Cognitive, Linguistic, and Psychological Sciences

(Primarily for Undergraduates)

0020 Approaches to the Mind: Introduction to Cognitive Science (formerly COGS 0010)
Cognitive science is the study of the mind from an interdisciplinary perspective. It focuses on such questions as how do we process information to recognize objects and faces, to know that a cup is not a bowl, to remember and learn, and to speak and understand? How can studying the brain inform us about the mind? This course will examine the above questions and discuss major themes in cognitive science including nature-nurture, categories and representations, and the nature of computations. WRIT

Fall  CLPS0020  S01  15670  MWF 12:00-12:50(12)  (S. Blumstein)

0030 Introduction to Linguistic Theory (formerly COGS 0410)
The ability to speak and understand a language involves having mastered (quite unconsciously) an intricate and highly structured rule-governed system. Linguists seek to model that rule system. This course introduces the principles underlying phonology (the principles which govern how sounds are put together), syntax (the rule system governing sentence structure), and semantics (the system which relates sentences to meanings). LILE

Fall  CLPS0030  S01  15671  TTh 10:30-11:50(09)  (P. Jacobson)

0040 Mind and Brain: Introduction to Cognitive Neuroscience (formerly COGS 0720)
This course provides an introduction to the neuroscientific study of cognition. Topics surveyed in the course include the neural bases of perception, attention, memory, language, executive function, emotion, social cognition, and decision making. In covering these topics, the course will draw on evidence from brain imaging (fMRI, EEG, MEG), transcranial magnetic stimulation, electrophysiology, and neuropsychology. The course will also consider how knowledge about the brain constrains our understanding of the mind.

Fall  CLPS0040  S01  15672  MWF 10:00-10:50(03)  (D. Badre)

0050A Computing as Done in Brains and Computers (formerly COGS 0100A)
Brains and computers compute in different ways. We will discuss the software and hardware of brains and computers and with introduction to the way brains are organized, the way computers are organized, and why they are good at such different things. We will talk about our current research, the Ersatz Brain Project, an attempt to design a first-class second-class brain. Enrollment limited to 15 first year students. FYS

Fall  CLPS0050A  S01  15673  MWF 10:00-10:50(03)  (J. Anderson)

0120 Introduction to Sleep (formerly PSYC 0550)
Uses sleep as the focal point for describing complex behavioral phenomena. How is sleep measured and defined? How does sleep differ across species? What accounts for the timing of sleep? How does sleep change with age? What are the behavioral, physiological, and cognitive concomitants of different states of sleep? How can dreaming be understood? What can go wrong with sleep?

Fall  CLPS0120  S01  15675  M 3:00-5:20(13)  (M. Carskadon)

0220 Making Decisions (formerly COGS 0500)
Life is full of decisions. Some decisions are made rationally, others could be improved. This course considers the psychology of human decision-making, the analysis of optimal decision-making, and implications for individual action and social policy. Topics include: chance and preference (e.g., how do consumers weigh attributes when making purchases?); the value of information (e.g., when should physicians order expensive diagnostic tests?); risky choice (e.g., is it rational to play the lottery?).

Fall  CLPS0220  S01  16077  Th 4:00-6:20(13)  (S. Sloman)

0530 Making Visual Illusions
Visual illusions are vivid examples of the mistakes our visual systems make. This interdisciplinary course is designed for art and science students with interests in visual perception to explore how and why visual processing sometimes fails. Course work will include hands-on laboratory experiments and art construction exercises. Topics will include color, brightness, and geometric illusions. Enrollment limited to 15. LILE
0610 Children's Thinking: The Nature of Cognitive Development (formerly COGS 0630)
An examination of children's thinking and cognitive development from infancy to middle childhood. Considers a range of topics including memory, reasoning, categorization, perception, and children's understanding of concepts such as space, time, number, mind, and biology. Major theories of cognitive development are described and evaluated in light of the available psychological data. LILE

Fall CLPS0610 S01 15677 MWF 1:00-1:50(06) (D. Sobel)

0700 Social Psychology (formerly PSYC 0210)
Examines the theories, findings, and methods of social psychology. Topics include: social cognition (person perception, attitudes), social influence (cultural sources of attitudes, conformity), and social relations (aggression, altruism, prejudice). Students become better informed consumers of empirical research and acquire a new framework for interpreting social behavior. Applications to historic and current events.

Fall CLPS0700 S01 15678 TTh 2:30-3:50(11) (B. Malle)

0900 Quantitative Methods in Psychology (formerly COGS/PSYC 0090)
A survey of statistical methods used in the behavioral sciences. Topics include graphical data description, probability theory, confidence intervals, principles of hypothesis testing, analysis of variance, correlation, and regression, and techniques for categorical data. Emphasizes application of statistical methods to empirical data.

Fall CLPS0900 S01 15679 MWF 1:00-1:50(06) (K. Spoehr)

(For Undergraduates and Graduates)

1180B Biology of Communication (formerly PSYC 1750A)
The study of animal communication systems from mechanistic, developmental, ecological, and evolutionary perspectives. The uses of auditory, chemical, and visual cues for mediating intraspecific communication in both vertebrate and invertebrate animals. Recommended prerequisites: CLPS 0110 (PSYC 0500), CLPS 1192 (PSYC 1200), BIOL 0450, or equivalent. Instructor's permission required.

Fall CLPS1180B S01 15680 M 3:00-5:20(13) (R. Colwill)

1192 Experimental Analysis of Animal Behavior and Cognition (formerly PSYC 1200)
A laboratory course on the prediction, control, and explanation of the behavior of animals in simple environments. Prerequisite: CLPS 0900 (PSYC/COGS 0090).

Fall CLPS1192 S01 15681 TTh 10:30-11:50(09) (R. Church)

1200 Thinking (formerly COGS 1520)
An investigation of conceptual structure, judgment, and inferential processes. The focus is on the relation between empirical evidence, theories, and models of cognitive process and structure. Prerequisite: CLPS 0200 (COGS 0420).

Fall CLPS1200 S01 15682 Th 4:00-6:20(13)

1320 The Production, Perception, and Analysis of Speech (formerly COGS 1230)
An introduction to the basis of the acoustic analysis of speech, the anatomy and physiology of speech production, and the perception of speech. Discussion and demonstration of quantitative computer-implemented methods for speech analysis. Linguistic and cognitive theories are discussed in relation to the probable neural mechanisms and anatomy that make human speech possible. Lectures, discussion, and laboratory demonstrations.

Fall CLPS1320 S01 15685 TTh 2:30-3:50(11) (P. Lieberman)

1381 Topics in Phonetics and Phonology: Intonational Phonology
This course is an in-depth study of intonation—the manipulation of pitch and length to signify sentence-level meaning—in English as well as in other languages. This course will have two components, which will overlap considerably. In the laboratory skills component, you will learn how to collect, transcribe, measure, and analyze intonational data in Praat (a program for acoustic analysis), while in the theoretical component, you will read about and test the claims of various theories of intonation. With these skills, you will conduct independent research over the course of the
semester. The course will also cover the interface between intonation and syntax/semantics, including the realization of focus in prosody.

Fall CLPS1381 S01 15686 MW 10:00-11:20(03)

1400 The Neural Bases of Cognition (formerly PSYC 1880)
Research using animal models has informed and guided many of the recent advances in our understanding of the brain mechanisms underlying cognition. This seminar course will address topics related to animal models of human cognition. Students learn about how different aspects of the neural bases of cognition are modeled in animals by reviewing the primary research literature. The course is divided into three sections, each addressing one animal model in one cognitive domain. Selected papers will emphasize learning, memory, and attention, but may also address other aspects of cognition, for example decision-making, or cognitive impairment associated with neuropathology or aging. Prerequisite: CLPS 0040 (COGS 0720), CLPS 0400 (PSYC 0470), or NEUR 0010; and CLPS 1190 (PSYC 1030), CLPS 1191 (PSYC 1450), CLPS 1192 (PSYC 1200), or NEUR 1600; or instructor permission. Enrollment limited to 20. Not open to first year students.

Fall CLPS1400 S01 15687 F 12:00-2:20(12) (R. Burwell)

1480A Cognitive Neuroscience of Emotion (formerly PSYC 1820)
Topics discussed in this course include: visual attention, awareness, emotional perception, and emotional memory. Classes will be structured around the discussion of current papers in the literature. Active participation in class is required, including the presentation of papers from the literature. Enrollment limited to 20.

Fall CLPS1480A S01 15688 MWF 1:00-1:50(06) (M. Van't Wout)

1492 Laboratory in Computational Cognitive Neuroscience (formerly COGS 1460)
We explore neural network models that bridge the gap between biology and cognition. Begins with basic biological and computational properties of individual neurons and networks of neurons. Examines specialized functions of various brain systems (e.g., parietal cortex, frontal cortex, hippocampus, ganglia) and their involvement in various phenomena, including perception, attention, memory, language and higher-level cognition. Includes a lab component in which students get hands on experience with graphical neural network software, allowing deeper appreciation for how these systems work. Prerequisites: CLPS 0020 (COGS 0010) or CLPS 0200 (COGS 0420); and CLPS 0410 (PSYC 0750) or NEUR 0010.

Fall CLPS1492 S01 15689 TTh 10:30-11:50(09) (M. Frank)

1520 Computational Vision (formerly COGS 1200)
A detailed introduction to computational models of biological and machine vision summarizing traditional approaches and providing experience with state-of-the-art methods. Topics include low-level vision (color, motion, depth and texture), segmentation, face, object and scene recognition. Connections to contemporary research in computer vision and computational neuroscience will be emphasized highlighting how computational models may motivate the development of new hypothesis for experiment design in cognitive psychology.

Fall CLPS1520 S01 15690 TTh 1:00-2:20(10) (T. Serre)

1580A Visually-Guided Action and Cognitive Processes
One of the main purposes of encoding visual information is to perform visually-guided actions to directly interact with the external world. This seminar will shed light on the behavioral and underlying neural mechanisms involved in integrating perception and cognitive processes, and converting them into action. We will also explore how visuomotor behavior can provide a useful tool to study a wide range of conscious and unconscious cognitive processes including the current locus of attention, the nature of language representation, spatial representation of number, and high-level decision-making. Prerequisite: CLPS 0010 (PSYC 0010), CLPS 0020 (COGS 0010), or NEUR 0010.

Fall CLPS1580A S01 15691 F 3:00-5:20(15) (J. Song)

1621 The Developing Brain (formerly PSYC 1750C)
Analysis of brain development focusing on neural substrates of psychological processes. Prerequisites: CLPS 0010 (PSYC 0010) or NEUR 0010. Not open to first year students or sophomores. Instructor permission required.

Fall CLPS1621 S01 15693 TTh 2:30-3:50(11) (A. Simmons)

1700 Abnormal Psychology (formerly PSYC 1330)
The study of anxiety, stress, and neurotic disorders, psychosomatic disorders, deviant social behavior, affective disorders, and schizophrenia. Considers theories of etiology (causes) and methods of therapeutic treatment, case studies, experimental research, and clinical research.

Fall  CLPS1700  S01  15694  TTh 9:00-10:20(08)  (B. Hayden)

1720 Human Resilience (formerly PSYC 1410)
This course explores answers to the question of what enables some individuals to escape the worst psychological consequences of extreme personal disruption caused by a range of human-made and natural disasters. It examines personal accounts, pertinent psychological research, theoretical discussions, and the creative works of catastrophe survivors. Prerequisites: CLPS 0010 (PSYC 0010), CLPS 0701 (PSYC 0300), or instructor permission. Enrollment limited to 20.

Fall  CLPS1720  S01  16320  TTh 4:00-5:20(13)

1730 Psychology in Business and Economics
The goal of this course is to explore emerging themes at the intersection of psychological science, business, and behavioral economics. Psychologists are primarily interested in detecting limits to human rationality, whereas economics tends to proceed within the rational-actor model. In business, questions arise of how theoretical models and empirical findings related to the practice of managerial decision-making. Investigations of power and the psychological impact of money are relatively recent additions to the suite of research topics. New methodologies, such as neuro-imaging have led to advances not represented in the traditional framework of organizational psychology. Enrollment limited to 20 junior and senior Psychology concentrators.

Fall  CLPS1730  S01  16064  TTh 2:30-3:50(11)  (J. Krueger)

1790 Personality and Clinical Assessment (formerly PSYC 1110)
Examines methods used in the study of child and adult personality, including microanalysis of social interactions, observer report, self report, test data, and life outcome data. Standardized personality assessment instruments will be examined in the context of their reliability, predictive and construct validity. Students will design research projects using these methods, collect and analyze data, give oral presentations, and prepare a written report of their research. Prerequisites: CLPS 0701 (PSYC 0300), and CLPS 0900 (PSYC/COGS 0090) or equivalent. Enrollment limited to 27.

Fall  CLPS1790  S01  15695  TTh 1:00-2:20(10)  (J. Wright)

1970 Independent Study (formerly COGS 1980)
Independent study or directed research in cognitive science. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Fall

1980 Directed Research in Psychology (formerly PSYC 1990)
Required of all ScB concentrators and Honors students in psychology. Instructor permission required. S/NC only. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Fall

(Primarily for Graduates)

2000 Graduate Proseminar I (formerly COGS 2000)
Required of all graduate students in the cognitive science program.

Fall  CLPS2000  S01  15697  ‘To Be Arranged’

2091 Graduate First Year Project Research (formerly PSYC 2000)
Please check Banner for the correct section number and CRN to use when registering for this course.

Fall

2095 Practicum in Teaching (formerly COGS/PSYC 2050)
Each student will assist a designated faculty member in teaching a course in cognitive science or related discipline. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.
2096 Directed Graduate Research (formerly COGS 2980/2981, PSYC 2030)
No description available.

2400 Core Topics in the Neural Basis of Behavior (formerly PSYC 2270)
Seminar on comparative aspects of brain evolution and function, with implications for behavior. Open to graduate students only.

Fall CLPS2400 S01 15698 F 12:00-2:30(12) (A. Simmons)

2800 Core Topics in Language (formerly COGS 2200B)
No description available. Open to graduate students only.

Fall CLPS2800 S01 15699 TTh 9:00-10:20(08) (J. Morgan)

2906 Experimental Design (formerly PSYC 2060)
The course designed for students at the intermediate level or above and will cover t-tests, power analysis, correlation, simple and multiple linear regression, logistic regression, analysis or variance, non-parametric tests, randomization and bootstrapping, among others. Instructor permission required. Open to graduate students only.

Fall CLPS2906 S01 15700 TTh 10:30-11:50(09) (W. Heindel)

2970 Preliminary Examination Preparation (formerly COGS/PSYC 2970)
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination.

Fall CLPS2970 S01 15701 'To Be Arranged'

2990 Thesis Preparation (formerly COGS/PSYC 2990)
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.

Fall CLPS2990 S01 15702 'To Be Arranged'

Linguistics

(Primarily for Undergraduates)

0030 Introduction to Linguistic Theory (CLPS 0030)
Interested students must register for CLPS 0030 S01 (CRN 15671).

(For Undergraduates and Graduates)

1320 The Production, Perception, and Analysis of Speech (CLPS 1320)
Interested students must register for CLPS 1320 S01 (CRN 15685).

1381 Topics in Phonetics and Phonology: Intonational Phonology (CLPS 1381)
Interested students must register for CLPS 1381 S01 (CRN 15686).