A or PSY BEH 11A) or (PSYCH 9B or PSY BEH 11B) or (PSYCH 9C or PSY BEH 11C)
Restriction: Psychology Majors have first consideration for enrollment.

PSYCH 123P. Topics in Philosophy of Psychology. 4 Units.
Selected topics in the philosophy of psychology, e.g., the nature of psychological explanation, reductionism, issues in cognitive, behavioral, and neuroscience.
Repeatability: Unlimited as topics vary.
Same as LPS 143, PHILOS 143.
Restriction: Psychology Majors have first consideration for enrollment. Philosophy Majors have first consideration for enrollment.
PSYCH 124S. Sports Psychology. 4 Units.
Discusses the field of sports psychology with an emphasis on clinical practice including motivation, goal setting, performance skills, and mental skills. Discusses and utilizes a wide range of techniques designed to enhance performance and manage problems among athletes.
Prerequisite: (PSYCH 7A or PSY BEH 9) or (PSYCH 9C or PSY BEH 11C)
Overlaps with PSY BEH 139H.
Restriction: Psychology Majors have first consideration for enrollment.

PSYCH 124V. Psychology of Violence. 4 Units.
Discusses the psychology of violence and aggression with an emphasis on understanding the psychological, social, and physiological roots of violent and aggressive behavior. Psychological treatment techniques and strategies for prevention of aggressive and violent behavior are also discussed.
Prerequisite: (PSYCH 7A or PSY BEH 9) or (PSYCH 9C or PSY BEH 11C)
Restriction: Psychology Majors have first consideration for enrollment.

PSYCH 129. Special Topics in General Psychology. 4 Units.
Studies in selected areas of general psychology. Topics addressed vary each quarter.
Prerequisite: Prerequisites vary.
Repeatability: Unlimited as topics vary.
Restriction: Psychology Majors have first consideration for enrollment.

PSYCH 130A. Perception and Sensory Processes. 4 Units.
A general introduction to the scientific study of sensory processes and perceptual phenomena, with special emphasis in the visual systems.
Prerequisite: (PSYCH 7A or PSY BEH 9) or (PSYCH 9A or PSY BEH 11A)
Overlaps with PSYCH 131A, PSYCH 131B.
Restriction: Cognitive Sciences Majors have first consideration for enrollment. Psychology Majors have first consideration for enrollment.

PSYCH 131A. Vision. 4 Units.
Visual perception and the anatomy and physiology of the visual system. Topics include the retina and the visual pathway; visual sensitivity; color vision; spatial vision; motion perception; and the development of the visual system.
Same as BIO SCI N182.
Overlaps with PSYCH 130A.
Restriction: Upper-division students only. Psychology Majors have first consideration for enrollment. Cognitive Sciences Majors have first consideration for enrollment. School of Biological Sciences students have first consideration for enrollment.

PSYCH 131B. Hearing. 4 Units.
Auditory perception, the anatomy and physiology of the auditory system, and the physics of sound. Topics include neural transduction of sound, sensitivity, sound localization, complex sound perception, and hearing loss.
Prerequisite: (PSYCH 9A or PSY BEH 11A) and (PSYCH 9B or PSY BEH 11B)
Overlaps with PSYCH 130A.
Restriction: Psychology Majors have first consideration for enrollment. Cognitive Sciences Majors have first consideration for enrollment.

PSYCH 135M. The Mind/Body Problem. 4 Units.
What is consciousness and what is matter and how are the two related? How can brains have minds? This multidisciplinary course draws on information from the fields of computer vision, artificial intelligence, cognition, neurophysiology, philosophy, and psychophysics.
Restriction: Psychology Majors have first consideration for enrollment.
PSYCH 139. Special Topics in Perception and Sensory Processes. 4 Units.
Studies in selected areas of perception and sensory processes. Topics addressed vary each quarter.

Prerequisite: Prerequisites vary.

Repeatability: Unlimited as topics vary.

Restriction: Psychology Majors have first consideration for enrollment.

PSYCH 140C. Cognitive Science. 4 Units.
Introduction to the investigations of the structure and function of the mind, from viewpoints of computation, neuroscience, philosophy, and cognitive psychology. Topics include perception, attention, knowledge representations, learning and memory, action, reasoning, and language.

Prerequisite: (PSYCH 7A or PSY BEH 9) and (PSYCH 9A or PSY BEH 11A) and (PSYCH 9B or PSY BEH 11B)

Restriction: Cognitive Sciences Majors have first consideration for enrollment. Psychology Majors have first consideration for enrollment.

PSYCH 140L. Principles of Learning Theory. 4 Units.
Investigation of the learning and memory processes of human and animals. Basic experimental approaches to learning and memory, empirical results, and theoretical interpretations of the evidence are discussed.

Prerequisite: (PSYCH 7A or PSY BEH 9) or (PSYCH 9A or PSY BEH 11A)

Restriction: Psychology Majors have first consideration for enrollment. Cognitive Sciences Majors have first consideration for enrollment.

PSYCH 140M. Human Memory. 4 Units.
Developments in the area of memory; history of memory research; theories of the nature of memory. Visual memory, recognition memory, high-speed scanning, free recall, short-term memory, mnemonics, retrieval, relationship of memory to thinking. Selected theoretical formulations for memory.

Prerequisite: (PSYCH 7A or PSY BEH 9) or (PSYCH 9B or PSY BEH 11B)

Restriction: Psychology Majors have first consideration for enrollment. Cognitive Sciences Majors have first consideration for enrollment.

PSYCH 141J. Jumpstart I: Early Language, Literacy, and Social Development. 4 Units.
An experiential course integrated with lecture material in the field of child development and education. Students are expected to attend lectures, complete assignments, and commit eight hours per week as mentors of disadvantaged preschool children.

Same as EDUC 141A, LINGUIS 181A.

Restriction: Department of Education students have first consideration for enrollment. Psychology Majors have first consideration for enrollment.

PSYCH 141K. Jumpstart I: Early Language, Literacy, and Social Development. 4 Units.
An experiential course integrated with lecture material in the field of child development and education. Students are expected to attend lectures, complete assignments, and commit eight hours per week as mentors of disadvantaged preschool children.

Same as EDUC 141B, LINGUIS 181B.

Restriction: Department of Education students have first consideration for enrollment. Psychology Majors have first consideration for enrollment.

PSYCH 141L. Jumpstart I: Early Language, Literacy, and Social Development. 4 Units.
An experiential course integrated with lecture material in the field of child development and education. Students are expected to attend lectures, complete assignments, and commit eight hours per week as mentors of disadvantaged preschool children.

Same as EDUC 141C, LINGUIS 181C.

Restriction: Department of Education students have first consideration for enrollment. Psychology Majors have first consideration for enrollment.

PSYCH 141M. Jumpstart II: Early Language, Literacy, and Social Development. 4 Units.
An experiential course integrated with lecture material in the field of child development and education. Students are expected to attend lectures, complete assignments, and commit eight hours per week as mentors of disadvantaged preschool children.

Prerequisite: (PSYCH 141J and PSYCH 141K and PSYCH 141L) or (EDUC 141A and EDUC 141B and EDUC 141C)

Same as EDUC 141D, LINGUIS 181D.
PSYCH 141N. Jumpstart II: Early Language, Literacy, and Social Development. 4 Units.
An experiential course integrated with lecture material in the field of child development and education. Students are expected to attend lectures, complete assignments, and commit eight hours per week as mentors of disadvantaged preschool children.

Prerequisite: (PSYCH 141J and PSYCH 141K and PSYCH 141L) or (EDUC 141A and EDUC 141B and EDUC 141C)

Same as EDUC 141E, LINGUIS 181E.

PSYCH 141O. Jumpstart II: Early Language, Literacy, and Social Development. 4 Units.
An experiential course integrated with lecture material in the field of child development and education. Students are expected to attend lectures, complete assignments, and commit eight hours per week as mentors of disadvantaged preschool children.

Prerequisite: (PSYCH 141J and PSYCH 141K and PSYCH 141L) or (EDUC 141A and EDUC 141B and EDUC 141C)

Same as EDUC 141F, LINGUIS 181F.

PSYCH 141P. Jumpstart III: Early Language, Literacy, and Social Development. 4 Units.
An experiential course integrated with lecture material in the field of child development and education. Students are expected to attend lectures, complete assignments, and commit eight hours per week as mentors of disadvantaged preschool children.

Prerequisite: (PSYCH 141M and PSYCH 141N and PSYCH 141O) or (EDUC 141D and EDUC 141E and EDUC 141F)

Same as EDUC 141G, LINGUIS 181G.

PSYCH 141Q. Jumpstart III: Early Language, Literacy, and Social Development. 4 Units.
An experiential course integrated with lecture material in the field of child development and education. Students are expected to attend lectures, complete assignments, and commit eight hours per week as mentors of disadvantaged preschool children.

Prerequisite: (PSYCH 141M and PSYCH 141N and PSYCH 141O) or (EDUC 141D and EDUC 141E and EDUC 141F)

Same as EDUC 141H, LINGUIS 181H.

PSYCH 141R. Jumpstart III: Early Language, Literacy, and Social Development. 4 Units.
An experiential course integrated with lecture material in the field of child development and education. Students are expected to attend lectures, complete assignments, and commit eight hours per week as mentors of disadvantaged preschool children.

Prerequisite: (PSYCH 141M and PSYCH 141N and PSYCH 141O) or (EDUC 141D and EDUC 141E and EDUC 141F)

Same as EDUC 141I, LINGUIS 181I.

PSYCH 143P. Human Problem Solving. 4 Units.
Modern developments in the psychology of human problem solving. Topics include concept identification, arithmetic, sets, logic puzzles, story problems, group problem solving, and theorem proving.

Prerequisite: (PSYCH 7A or PSY BEH 9) or (PSYCH 9B or PSY BEH 11B)

Restriction: Psychology Majors have first consideration for enrollment. Cognitive Sciences Majors have first consideration for enrollment.

PSYCH 145P. Attention and Learning Deficits in Children I. 4 Units.
Learning in normal and attention-deficit disordered children. Covers the normal developmental course of learning and a variety of deficits. Includes field work with attention-deficit disordered children.

Restriction: Psychology Majors have first consideration for enrollment.

PSYCH 145Q. Attention and Learning Deficits in Children II. 4 Units.
Learning in normal and attention-deficit disordered children. Covers the normal developmental course of learning and a variety of deficits. Includes field work with attention-deficit disordered children.

Prerequisite: PSYCH 145P

Restriction: Psychology Majors have first consideration for enrollment.
PSYCH 145R. Attention and Learning Deficits in Children III. 4 Units.
Learning in normal and attention-deficit disordered children. Covers the normal developmental course of learning and a variety of deficits. Includes field work with attention-deficit disordered children.

Prerequisite: PSYCH 145Q

Restriction: Psychology Majors have first consideration for enrollment.

PSYCH 146MW. Writing about Memory. 4 Units.
Covers a broad range of texts, literary, philosophical, and scientific, each probing the nature of memory and its meaning in human life. Readings are drawn from across many disciplines and many perspectives.

Prerequisite: PSYCH 7A or PSYCH 9B or PSY BEH 9 or PSY BEH 11B. Satisfactory completion of the Lower-Division Writing requirement.

Restriction: Psychology Majors have first consideration for enrollment.

(1b)

PSYCH 148A. Cognitive Development Research. 4 Units.
Provides experience in cognitive development research, centered around the child's acquisition of number words and concepts. Students conduct research and review and discuss each other's projects in weekly lab meetings with instructor and graduate students.

Repeatability: May be repeated for credit unlimited times.

Restriction: Psychology Majors have first consideration for enrollment.

Concurrent with PSYCH 228A.

PSYCH 148B. Cognitive Development Research. 4 Units.
Provides experience in cognitive development research, centered around the child's acquisition of number words and concepts. Students conduct research and review and discuss each other's projects in weekly lab meetings with instructor and graduate students.

Repeatability: May be repeated for credit unlimited times.

Restriction: Psychology Majors have first consideration for enrollment.

Concurrent with PSYCH 228B.

PSYCH 148C. Cognitive Development Research. 4 Units.
Provides experience in cognitive development research, centered around the child's acquisition of number words and concepts. Students conduct research and review and discuss each other's projects in weekly lab meetings with instructor and graduate students.

Repeatability: May be repeated for credit unlimited times.

Restriction: Psychology Majors have first consideration for enrollment.

Concurrent with PSYCH 228C.

PSYCH 149. Special Topics in Cognition and Learning. 4 Units.
Studies in selected areas of cognition and learning. Topics addressed vary each quarter.

Prerequisite: Prerequisites vary.

Repeatability: Unlimited as topics vary.

Restriction: Psychology Majors have first consideration for enrollment.

PSYCH 150. Psychology of Language. 4 Units.
Examines language using the tools of experimental psychology. From sounds to words to spoken and written sentences, explores how language is used in real time, and how its use reveals how it is represented in the mind.

Prerequisite: (PSYCH 7A or PSY BEH 9) or (PSYCH 9B or PSY BEH 11B)

Same as LINGUIS 155.

Restriction: Psychology Majors have first consideration for enrollment. Cognitive Sciences Majors have first consideration for enrollment.
PSYCH 156A. Acquisition of Language II. 4 Units.
Focuses on native language learning, exploring the way in which infants and very young children unconsciously uncover the rich systematic knowledge of their native language. Examines both experimental and computational studies that quantitatively investigate the “how” of language acquisition.
Prerequisite: PSYCH 56L or LINGUIS 51
Same as LINGUIS 150.
Restriction: Cognitive Sciences Majors have first consideration for enrollment. Psychology Majors have first consideration for enrollment.

PSYCH 157M. Computational Methods for Language Research. 4 Units.
Focuses on computational methods useful for language research. Students become familiar with software and programming languages used for extracting information from electronic datasets and for creating basic simulations of linguistic cognition. No prior programming experience assumed.
Prerequisite: PSYCH 150 or LINGUIS 155 or PSYCH 156A or LINGUIS 151
Same as LINGUIS 107M.

PSYCH 159. Special Topics in Language. 4 Units.
Studies in selected areas of language sciences. Topics addressed vary each quarter.
Prerequisite: Prerequisites vary.
Repeatability: Unlimited as topics vary.
Restriction: Cognitive Sciences Majors have first consideration for enrollment. Psychology Majors have first consideration for enrollment.

PSYCH 160A. Introduction to Cognitive Neuroscience. 4 Units.
Introduction to the neural basis of human perceptual, motor, and cognitive abilities. Topics include sensory perception, motor control, memory, language, attention, emotion, frontal lobe function, functional brain imaging, and neuropsychological disorders.
Prerequisite: (PSYCH 7A or PSY BEH 9) and (PSYCH 9A or PSY BEH 11A) and (PSYCH 9B or PSY BEH 11B)
Same as BIO SCI N165.
Restriction: Cognitive Sciences Majors have first consideration for enrollment. Biological Sciences Majors have first consideration for enrollment. Psychology Majors have first consideration for enrollment.

PSYCH 160D. Brain Disorders and Behavior. 4 Units.
Examines the localization of human brain functions and the effects of neurological disorders on psychological functions such as perception, motor control, language, memory, and decision-making.
Prerequisite: (PSYCH 7A or PSY BEH 9) and (PSYCH 9A or PSY BEH 11A) and (PSYCH 9B or PSY BEH 11B) or BIO SCI 35 or BIO SCI N110
Same as BIO SCI N165.
Restriction: Cognitive Sciences Majors have first consideration for enrollment. Biological Sciences Majors have first consideration for enrollment. Psychology Majors have first consideration for enrollment.

PSYCH 160H. History of Cognitive Neuroscience. 4 Units.
Studies of the human mind from ancient cultures to the innovation of modern methods of brain imaging. Logic of valid and invalid brain hypothesis are examined. Recurring theme is the competition between holistic and localized views of brain function.
Prerequisite: PSYCH 9A or PSY BEH 11A or PSYCH 7A or PSY BEH 9
Restriction: Cognitive Sciences Majors have first consideration for enrollment. Psychology Majors have first consideration for enrollment.

PSYCH 161. Language and the Brain. 4 Units.
Research analysis on biological bases of human linguistic capacity. Development, focusing on hemispheric specialization, plasticity; localization of specific linguistic functions in adults, with emphasis on study of aphasias; relation of linguistic capacity to general cognitive capacity, considering research on retardation.
Prerequisite: (PSYCH 7A or PSY BEH 9 or PSYCH 9A or PSY BEH 11A) and (PSYCH 9B or PSY BEH 11B or BIO SCI 35 or BIO SCI N110)
Same as BIO SCI N160, LINGUIS 158.
Restriction: Cognitive Sciences Majors have first consideration for enrollment. Biological Sciences Majors have first consideration for enrollment. Psychology Majors have first consideration for enrollment.
PSYCH 161H. Hearing and the Brain. 4 Units.
An overview of brain mechanisms of hearing, including perception of simple sounds, speech, and music. Begins with sound itself, and looks at processing by the ear, auditory pathways, auditory cortex, and beyond. Also auditory development, learning, and clinical issues.

Prerequisite: PSYCH 160A or BIO SCI 93

Same as BIO SCI N147.

Restriction: Cognitive Sciences Majors have first consideration for enrollment. Biological Sciences Majors have first consideration for enrollment. Psychology Majors have first consideration for enrollment.

PSYCH 162B. Human Memory Disorders. 4 Units.
Focuses on models and methods of assessing human memory and its disorders. Exposure to conventional and new assessment devices provided.

Restriction: Cognitive Sciences Majors have first consideration for enrollment. Psychology Majors have first consideration for enrollment.

PSYCH 162N. Human Neuropsychology. 4 Units.
A survey of human brain disorders using a clinical case study approach to illustrate fundamental issues in studying brain and behavior. Topics include sensory deficits, attentional neglect, amnesia, cortical organization, clinical psychopathology, and more.

Prerequisite: BIO SCI N110 or PSYCH 9A or PSY BEH 11A

Same as PSY BEH 163C, BIO SCI N173.

Restriction: School of Biological Sciences students have first consideration for enrollment. Cognitive Sciences Majors have first consideration for enrollment. Psychology and Social Behavior Majors have first consideration for enrollment. Psychology Majors have first consideration for enrollment.

PSYCH 165A. Visual Neuroscience Research. 4 Units.
Covers a range of cognitive neuroscience research topics with emphasis on cortical organization of visual circuits, object recognition, motion perception, visual attention, and decision making.

Repeatability: May be repeated for credit unlimited times.

Concurrent with PSYCH 263A.

PSYCH 165B. Visual Neuroscience Research. 4 Units.
Covers a range of cognitive neuroscience research topics with emphasis on cortical organization of visual circuits, object recognition, motion perception, visual attention, and decision making.

Repeatability: May be repeated for credit unlimited times.

Concurrent with PSYCH 263B.

PSYCH 165C. Visual Neuroscience Research. 4 Units.
Covers a range of cognitive neuroscience research topics with emphasis on cortical organization of visual circuits, object recognition, motion perception, visual attention, and decision making.

Repeatability: May be repeated for credit unlimited times.

Concurrent with PSYCH 263C.

PSYCH 169. Special Topics in Cognitive Neuroscience. 4 Units.
Studies in selected areas of cognitive neuroscience. Topics addressed vary each quarter.

Prerequisite: Prerequisites vary.

Repeatability: Unlimited as topics vary.

Restriction: Psychology Majors have first consideration for enrollment.
PSYCH 173A. Psychological Anthropology. 4 Units.
Cultural differences and similarities in personality and behavior. Child-rearing practices and consequent adult personality characteristics, biocultural aspects of child development and attachment, culture and behavior evolutionary models, politically linked personality, cognitive anthropology, psychology of narrative forms, comparative national character studies.
Prerequisite: ANTHRO 2A or PSYCH 7A or (PSYCH 9A and PSYCH 9B and PSYCH 9C) or (PSY BEH 11A and PSY BEH 11B and PSY BEH 11C)
Same as ANTHRO 132A.
Restriction: Psychology Majors have first consideration for enrollment.

PSYCH 174E. African American Psychology. 4 Units.
Historical overview of the development of black psychology and the African American frame of reference. Topics include personality development, psychological assessment, issues in education, black mental health, and the role of the African American psychologist in the community.
Same as AFAM 153.

PSYCH 174F. Chicano/Latino Psychology. 4 Units.
Examines research and literature investigating Chicano/Latino ethnicity as a variable influencing behavior. Explores mental health needs and issues of Chicano/Latinos and discusses competent, sensitive methods of mental health service delivery.
Same as CHC/LAT 171.

PSYCH 174H. Chicano/Latino Families. 4 Units.
Introduction to the research, literature, and issues surrounding the topic of Chicano/Latino families including cultural history, contemporary issues, organization of family, traditions, lifestyles, values, beliefs, generational differences, gender issues, ethnic identity, evolution of demographic patterns, current economic and political standings.
Same as CHC/LAT 170, SOC SCI 165.

PSYCH 176A. Political Psychology. 4 Units.
Examination of how psychological theory and research may be used to better understand political thought and behavior. Drawing on theories of learning, cognition, and personality, discusses such topics as the formation of political attitudes, and the process of political decision-making.
Same as POL SCI 128C.
Restriction: Majors only. POL SCI 128C may not be taken for credit if taken after POL SCI 137C.

PSYCH 177D. Deviance. 4 Units.
Perspectives on deviance and criminality in behavior, institution, community, and myth. The suitability of contemporary theories of deviant behavior.
Same as SOCIOL 156, CRM/LAW C107.
Restriction: Criminology, Law and Society Majors have first consideration for enrollment. Social Ecology Majors have first consideration for enrollment. Sociology Majors have first consideration for enrollment. Psychology Majors have first consideration for enrollment.

PSYCH 177F. Forensic Psychology: Advanced Seminar. 4 Units.
The focus is on the psychology of criminal offending, particularly violent behavior. Examines violence, sexual offending, and mental disorder related to crime with regard to clinical assessment and treatment; mental health services within forensic institutions.
Prerequisite: (PSY BEH 9 or PSY BEH 11C or PSYCH 7A or PSYCH 9C) and PSY BEH 102C and (PSY BEH 178S or CRM/LAW C149)
Same as PSY BEH 156C, CRM/LAW C136.
Restriction: Psychology and Social Behavior Majors have first consideration for enrollment. Social Ecology Majors have first consideration for enrollment. Psychology Majors have first consideration for enrollment. Criminology, Law and Society Majors have first consideration for enrollment.

PSYCH 178N. Social Psychology of Networks. 4 Units.
Review of network methods used in small group and organizational research. Discussion of social psychological literature relevant to the network of study of cognitive social structure, exchange/communication, identity negotiation, and social control. Case study of network datasets exemplifies research issues.
Same as SOCIOL 135.
Restriction: Sociology Majors have first consideration for enrollment. Psychology Majors have first consideration for enrollment.
PSYCH 179. Special Topics in Interdisciplinary Studies. 1-4 Units.
Studies in selected areas of interdisciplinary studies. Topics addressed vary each quarter.
Prerequisite: Prerequisites vary.
Repeatability: Unlimited as topics vary.
Restriction: Psychology Majors have first consideration for enrollment.

PSYCH 190. Senior Thesis. 4 Units.
Student writes senior thesis on a topic of psychology with guidance from a three-member committee comprised of Cognitive Sciences faculty. Senior thesis includes the following: research statement, literature review, experimental design, data collection and analysis, and a written final thesis.
Grading Option: In Progress (Letter Grade with P/NP).
Repeatability: May be taken for credit 3 times.

PSYCH 198. Directed Group Study. 1-4 Units.
Directed study with Cognitive Sciences faculty.
Repeatability: May be repeated for credit unlimited times.

PSYCH 199. Independent Study. 1-4 Units.
Independent research with Cognitive Sciences faculty.

PSYCH 201A. Cognitive Sciences Research Seminar. 1.3 Unit.
Weekly reports and colloquia by faculty, students, and visitors.
Grading Option: Satisfactory/unsatisfactory only.
Restriction: Graduate students only. Psychology Majors only.

PSYCH 201B. Cognitive Sciences Research Seminar. 1.3 Unit.
Weekly reports and colloquia by faculty, students, and visitors.
Prerequisite: PSYCH 201A
Grading Option: Satisfactory/unsatisfactory only.
Restriction: Graduate students only. Psychology Majors only.

PSYCH 201C. Cognitive Sciences Research Seminar. 1.4 Unit.
Weekly reports and colloquia by faculty, students, and visitors.
Prerequisite: PSYCH 201B
Grading Option: Satisfactory/unsatisfactory only.
Restriction: Graduate students only. Psychology Majors only.

PSYCH 202A. Proseminar in the Cognitive Sciences. 1 Unit.
Introduction to the conceptual foundations and basic research results in the cognitive sciences for first-year graduate students.
Grading Option: Satisfactory/unsatisfactory only.
Restriction: Graduate students only.

PSYCH 203A. Discrete Mathematics and Probability. 4 Units.
Logic and set theory are covered during the first three weeks, using an interactive computer system. The remaining seven weeks are devoted to probability theory and cover elementary concepts from samples spaces to Chebychev's Inequality and the moment generating function.
Restriction: Graduate students only.
PSYCH 203B. Introduction to Mathematical Statistics. 4 Units.
Restriction: Graduate students only.

PSYCH 203C. Algorithmic Statistics. 4 Units.
Discussion of the fundamentals of statistical inference and computational implementations of common statistical models.
Restriction: Graduate students only.

PSYCH 203D. Applied Mathematics for Cognitive Sciences Research. 4 Units.
Covers the basics of linear systems analysis, focusing on linear algebra, Fourier analysis, differential equations, and elementary signal processing. Applications in Cognitive Science and Cognitive Neuroscience research will be developed.
Prerequisite: PSYCH 205A
Restriction: Graduate students only. Psychology Majors only.

PSYCH 204C. Seminar in Professional Development. 1 Unit.
Development of professional skills. Focuses on career opportunities, interests and information, and community outreach.
Grading Option: Satisfactory/unsatisfactory only.
Restriction: Graduate students only. Psychology Majors only.

PSYCH 205A. Computational and Research Methods with MATLAB. 4 Units.
Introduces rudiments of programming, statistical analysis and probability theory, graphic visualization, GUI design, spectral analysis, and simulation models using MATLAB, a software package for solving quantitative problems often encountered in experimental psychology.
Restriction: Graduate students only.

PSYCH 205B. Running Experiments Using MATLAB. 4 Units.
Provides an in-depth introduction to writing MATLAB programs to run auditory and visual experiments. Topics covered include program structure, stimulus generation, presentation, and data collection.
Prerequisite: PSYCH 205A

PSYCH 205C. Computational Statistics. 4 Units.
Introduction to a number of computational statistics approaches including exploratory data analysis and modeling using a probabilistic framework with Bayesian graphical models. Emphasis will be on in-class programming using MATLAB.
Restriction: Graduate students only.

PSYCH 210A. Introduction to Cognitive and Brain Sciences I: Perception. 4 Units.
Discusses models of cognition and evidence linking cognition and the brain. Focus is on visual, auditory, and somatic perception and bottom-up mechanisms of attention.
Restriction: Graduate students only.

PSYCH 210B. Introduction to Cognitive and Brain Sciences II: Cognition. 4 Units.
Discusses models of cognition and evidence linking cognition and the brain. Focus is on emotion, top-down attention, goal-directed behavior, categorization, judgment, and decision-making.
Restriction: Graduate students only.

PSYCH 210C. Introduction to Cognitive and Brain Sciences III: Learning and Development. 4 Units.
Discusses experimental data, formal models of learning, and evidence linking learning and development to its neural substrates. Topics include Pavlovian and instrumental conditioning, language acquisition, causal reasoning, perceptual learning, category formation, and structure learning.
Restriction: Graduate students only.
PSYCH 211. Attention and Perception. 4 Units.
Focuses on selective attention, the process of selecting a subset of available information for analysis and representation, and on how stimulus salience, behavioral goals, and expectations influence attentional deployment and perception. Also explores related cognitive processes and applications.
Restriction: Graduate students only.

PSYCH 213. The Mind/Body Problem. 4 Units.
Course is multidisciplinary, drawing on information from the fields of quantum physics, computer vision, artificial intelligence, cognition, neurophysiology, philosophy, and psychophysics.
Restriction: Graduate students only.

PSYCH 214. Bayesian Cognitive Modeling. 4 Units.
Considers a range of statistical methods of data analysis and simple cognitive models using the Bayesian graphical modeling framework.
Restriction: Graduate students only.

PSYCH 215L. Language Acquisition. 4 Units.
Focuses on native language learning, exploring the way in which infants and very young children unconsciously uncover the rich systematic knowledge of their native language. Examines both experimental and computational studies that quantitatively investigate the "how" of language acquisition.
Restriction: Graduate students only.

PSYCH 217. Vision. 4 Units.
Examines visual sensation and perception using psychophysical and neuroscientific perspectives. Covers visual stimulus description and generation; the eye and retinal processing; LGN and cortical visual area function; specialized processing for form, depth, motion, and color perception; and neurological disorders.
Restriction: Graduate students only.

PSYCH 218. Hearing. 4 Units.
Examines auditory sensation and perception using psychophysical and neuroscientific perspectives. Covers physical aspects of sound; subcortical auditory processing; aspects of sensation and perception such as sensitivity, sound localization, and complex-sound recognition; neuroscientific studies of cortical function; and abnormal auditory processing.
Restriction: Graduate students only.

PSYCH 228A. Cognitive Development Research. 4 Units.
Provides experience in cognitive development research, centered around the child's acquisition of number words and concepts. Students conduct research and review and discuss each other's projects in weekly lab meetings with instructor and graduate students.
Repeatability: May be repeated for credit unlimited times.
Concurrent with PSYCH 148A.

PSYCH 228B. Cognitive Development Research. 4 Units.
Provides experience in cognitive development research, centered around the child's acquisition of number words and concepts. Students conduct research and review and discuss each other's projects in weekly lab meetings with instructor and graduate students.
Repeatability: May be repeated for credit unlimited times.
Concurrent with PSYCH 148B.

PSYCH 228C. Cognitive Development Research. 4 Units.
Provides experience in cognitive development research, centered around the child's acquisition of number words and concepts. Students conduct research and review and discuss each other's projects in weekly lab meetings with instructor and graduate students.
Repeatability: May be repeated for credit unlimited times.
Concurrent with PSYCH 148C.

PSYCH 229. Special Topics in Human Cognition. 1.3-4 Units.
Current research in brain/behavior relationships, human memory, and learning theory is presented.
Repeatability: Unlimited as topics vary.
Restriction: Graduate students only.
PSYCH 231P. Topics in Philosophy of Psychology. 4 Units.
Selected topics in the philosophy of psychology, e.g., the nature of psychological explanation, reductionism, issues in cognitive, behavioral, and neuroscience.

Repeatability: Unlimited as topics vary.

Same as LPS 243, PHILOS 243.

PSYCH 234A. Mathematical Models of Cognitive Processes I . 4 Units.
Mathematical models of various cognitive processes developed since 1960, including learning, memory, perception, psycholinguistics, and problem solving. Models are formulated in different mathematical languages: calculus, algebra, logic, probability, and computer. Difficulties in testing and validating models discussed.

Restriction: Graduate students only.

PSYCH 236. Multivariate Time Series Analysis. 4 Units.
Introduces multivariate time series analysis theory and methods emphasizing computational methods in spectral analysis, autoregressive modeling, information theory, principal and independent components analysis, and nonlinear dynamics. Applications to human neuroimaging data are extensively discussed.

Prerequisite: PSYCH 205A

Restriction: Graduate students only.

PSYCH 237. Advanced Bayesian Cognitive Modeling. 4 Units.
Considers a range of advanced cognitive process models including models of signal detection, memory retention, category learning, stimulus representation, and reasoning using the Bayesian graphical modeling framework.

Prerequisite: PSYCH 214

Restriction: Graduate students only.

PSYCH 239. Special Topics in Methodology and Models. 1.3-4 Units.
Current research in cognitive sciences methodologies, concepts, and models is presented.

Repeatability: Unlimited as topics vary.

Restriction: Graduate students only.

PSYCH 245A. Computational Models of Language Learning. 4 Units.
Focuses on computational models of native language learning, exploring how probabilistic learning and inference fare on difficult case studies within language acquisition. In all cases, grounds the learning models in available empirical data and considers their psychological plausibility.

Prerequisite: PSYCH 215L

Restriction: Graduate students only.

PSYCH 249. Special Topics in Language Science. 1.3-4 Units.
Foundations and current research in theoretical, experimental, and computational linguistics.

Repeatability: Unlimited as topics vary.

Restriction: Graduate students only.

PSYCH 254. Human Information Processing. 4 Units.
Detailed introduction to speed-accuracy tradeoff experimental procedures; speed-accuracy tradeoff issues; quantitative modeling of temporal aspects of human information processing.

Repeatability: May be repeated for credit unlimited times.

Restriction: Graduate students only.

PSYCH 259. Special Topics in Human Performance. 1.3-4 Units.
Current research in the human issues involved with sensation, perception, and cognition.

Repeatability: Unlimited as topics vary.

Restriction: Graduate students only.
PSYCH 261N. Cortical Neuroscience. 4 Units.
Physiology of the cerebral cortex, theoretical neuroscience, and the neural basis of perception.
Prerequisite: PSYCH 216

PSYCH 262. Functional Neuroanatomy. 4 Units.
It is impossible to truly understand human behavior without some understanding of the physical structure that enables behavior. Examines recent findings in functional neuroanatomy through lectures and papers discussing links between particular behaviors and specific brain structures.
Restriction: Graduate students only.

PSYCH 263A. Visual Neuroscience Research. 4 Units.
Covers a range of cognitive neuroscience research topics with emphasis on cortical organization of visual circuits, object recognition, motion perception, visual attention, and decision making.
Repeatability: May be repeated for credit unlimited times.
Restriction: Graduate students only.
Concurrent with PSYCH 165A.

PSYCH 263B. Visual Neuroscience Research. 4 Units.
Covers a range of cognitive neuroscience research topics with emphasis on cortical organization of visual circuits, object recognition, motion perception, visual attention, and decision making.
Restriction: Graduate students only.
Concurrent with PSYCH 165B.

PSYCH 263C. Visual Neuroscience Research. 4 Units.
Covers a range of cognitive neuroscience research topics with emphasis on cortical organization of visual circuits, object recognition, motion perception, visual attention, and decision making.
Restriction: Graduate students only.
Concurrent with PSYCH 165C.

PSYCH 265. Introduction to Functional MRI. 4 Units.
Describes the fundamentals of imaging the human brain function using functional Magnetic Resonance Imaging (fMRI). Topics include basic fMRI physics, experimental design, and data acquisition and analysis.
Restriction: Graduate students only.

PSYCH 267. Cognitive Neuroscience of Music. 4 Units.
Introduction to cortical mechanisms involved in music perception and production.
Repeatability: May be repeated for credit unlimited times.
Restriction: Graduate students only.

PSYCH 268A. Computational Neuroscience. 4 Units.
Introduction to computational neuroscience. Mathematical models of single neurons, neural circuits, thalamocortical systems, and cortical mass action can stimulate single-unit, local field potential, and EEG dynamics. These models are used to investigate mechanisms of sensation, motor control, attention, and consciousness.
Prerequisite: PSYCH 205A and (PSYCH 216 or PSYCH 261N)

PSYCH 268R. Cognitive Robotics. 4 Units.
Introduces concepts for studying cognitive function by embedding brain models on robotic platforms. Topics include robot construction, computer programming, and the notion of embodiment. Students construct simple robots and program these robots to perform different behaviors.

PSYCH 269. Special Topics in Cognitive Neuroscience. 1.3-4 Units.
Current research in cognitive neuroscience.
Repeatability: Unlimited as topics vary.
Restriction: Graduate students only.
PSYCH 289. Special Topics in Sensation and Perception. 1.3-4 Units.
Current research in the reception and processing of visual and auditory stimuli presented.

Repeatability: Unlimited as topics vary.

Restriction: Graduate students only.

PSYCH 290. Dissertation Research. 1-12 Units.
Dissertation research with Cognitive Science faculty.

Repeatability: May be repeated for credit unlimited times.

Restriction: Graduate students only. Psychology Majors only.

PSYCH 299. Individual Study. 4-12 Units.
Individual research with Cognitive Science faculty.

Repeatability: May be repeated for credit unlimited times.

Restriction: Graduate students only.