COGNITIVE SCIENCE (CGSC)

CGSC 110a / PSYC 130a, Introduction to Cognitive Science  Brian Scholl  
An introduction to the interdisciplinary study of how the mind works. Discussion of tools, theories, and assumptions from psychology, computer science, neuroscience, linguistics, and philosophy.   so

CGSC 216b / LING 116b / PSYC 116b, Cognitive Science of Language  Staff  
The study of language from the perspective of cognitive science. Exploration of mental structures that underlie the human ability to learn and process language, drawing on studies of normal and atypical language development and processing, brain imaging, neuropsychology, and computational modeling. Innate linguistic structure vs. determination by experience and culture; the relation between linguistic and nonlinguistic cognition in the domains of decision making, social cognition, and musical cognition; the degree to which language shapes perceptions of color, number, space, and gender.   so

CGSC 277a / AFAM 198a / EDST 177a / EP&E 494a / PHIL 177a, Propaganda, Ideology, and Democracy  Jason Stanley  
Historical, philosophical, psychological, and linguistic introduction to the issues and challenges that propaganda raises for liberal democracy. How propaganda can work to undermine democracy; ways in which schools and the press are implicated; the use of propaganda by social movements to address democracy's deficiencies; the legitimacy of propaganda in cases of political crisis.   HU  
½ Course cr

* CGSC 315b / PHIL 353b / PSYC 315b, Philosophy for Psychologists  Joshua Knobe  
Introduction to frameworks developed within philosophy that have applications in psychological research. Principal topics include the self, causation, free will, and morality. Recommended preparation: a course in philosophy or psychology.   HU, SO

CGSC 315a / PSYC 315a, The Modern Unconscious  John Bargh  
The notion of the unconscious mind traced from the early 1800s through Freud to present-day cognitive science, with a focus on the past thirty years. The power and function of the unconscious as a pervasive part of normal everyday human functioning. Readings from philosophy of mind and evolutionary biology.   so

* CGSC 395a / PHIL 395a, Junior Colloquium in Cognitive Science  Guilherme Almeida  
Survey of contemporary issues and current research in cognitive science. By the end of the term, students select a research topic for the senior essay. Enrollment limited to Cognitive Science majors.   ½ Course cr

* CGSC 420a or b / NSCI 440a or b / PSYC 420a or b, Topics in Clinical Neuroscience  Avram Holmes  
An overview and examination of the neuroscience of psychiatric illness. We focus on cutting-edge research in humans and animals aimed at understanding the biological mechanisms that underlie psychiatric illness. Although these questions date back to early philosophical texts, only recently have experimental psychologists and neuroscientists begun to explore this vast and exciting domain of study. We discuss the evolutionary and developmental origins of individual differences in human personality, measurement issues, fundamental dimensions of psychopathology, stability/plasticity, heritability, and implications therapeutic interventions as well as the associated broader implications for public policy. A major focus is on the neurobiology of fear and anxiety, including brain circuits, molecular genetic pathways, and epigenetics. A secondary focus is on differences in behavior and biology that confer risk for the development of depression and addiction, including the biological systems involved in hedonic pleasure, motivated goal pursuit, and the regulation of impulses in the face of everyday temptation. Students should have some background in psychology; PSYC 110 and PSYC 160 preferred.   so

* CGSC 425b / PSYC 425b, Social Perception  Brian Scholl  
Connections between visual perception, among the earliest and most basic of human cognitive processes, and social cognition, among the most advanced forms of higher-level cognition. The perception of animacy, agency, and goal-directedness; biological motion; face perception (including the perception of facial attractiveness); gaze processing and social attention; "thin-slicing" and "perceptual stereotypes"; and social and cultural influences on perception.   so

Introduction to the emerging field of moral cognition. Focus on questions about the philosophical significance of psychological findings. Topics include the role of emotion in moral judgment; the significance of character traits in virtue ethics and personality psychology; the reliability of intuitions and the psychological processes that underlie them.   HU

* CGSC 435a / PSYC 435a, The Kinds We Keep: Sorting and Distorting Reality  Frank Keil  
Sorting the world into kinds is crucial human cognition. It grounds concepts, the currency of thought. But this cognitive asset can corrode our humanity and become a curse if we fail to understand the attendant biases. We first consider some metaphysical assumptions about causal patterns in the world that sustain relatively stable kinds and how these provide grounds for building early categories. We then examine why humans, and most AI systems, must sort individuals into kinds to learn and think about the world. But while categorization greatly amplifies the power of thought, it also distorts what is sorted and how the resulting kinds are construed. We explore why learning is impossible without such distortions of and consider different sets of distortions and when they occur. We focus on thought about fundamental, or ontological kinds, many of which are first apprehended in infancy or early childhood. These include non-living natural kinds, goal-directed entities, thinking things, living things, and artifacts. We ask how human and artificial agents might take more care with the kinds they use. How can we embrace the kinds that inspire exploration and discovery without having our mis-construals turn them towards darker ends? Prerequisites: PSYC 110 or CGSC 110 and two additional courses relevant to cognition.   so
* CGSC 437b / PSYC 437b, Minds,Brains, and Machines Julian Jara-Ettinger
Exploration of the implications that the brain is a kind of computer that gives rise to the mind. Readings combine classical and cutting-edge research in psychology, philosophy, and artificial intelligence. SO RP

* CGSC 439a / PSYC 439a, The Psychology of Social Construction Yarrow Dunham
We live in a world replete with “forgeries that become genuine”: pieces of paper that become money, words that become promises, lines in the sand that become borders. Nearly every aspect of our lives is shaped and constrained by these kinds of socially constructed entities, things as real as mountains but far more mysterious. How do such entities come to be, and how do (and how should) we understand them? How are they made and how can they be contested when they go astray? Answering these questions requires ranging across diverse literatures beginning with psychology but including philosophy, anthropology, economics, and game theory. Prerequisite: PSYC 110 or CGSC 110. SO

* CGSC 471a, Directed Research in Cognitive Science Joshua Knobe
Research projects for qualified students. The student must be supervised by a member of the Cognitive Science faculty, who sets the requirements and directs the research. To register, a student must submit a written plan of study to the director of undergraduate studies and the faculty supervisor. The normal minimum requirement is a written report of the completed research, but individual faculty members may set alternative equivalent requirements. Only one term may be offered toward the major, with permission of the director of undergraduate studies; two terms may be offered toward the bachelor’s degree.

* CGSC 473a, Directed Reading in Cognitive Science Joshua Knobe
Individual study for qualified students who wish to investigate an area of cognitive science not covered in regular courses. The student must be supervised by a member of the Cognitive Science faculty, who sets the requirements and meets regularly with the student. To register, a student must submit a written plan of study to the director of undergraduate studies and the faculty supervisor. The normal minimum requirement is a term paper, but individual faculty members may set alternative equivalent requirements. Only one term may be offered toward the major, with permission of the director of undergraduate studies; two terms may be offered toward the bachelor’s degree.