

COGNITIVE SCIENCE (COGST)

COGST 1101 - Introduction to Cognitive Science (3 Credits)

Crosslisted with PSYCH 1102, LING 1170, PHIL 1620, CS 1710, HD 1102
This course provides an introduction to the science of the mind. Everyone knows what it's like to think and perceive, but this subjective experience provides little insight into how minds emerge from physical entities like brains. To address this issue, cognitive science integrates work from at least five disciplines: Psychology, Neuroscience, Computer Science, Linguistics, and Philosophy. This course introduces students to the insights these disciplines offer into the workings of the mind by exploring visual perception, attention, memory, learning, problem solving, language, and consciousness.

Distribution Requirements: (ETM-AS), (KCM-AG), (SCT-IL)

Last Four Terms Offered: Summer 2025, Fall 2024, Summer 2024, Fall 2023

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 1104 - WIM: Introduction to Cognitive Science (1 Credit)

Crosslisted with PSYCH 1104, PHIL 1621, LING 1104
This section is highly recommended for students who are interested in learning about the topics covered in the main course through writing and discussion.

Corequisites: COGST 1101.

Last Four Terms Offered: Fall 2024, Fall 2023, Spring 2023, Spring 2022
Schedule of Classes (<https://classes.cornell.edu/>)

COGST 1105 - Introduction to Linguistics (4 Credits)

Crosslisted with LING 1101
Overview of the science of language, especially its theoretical underpinnings, methods, and major findings. Areas covered include: the relation between sound and meaning in human languages, social variation in language, language change over time, universals of language, and the mental representation of linguistic knowledge. Students are introduced to a wide variety of language phenomena, drawn not only from languages resembling English, but also from many that appear to be quite unlike English, such as those native to the Americas, Africa, Asia, Australia, and the South Pacific.

Distribution Requirements: (ETM-AS, SSC-AS), (KCM-AG, SBA-AG)

Last Four Terms Offered: Spring 2025, Fall 2024, Spring 2024, Fall 2023
Schedule of Classes (<https://classes.cornell.edu/>)

COGST 1111 - Making a Difference by Design (3 Credits)

Crosslisted with DEA 1110

This course provides a broad overview of design applied various disciplines, scales, and problem contexts, and how design can offer an alternative, and often more human-centered perspective towards solving the problems around us. With a focus on designing with a human-centered mindset in this age of technology, we will examine topics on the role of design in wearable computing, virtual and tangible interfaces, robotics to biology. We will also apply the lens of design to issues on sustainability, healthy environments, diversity and inclusion, and designing for social good. Each week, through case studies and familiar examples, DEA 1110 explores how designing is part of every discipline.

Enrollment Information: Enrollment priority given to: DEA undergraduate majors. DEA minors and transfers will be given enrollment consideration based on course caps and/or permission of instructor.

Course Fee: Materials Fee, \$50.

Exploratory Studies: (CU-CEL, CU-SBY)

Last Four Terms Offered: Fall 2024, Fall 2023, Fall 2022, Winter 2022

Learning Outcomes:

- Comprehend disciplines and fields, develop an understanding of design applied across a wide range of disciplines to make a difference, and learn to appreciate design at different scales and applied across problem contexts.
- Apply multi-disciplinary perspectives, identify and examine the relationship between design, technology, and other disciplines, and proactively apply interdisciplinary and transdisciplinary perspectives to problem-solving.
- Write, speak, and use visual communications effectively, demonstrate the ability to develop and communicate one's creative ideas effectively through writing, visuals, and tangible prototypes.

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 1112 - Change-making: Designing Healthy and Hospitable Environments (3 Credits)

Crosslisted with DEA 1112

Designing Human-Centered, Healthy and Hospitable Environments is a three-week course examining design innovations and some impacts on management/operations in hospitality, communication, business, healthcare, and senior housing. During this course students will learn how design impacts organizations and every aspect of daily life. Using case studies, familiar examples, and interactions with a variety of leaders from design, healthcare and hospitality fields, students will engage with design thinking and explore new career pathways.

Distribution Requirements: (SBA-AG)

Last Four Terms Offered: Summer 2025, Summer 2024, Winter 2024, Summer 2023

Learning Outcomes:

- Understand the relationship between health, hospitality, and design.
- Identify characteristics of service design.
- Commit to design excellence and socially responsible design.
- Explain basic ideas involved with the process of design thinking.
- Describe some ways hospitality ideas can improve the design of services in healthcare.

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 1212 - Music on the Brain (3 Credits)

Crosslisted with MUSIC 1212

This course is for anyone who listens to music or plays music and wonders what's happening in your brain that makes you feel the way you do. Starting with the music each of you knows and loves-the soundtrack to your life-we'll tackle questions like: what is the relationship between speech and music? Do animals have music, too? How does the brain process aspects of music, including rhythm, melody, harmony, and form? Why does some music trigger an emotional response? What does it mean to say that music is an embodied behavioral act? What is the relationship between music and memory? Through lectures, discussions, experiments, compositions, recording technologies, student presentations/performances and writing assignments we'll explore how/ why you've chosen the particular tunes on the soundtrack of your life, and how your brain processes musical thoughts and experiences. (HC)

Enrollment Information: Enrollment limited to: first- and second-year students. Recommended corequisite: MUSIC 1213.

Distribution Requirements: (ALC-AS), (CA-AG, LA-AG)

Last Four Terms Offered: Spring 2025, Spring 2024, Spring 2023, Spring 2022

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 1500 - Introduction to Environmental Psychology (3 Credits)

Crosslisted with DEA 1500, PSYCH 1500

Environmental Psychology is an interdisciplinary field concerned with how the physical environment and human behavior interrelate. Most of the course focuses on how residential environments and urban and natural settings affect human health and well-being. Students also examine how human attitudes and behaviors affect environmental quality. Issues of environmental justice and culture are included throughout. Hands-on projects plus exams.

Enrollment Information: Enrollment priority given to: DEA undergraduate majors. DEA minors and transfers will be given enrollment consideration based on course caps and/or permission of instructor.

Distribution Requirements: (D-AG, SBA-AG), (D-HE, LAD-HE, SBA-HE), (SSC-AS)

Exploratory Studies: (CU-SBY)

Last Four Terms Offered: Summer 2025, Fall 2024, Summer 2024, Fall 2023

Learning Outcomes:

- Provide overview of knowledge about the environment and human behavior (grounding in field).
- Understand cultural and life course diversity in human-environment interactions (sensitivity to diversity).
- Learn how to analyze problems like an environmental psychologist (develop critical thinking skill).

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 1501 - Introduction to Environmental Psychology - Writing in the Major (4 Credits)

Crosslisted with DEA 1501, PSYCH 1501

Human-Environment Relations is an interdisciplinary field concerned with how the physical environment and human behavior interrelate. Most of the course focuses on how residential environments and urban and natural settings affect human health and well-being. Students also examine how human attitudes and behaviors affect environmental quality. Issues of environmental justice and culture are included throughout. Hands-on projects plus exams. Lecture and discussion sections. WIM section attends a regular lecture but also meets weekly with a graduate writing instructor. The two principal objectives of WIM section: 1. More in depth discussion and analysis of the materials covered in the course. 2. On going, systematic opportunity to improve your writing and presentation skills.

Enrollment Information: Enrollment priority given to: DEA undergraduate majors. DEA minors and transfers will be given enrollment consideration based on course caps and/or permission of instructor.

Distribution Requirements: (D-AG, SBA-AG), (D-HE, LAD-HE, SBA-HE), (SSC-AS)

Exploratory Studies: (CU-CEL)

Last Four Terms Offered: Fall 2024, Fall 2023, Fall 2022, Fall 2020

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 2050 - Perception (3 Credits)

Crosslisted with PSYCH 2050, HD 2050

Basic perceptual concepts and phenomena are discussed with emphasis on stimulus variables and sensory mechanisms. All sensory modalities are considered, vision is discussed in detail.

Distribution Requirements: (BIO-AS), (OPHLS-AG), (SCT-IL)

Last Four Terms Offered: Spring 2025, Spring 2023, Fall 2018, Fall 2017

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 2090 - Developmental Psychology (3 Credits)

Crosslisted with PSYCH 2090, HD 2090

One of four introductory courses in cognition and perception. A comprehensive introduction to current thinking and research in developmental psychology that approaches topics from both psychobiological and cognitive perspectives. We will use a comparative approach to assess principles of development change. The course focuses on the development of perception, action, cognition, language, and social understanding in infancy and early childhood.

Distribution Requirements: (ETM-AS), (KCM-AG), (SCT-IL)

Last Four Terms Offered: Spring 2025, Spring 2024, Spring 2023, Spring 2022

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 2150 - Psychology of Language (3 Credits)

Crosslisted with PSYCH 2150, LING 2215

Provides an introduction to the psychology of language. The purpose of the course is to introduce students to the scientific study of psycholinguistic phenomena. Covers a broad range of topics from psycholinguistics, including the origin of language, the different components of language (phonology, morphology, syntax, and semantics), processes involved in reading, computational modeling of language processes, the acquisition of language (both under normal and special circumstances), and the brain bases of language.

Prerequisites: any one course in psychology or human development.

Enrollment Information: Enrollment limited to: sophomores, juniors, and seniors.

Distribution Requirements: (ETM-AS), (KCM-AG)

Last Four Terms Offered: Spring 2025, Spring 2024, Spring 2023, Spring 2022

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 2200 - The Human Brain and Mind: An Introduction to Cognitive Neuroscience (3 Credits)

Crosslisted with HD 2200

At the turn of the 21st century the age of Embodied Cognition dawned: a reconsideration of relationships between body, brain, and mind. Researchers in philosophy, psychology, linguistics, and cognitive neuroscience challenged the 20th-century dogma that the mind is like a digital computer, and can be studied independently of the body, brain, and world. Researchers turned their attention to the role that bodily experience plays in thinking and learning, and the roles neural systems for perception and action play in cognition. This course views the field of Cognitive Neuroscience through the lens of Embodied Cognition research, and evaluates the extent to which embodiment may be passing fad, a useful shift in perspective, or a revolutionary new way of building theories about brain and mind.

Distribution Requirements: (ETM-AS), (KCM-AG), (KCM-HE, PBS-HE, SBA-HE), (SCT-IL)

Last Four Terms Offered: Fall 2024, Fall 2023, Fall 2022, Spring 2021
Schedule of Classes (<https://classes.cornell.edu/>)

COGST 2230 - Intro to Behavioral Neuroscience (3 Credits)

Crosslisted with PSYCH 2230, HD 2230

Introduction to psychology from a biological perspective, which focuses on brain mechanisms of behavior. Topics include the structure and function of the nervous system, physiological approaches to understanding behavior, hormones and behavior, biological bases of sensation and perception, learning and memory, cognition, emotion, and communication.

Distribution Requirements: (BIO-AS), (OPHLS-AG), (SCT-IL)

Last Four Terms Offered: Summer 2025, Fall 2024, Summer 2024, Fall 2023

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 2300 - Cognitive Development (3 Credits)

Crosslisted with HD 2300

This course will provide you with an overview of how children's cognition develops. We will investigate how cognition develops from many different perspectives. The main perspectives will be biological, genetic-epistemological, socio-cultural, and information-processing ones. This course also will help you to understand how cognition influences other areas of development, including intelligence, development of the self, language, and social development. Finally, different populations will be considered to better understand the roles not only of nature and nurture, but also of how the two interact to influence development.

Distribution Requirements: (ETM-AS, SSC-AS), (KCM-AG, SBA-AG)

Last Four Terms Offered: Fall 2024, Fall 2023, Fall 2020, Fall 2019
Schedule of Classes (<https://classes.cornell.edu/>)

COGST 2305 - Puzzles and Paradoxes (4 Credits)

Crosslisted with PHIL 2300

This course will survey a number of famous paradoxes about the nature of time, identity, logic, science, belief, decision, and value. Some of these paradoxes have widely accepted answers, but many do not. Paradoxes include (but are not limited to) Zeno's paradoxes, the sorites paradox, the liar paradox, paradoxes of probability, the doomsday and simulation arguments, Newcomb's puzzle, and the trolley problem. These paradoxes will be used as a stepping stone to deeper philosophical questions. Some of the questions we'll tackle include: Is time real? What is a person? Is infinity coherent? How is science possible? What is knowledge? What is it to be rational? What should we do? Does God exist? And finally, why is death bad?

Distribution Requirements: (SMR-AS)

Last Four Terms Offered: Fall 2023, Fall 2022, Summer 2022, Fall 2020
Schedule of Classes (<https://classes.cornell.edu/>)

COGST 2310 - Introduction to Deductive Logic (4 Credits)

Crosslisted with PHIL 2310

Covers sentential languages, the truth-functional connectives, and their logic; first-order languages, the quantifiers every and some, and their logic.

Distribution Requirements: (SMR-AS)

Last Four Terms Offered: Spring 2025, Fall 2024, Spring 2024, Fall 2023
Schedule of Classes (<https://classes.cornell.edu/>)

COGST 2350 - How the Brain Makes the Mind (3 Credits)

Crosslisted with PSYCH 2300, HD 2310

There is no getting away from the brain. Everything a person does, creates, thinks, feels, believes, and experiences (including making sense of course descriptions!) depends on it. But, how? How could a three pound mass of cells and the body in which it exists see, decide, or remember, let alone navigate a busy city, play soccer, or write poetry? This course will provide students with the foundational concepts and tools they will need to begin to address these questions, providing insight into how modern cognitive neuroscientists understand the brain, how it works, and how the mind emerges from all of this. Students will learn core principles of modern human cognitive neuroscience (e.g., brain structure versus function, connectivity, reuse) and their application to cognition (e.g., action, perception, attention, memory, emotion, language, cognitive control, and consciousness). Topics in neuroanatomy, human neuroscience methods, and neurological conditions will also be covered.

Distribution Requirements: (ETM-AS), (KCM-AG)

Last Four Terms Offered: Spring 2025, Spring 2024

Learning Outcomes:

- Contrast several perspectives on the relationship between the mind, brain, and body.
- Explain principles of cognitive neuroscience that relate brain structure to function.
- Describe current views about core cognitive functions, like perception, attention, and memory, and their brain basis.
- Demonstrate understanding of the methods and tools used in human cognitive neuroscience, contrasting their strengths and weaknesses.
- Describe how some kinds of brain dysfunction may lead to cognitive disorders.

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 2415 - Introduction to Moral Psychology (3 Credits)

Crosslisted with PHIL 2415, PSYCH 2415

This course is an introduction to the moral mind from philosophical and psychological perspectives. Many traditional philosophical problems about morality are being illuminated by current work in cognitive science. In this course, we will look at several of these problems. In each case, we will begin with a presentation of the philosophical problems, and we will proceed to examine recent empirical work on the topic. A wide range of topics will be covered, including moral judgment, agency, the self, and punishment.

Distribution Requirements: (ETM-AS), (KCM-AG)

Last Four Terms Offered: Spring 2025, Fall 2022, Fall 2021, Spring 2021

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 2621 - Minds and Machines (3 Credits)

Crosslisted with PHIL 2621

Throughout history, metaphors drawn from technology of the time have been proposed to understand how the mind works. While Locke likened the newborn's mind to a blank slate, Freud compared the mind to hydraulic and electro-magnetic systems. More recently, many have endorsed Turing's proposal that the mind is a computer. Why is this idea attractive and what exactly is a computer? Is it at all plausible that the cells of your brain are computing? Could a computer ever really have a mind, beliefs, emotions and conscious experiences? What are these mysterious things anyway? Could a machine ever count as a person and make choices based on its own free will? Is it really so clear that we have this kind of free will?

Distribution Requirements: (ETM-AS), (KCM-AG)

Last Four Terms Offered: Summer 2025, Fall 2024, Spring 2023, Spring 2021

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 2801 - Game Theory: For Finance, Diplomacy and Everyday Life (3 Credits)

Crosslisted with ECON 2801, PHIL 2835, GOVT 2803

The course is an introduction to game theory for students from diverse disciplinary backgrounds and interests. Game theory is a discipline barely one hundred years old. Its rise to prominence, with implications for various subjects, from economics, politics, and philosophy, to finance, diplomacy and computer science, in such a short time, has few parallels. The course is meant to be a primer on the subject for students who have no background in it. It can serve as groundwork for students pursuing different disciplines and also for those who intend to later take more advanced courses in game theory.

Distribution Requirements: (SSC-AS)

Exploratory Studies: (SAAREA)

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 3135 - The Psychology of Good and Evil (3 Credits)

Crosslisted with PSYCH 3135

Morality seems to be a universal feature of humanity. People across time, place and culture have a strong sense that certain things are right or wrong, that some people are good and some are evil. Where does this moral sense come from? Why do some people disagree so strongly about what is right and wrong? How did evolution shape this moral sense? How does it develop? Are there any universal aspects of moral psychology? The goals of this course are to offer an introduction to the psychological science behind what humans know as morality.

Prerequisites: PSYCH 1101.

Distribution Requirements: (ETM-AS, SSC-AS), (KCM-AG, SBA-AG)

Last Four Terms Offered: Fall 2024, Fall 2023, Fall 2021, Fall 2020

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 3140 - Computational Psychology (3 Credits)

Crosslisted with PSYCH 3140, INFO 3140

This course states and motivates the observation that cognition is fundamentally a computational process and explores the implications of this idea. Students are introduced to a variety of conceptual tools for thinking about cognitive information processing, including statistical learning from experience and the use of patterns distilled from past experience in guiding future actions. They learn to apply these tools to gain understanding of perception, memory, motor control, language, action planning, problem solving, decision making, reasoning, intelligence, and creativity. Applications of the newly acquired computational cognitive science concepts and tools to ecological issues - in particular, the accelerating climate catastrophe - are discussed in this course on a regular basis.

Prerequisites: one course each in psychology and statistics, or permission of instructor.

Distribution Requirements: (ETM-AS), (KCM-AG)

Last Four Terms Offered: Spring 2025, Spring 2024, Spring 2023, Spring 2022

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 3150 - Language and Power (3 Credits)

Crosslisted with HD 3150, PSYCH 3130, LING 3150

In this course, we will explore how language interacts with power: how does language reflect, shape, threaten and reinforce power relations in human society? From childhood through old age, language is an ever-present source of symbolic power. We use it to develop and express our identities, to position ourselves in hierarchies, and to establish group membership and exclusion throughout life. Language shapes ourselves, our families, our social lives, and our institutions. Understanding how people use language can provide a window into hidden aspects of both individuals and the social world.

Distribution Requirements: (CA-AG, D-AG, SBA-AG), (CA-HE, D-HE), (SSC-AS)

Last Four Terms Offered: Spring 2025, Fall 2024, Spring 2024, Spring 2023

Learning Outcomes:

- To develop skills for thinking, speaking, and writing critically about social scientific questions.
- To apply these skills in analyzing the papers we discuss in class.
- To understand the role of language in the social world and its power structures.

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 3190 - Memory and the Law (3 Credits)

Crosslisted with HD 3190, PSYCH 3190

Focuses on how the scientific study of human memory interfaces with the theory and practice of law.

Prerequisites: at least one of the following: HD 1130, PSYCH 1101, or PSYCH 2650.

Distribution Requirements: (ETM-AS), (KCM-AG, OPHLS-AG), (KCM-HE, PBS-HE)

Last Four Terms Offered: Fall 2024, Fall 2023, Fall 2022, Fall 2021

Learning Outcomes:

- Students will demonstrate the presentation of clear and effective arguments in a written communication format.
- Students will demonstrate their ability to understand and apply course material in an objective manner.

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 3210 - Developmental Cognitive Neuroscience (3 Credits)

Crosslisted with HD 3210

As it is with much of scientific discovery, a poet, William Wordsworth, best explained development with a simple phrase: The Child is father of the Man (person). In this course, we explore how our adult selves come to be through the lens of Developmental Cognitive Neuroscience. You will learn about current perspectives and controversies, the latest understanding of the development of multiple physiological systems (e.g., vision, perception, language, etc.) as interactions between molecular mechanisms, experience, and neural plasticity. Weekly short reaction papers, class exercises, and midterm and final projects, will all be geared towards developing a personal appreciation for the subject as well as an understanding of the issues in developmental cognitive neuroscience as a field.

Prerequisites: Recommended prerequisite: an introductory course in human development and at least one introductory course in behavioral neuroscience or biological basis of behavior.

Distribution Requirements: (BIO-AS), (D-AG, KCM-AG, OPHLS-AG, SBA-AG), (D-HE, KCM-HE, PBS-HE, SBA-HE)

Last Four Terms Offered: Fall 2024, Fall 2023, Spring 2023, Spring 2022

Learning Outcomes:

- Students will show a nuanced understanding of the competing and complementary theories of developmental neuroscience through reaction papers and class participation.
- Students will demonstrate the ability to find, read, and synthesize disciplinary literature by completing a review of primary developmental neuroscience literature on a topic that is innately interesting to them.
- Students will demonstrate the ability to generate and engage in scientific discourse through discussant roles, in-class presentations, and general class discussion both in-class and in the online forums.

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 3240 - Behavioral Neuroscience Laboratory (3 Credits)

Crosslisted with PSYCH 3240, BIONB 3240

This course is designed to provide an introduction to experimental research on the neural basis of behavior and cognition in animals. Topics will include basic neuroanatomy and neurophysiology, neural and hormonal control of behavior, and learning and memory. Students will gain extensive hands on experience with a variety of laboratory techniques, and animal species, and behaviors.

Prerequisites: PSYCH 2230 or BIONB 2220.

Course Fee: Course Fee, \$100. Lab fee.

Distribution Requirements: (BIO-AS), (OPHLS-AG)

Last Four Terms Offered: Fall 2024, Fall 2023, Fall 2022, Fall 2021

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 3250 - Neurochemistry of Human Behavior (3 Credits)

Crosslisted with HD 3250

Last Four Terms Offered: Spring 2022, Fall 2021, Spring 2021, Fall 2019

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 3300 - Introduction to Computational Neuroscience (3-4 Credits)

Crosslisted with BIONB 3300, PSYCH 3300, BME 3300

Covers the basic ideas and techniques involved in computational neuroscience. Surveys diverse topics, including neural dynamics of small networks of cells, neural coding, learning in neural networks and in brain structures, memory models of the hippocampus, sensory coding, and others.

Prerequisites: BIONB 2220 or permission of instructor.

Distribution Requirements: (BIO-AS, SDS-AS), (OPHLS-AG)

Last Four Terms Offered: Fall 2024, Fall 2022, Fall 2018, Fall 2016

Learning Outcomes:

- Basic understanding of current theories of brain function.
- How to construct representations from tuning curves.
- Plasticity and how it relates to memory.
- Models of human memory.

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 3302 - Introduction to Phonetics and Phonology (4 Credits)

Crosslisted with LING 3302

This course is an introduction to both phonetics (the study of the physical properties of the sounds of human language) and phonology (the organization and patterning of those sounds). The first part of the course focuses on the main areas of phonetics: articulation, acoustics, and perception. Students acquire basic skills, such as production and perception of speech sounds, transcription using the International Phonetic Alphabet, and instrumental analysis of speech. In the second part of the course students are introduced to key concepts in phonology, including rules, representations, and analysis of sound patterns. Throughout the course aspects of the sound systems of a wide range of world languages are studied.

Prerequisites: LING 1101 or permission of instructor.

Distribution Requirements: (ETM-AS), (KCM-AG)

Last Four Terms Offered: Spring 2025, Spring 2024, Spring 2023, Spring 2022

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 3310 - Deductive Logic (4 Credits)

Crosslisted with PHIL 3310, MATH 3810

A mathematical study of the formal languages of standard first-order propositional and predicate logic, including their syntax, semantics, and deductive systems. The basic apparatus of model theory will be presented. Various formal results will be established, most importantly soundness and completeness.

Prerequisites: PHIL 2310 or MATH 2210 or MATH 2230 or permission of instructor.

Distribution Requirements: (SMR-AS)

Last Four Terms Offered: Spring 2024, Spring 2023, Fall 2021, Spring 2021

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 3330 - Problems in Semantics (3 Credits)

Crosslisted with LING 3333, PHIL 3700

Concepts are properties of individuals that approximately correspond to word meanings. They play a role in Linguistics, Cognitive Science, Philosophy, and Artificial Intelligence. The course looks at phenomena and accounts of concepts from these different perspectives. Looks at problems in the semantic analysis of natural languages, critically examining work in linguistics and philosophy on particular topics of current interest. Topics vary. Not taught every year.

Prerequisites: logic or semantics course such as LING 3303, LING 4421, PHIL 2310, or permission of instructor.

Distribution Requirements: (ETM-AS), (KCM-AG)

Last Four Terms Offered: Fall 2023, Fall 2021, Fall 2019, Fall 2009
Schedule of Classes (<https://classes.cornell.edu/>)

COGST 3420 - Human Perception: Application to Computer Graphics, Art, and Visual Display (3 Credits)

Crosslisted with PSYCH 3420, VISST 3342

Our present technology allows us to transmit and display information through a variety of media. To make the most of these media channels, it is important to consider the limitations and abilities of the human observer. The course considers a number of applied aspects of human perception with an emphasis on the display of visual information. Topics include three-dimensional display systems, color theory, spatial and temporal limitations of the visual systems, attempts at subliminal communication, and visual effects in film and television.

Distribution Requirements: (ETM-AS), (KCM-AG)

Last Four Terms Offered: Spring 2025, Spring 2023, Spring 2022, Spring 2021

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 3660 - Affective and Social Neuroscience (3 Credits)

Crosslisted with HD 3660

Last Four Terms Offered: Summer 2022, Fall 2019, Spring 2019, Spring 2018

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 4150 - Culture, Cognition, Humanities (3 Credits)

Crosslisted with PSYCH 4150, COML 4229

Seminar on the essential features and qualities of culture and how it impacts human endeavors. Because understanding culture necessarily requires interaction across multiple areas of study, this interdisciplinary seminar will be based on discussions of recent research at the interface of cognitive science and the humanities. Topics may include: animal cultures, the evolution of language, the symbolic revolution, knowledge acquisitions, play, rituals and the arts.

Enrollment Information: Enrollment limited to: juniors and seniors or by permission of instructor.

Distribution Requirements: (ALC-AS, ETM-AS), (CA-AG, KCM-AG, LA-AG)

Last Four Terms Offered: Fall 2023, Fall 2021, Fall 2019

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 4230 - Navigation, Memory, and Context: What Does the Hippocampus Do? (3 Credits)

Crosslisted with PSYCH 4230

Although the hippocampus has been the subject of intense scrutiny for nearly 50 years, there remains considerable disagreement about functional contributions the hippocampus makes to learning and memory process. This course will examine the diverse functions attributed to the hippocampus with an eye toward integrating the differing viewpoints in the literature. After a brief historical overview, students will discuss cutting-edge literature on the hippocampal role in spatial navigation, learning, and memory, and context processing.

Enrollment Information: Enrollment limited to: juniors, seniors, and graduate students.

Distribution Requirements: (BIO-AS), (OPHLS-AG)

Last Four Terms Offered: Spring 2025, Spring 2024, Spring 2023, Spring 2021

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 4240 - Computational Linguistics I (4 Credits)

Crosslisted with LING 4424, CS 4744

Computational models of natural languages. Topics are drawn from: tree syntax and context free grammar, finite state generative morpho-phonology, feature structure grammars, logical semantics, tabular parsing, Hidden Markov models, categorial and minimalist grammars, text corpora, information-theoretic sentence processing, discourse relations, and pronominal coreference.

Prerequisites: Elementary Python (ex. CS 1133), LING 1101, or CS 2800, or PHIL 2310; for CS majors: Elementary Python and CS 2800.

Distribution Requirements: (SMR-AS)

Last Four Terms Offered: Spring 2025, Spring 2024, Spring 2023, Spring 2022

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 4250 - Translational Research on Decision Making (3 Credits)

Crosslisted with HD 4250

Translational Research on Decision Making is a 4000-level course focusing on basic foundations in translational research on decision making across the lifespan. The course will introduce students to the latest research and theory in this area and provide opportunities for hands-on applications of their learning in fields such as law, medicine, public health, behavioral economics, and policy. This course will cover such topics as human subjects protection, working with populations across the lifespan (e.g., children; adolescents; adults), database development, working with external partners and stakeholders (e.g., schools; hospitals), and basic concepts and techniques in decision making. Students in this course will participate in weekly class meetings together and in small groups focused on specific concepts, skills, and findings. During class meetings, we discuss research readings, critique research designs, learn about scientific methods, interpret empirical findings, and discuss alternative designs. Students work closely with each other but also work independently. Students will be provided with opportunities for hands-on application in real-world fields. Students attend a weekly class meeting, read pertinent papers from the primary literature, write reaction reports, integrate material across readings, and work cooperatively to understand and critique concepts, methods, analyses, and findings in the scientific literature.

Prerequisites: HD 1130 or PSYCH 1101, also HD 2830 and HD 5750 and HD 5760.

Distribution Requirements: (D-AG, SBA-AG), (SBA-HE), (SCD-AS)

Last Four Terms Offered: Fall 2024, Fall 2023, Fall 2022, Fall 2021

Learning Outcomes:

- Be able to know and evaluate evidence-based hypotheses.

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 4265 - Translational Research on Memory and Neuroscience (3 Credits)

Crosslisted with HD 4260

Translational Research in Memory and Neuroscience is a 4000-level course that is intended to provide students with background in the latest theoretical ideas, empirical findings, and research methods in both the behavioral and neuroscience sides of the contemporary science of human memory. This will prepare students to understand and eventually conduct both supervised and independent research on these topics by studying and writing about the work in recent research articles and by learning some of the design, programming, and analysis tools that are required to conduct such work. Students will receive in-depth exposure to behavioral and neuroscience research on memory through a course that focuses on mainstream, theory-driven experimentation with normal adult populations and that also focuses on developmental investigations with child, healthy elderly, and neurologically impaired populations. Students will learn about that research together with other students. During weekly class meetings, students will receive instruction and discuss research readings. They will also make formal class presentations, in which they interpret the results in those readings. To demonstrate their understanding, students will write weekly reaction responses about their readings. Weekly readings will come from the primary peer-reviewed scientific literature.

Prerequisites: HD 1130 or PSYCH 1101 and HD 2600.**Distribution Requirements:** (OPHLS-AG), (PBS-HE), (SDS-AS)**Last Four Terms Offered:** Fall 2024, Fall 2023, Fall 2022, Fall 2021**Learning Outcomes:**

- Be able to interpret results of statistical analyses with respect to theory.

Schedule of Classes (<https://classes.cornell.edu/>)**COGST 4270 - Evolution of Language (3 Credits)**

Crosslisted with PSYCH 4270

Seminar surveying a cross-section of modern theories, methods, and research pertaining to the origin and evolution of language. Considers evidence from psychology, the cognitive neurosciences, theoretical biology, comparative psychology, and computational modeling of evolutionary processes. Topics for discussion may include: What is special about language? What can we learn from comparative perspectives on neurobiology and behavior? Can apes really learn language? Did language come about through natural selection or cultural evolution?

Prerequisites: any one course in psychology or human development.**Enrollment Information:** Enrollment limited to: juniors and seniors.**Distribution Requirements:** (ETM-AS), (KCM-AG)**Last Four Terms Offered:** Fall 2024, Fall 2022, Fall 2018, Fall 2016Schedule of Classes (<https://classes.cornell.edu/>)**COGST 4331 - Event Cognition: How Minds, Brains and Bodies Experience Events (3 Credits)**

Crosslisted with PSYCH 4331, HD 4331

People experience and remember complex and dynamic environments as events. This seminar draws on work from cognitive neuroscience to characterize how people shape experience into events, and how these processes support adaptive behavior. The course will start with discussions of historical and modern perspectives about the relationships between minds, bodies, and experience. We will then cover topics ranging from the perception of motion and causality to social learning and interaction. The primary goals are for you to be able to (1) read and evaluate research in psychology, cognitive science, and neuroscience, and (2) describe and understand the implications of this research for how minds and bodies are adapted to everyday situations.

Prerequisites: a course in PSYCH, COGST, HD or NBB.**Distribution Requirements:** (ETM-AS), (KCM-AG)**Last Four Terms Offered:** Fall 2024, Fall 2020Schedule of Classes (<https://classes.cornell.edu/>)**COGST 4340 - Current Topics in Cognitive Development (3 Credits)**

Crosslisted with HD 4340

Last Four Terms Offered: Spring 2021, Spring 2019, Spring 2017, Spring 2009Schedule of Classes (<https://classes.cornell.edu/>)**COGST 4350 - Mind, Self, and Emotion (3 Credits)**

Crosslisted with HD 4310

Offered to students who are currently conducting research or planning to do research in the near future on one of the three topics-memory, self, or emotion. The course examines current data and theories concerning the topics from a variety of perspectives and at multiple levels of analysis, particularly focusing on the interconnections among these fields of inquiry. The scale of observation is viewed as occurring within the person (brain mechanisms, including genetics), at the level of the person (content-goals, beliefs, desires, etc.), and between persons (relationships and group interaction-including culture).

Prerequisites: HD 1130 or PSYCH 1101.**Enrollment Information:** Enrollment limited to: 15 upper-class undergraduate standing.**Distribution Requirements:** (SBA-HE)**Exploratory Studies:** (EAAREA)**Last Four Terms Offered:** Spring 2025, Spring 2024, Fall 2016, Fall 2015**Learning Outcomes:**

- Students learn to develop research ideas and design a study to test their ideas. They each complete a research proposal by the end of the semester.

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 4420 - The Psychology and Ethics of Technology (3 Credits)

Crosslisted with PSYCH 4420, HD 4425

New technologies are changing our world at a rapid pace. In many cases, the society does not fully understand the impact of technology and is not prepared for the speed of the change that is occurring. This course will explore a few of these new technologies and investigate their effects on the users and on the society at large. The topics that will be explored include face recognition, virtual reality, violence in media, general AI, and the technological singularity. We will look at the ways in which these technologies affect our lives, with a focus on education, entertainment, employment, politics, and the future of humanity.

Distribution Requirements: (ETM-AS), (KCM-AG)

Last Four Terms Offered: Fall 2024, Fall 2022, Fall 2021, Spring 2020
Schedule of Classes (<https://classes.cornell.edu/>)

COGST 4425 - Pragmatics (4 Credits)

Crosslisted with LING 4425, PHIL 4720

What is the relationship between what words mean and how they are used? What is part of the grammar and what is a result of general reasoning? Pragmatics is often thought of as the study of how meaning depends on the context of utterance. However, it can be difficult to draw a line between pragmatics and semantics. In this course, we will investigate various topics that walk this line, including varieties of linguistic inference (including entailment and implicature), the pragmatics and compositional semantics of presupposition, anaphora and dynamic semantics, the semantics and pragmatics of focus, indexicals, and speech acts.

Prerequisites: LING 3303 or PHIL 2310, or permission of instructor.

Distribution Requirements: (ETM-AS), (KCM-AG)

Last Four Terms Offered: Spring 2025, Spring 2023, Spring 2022, Spring 2021
Schedule of Classes (<https://classes.cornell.edu/>)

COGST 4435 - Confronting Climate Change (3 Credits)

Crosslisted with PSYCH 4430, HD 4435

This course on the climate crisis acquaints students with the psychological factors underlying ecocide and anthropogenic climate change and the possible avenues for its mitigation, with a particular focus on climate justice and Indigenous knowledges and ways of relating to nature. In parallel with reading and discussing primary literature on these topics, students work on research projects, complementing theory with practice and placing it in the local geopolitical context.

Distribution Requirements: (SBA-AG), (SSC-AS)

Last Four Terms Offered: Fall 2024

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 4477 - Experimental Methods in Language Sciences (4 Credits)

Crosslisted with LING 4477

The class offers an introduction to the experimental methods and data analysis techniques commonly used in linguistics. Topics covered in the course will include basics of experimental design and statistical inference for hypothesis testing, as well as practical training on a variety of experimental paradigms used in syntax and semantics/pragmatics.

Prerequisites: LING 3303 for undergraduates, and previous knowledge of Syntax and Semantics.

Distribution Requirements: (OPHLS-AG), (SDS-AS)

Last Four Terms Offered: Fall 2023, Spring 2023, Spring 2022, Spring 2021
Schedule of Classes (<https://classes.cornell.edu/>)

COGST 4500 - Psychology at the Sciencenter! (4 Credits)

Crosslisted with PSYCH 4500

This course will give an opportunity to learn how to communicate concepts and knowledge from the psychological sciences. We will examine the challenges associated with science communications, including ways to engage the perspectives of diverse audiences, and evaluation of the effects of the interaction on the audience's knowledge and attitudes. Most of our activities will focus on the development of exhibits for the Sciencenter of Ithaca. We will develop exhibit prototypes, evaluate the public's engagement and learning from them, and use the feedback to refine our prototypes. The goal will be to effectively convey current understanding of psychological processes to the general public, with an emphasis on engaging young children.

Last Four Terms Offered: Fall 2022, Fall 2019, Spring 2018, Spring 2017
Schedule of Classes (<https://classes.cornell.edu/>)

COGST 4510 - Topics in the Philosophy of Aesthetics (3 Credits)

Crosslisted with PHIL 4510

An investigation of central topics in the philosophy of art, with an emphasis on issues about the mind. Readings will be drawn from philosophy and psychology.

Prerequisites: at least one prior course in Philosophy.

Distribution Requirements: (ALC-AS, ETM-AS), (CA-AG, KCM-AG, LA-AG)

Last Four Terms Offered: Spring 2024, Spring 2023
Schedule of Classes (<https://classes.cornell.edu/>)

COGST 4625 - Topics in Philosophy of Mind (3 Credits)

Crosslisted with PHIL 4620

Advanced discussion of a topic in Philosophy of Mind.

Distribution Requirements: (ETM-AS), (KCM-AG)

Last Four Terms Offered: Fall 2021, Spring 2021, Spring 2020, Fall 2018
Schedule of Classes (<https://classes.cornell.edu/>)

COGST 4646 - Cognitive Science and the Classics (3 Credits)

Crosslisted with CLASS 4646

What can contemporary cognitive science teach us about the factors that shaped art, science, and philosophy in antiquity? In this course we will study both ancient and modern theories of mind and learn how to apply modern analytical and empirical methods to deepen our understanding of the ancient world. Featured topics include cognitive linguistics, mental representations, and distributed and social cognition.

Distribution Requirements: (ETM-AS, HST-AS), (HA-AG, KCM-AG)

Last Four Terms Offered: Spring 2025

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 4700 - Undergraduate Research in Cognitive Science (1-4 Credits)

Experience in planning, conducting, and reporting independent laboratory, field, and/or library research in an interdisciplinary area relevant to Cognitive Science.

Last Four Terms Offered: Spring 2025, Fall 2024, Spring 2024, Fall 2023
Schedule of Classes (<https://classes.cornell.edu/>)

COGST 4710 - Cognitive Science Research Workshop (1-4 Credits)

Provides a research workshop in which undergraduate students who are engaged in research in a particular area relevant to cognitive science can meet across disciplines to learn and practice the essentials of research using interdisciplinary approaches. In this workshop, students critique and discuss the existing literature in a field of inquiry, individual students present their research designs, methods, and results from their independent research studies, debate the interpretation of their research results, and participate in the generation of new research hypotheses and designs, in a peer group of other undergraduate students involved in related research.

Prerequisites: enrollment in an independent research course either in Cognitive Science (e.g., COGST 4700) or in a related department or in honors thesis research in one of the departments relevant to Cognitive Science.

Last Four Terms Offered: Spring 2025, Fall 2024, Spring 2024, Fall 2023
Schedule of Classes (<https://classes.cornell.edu/>)

COGST 4720 - Current Research in Emotion, Cognition, and Brain (3 Credits)

Crosslisted with HD 4720

The course will cover advanced topics in research on the emotions from central neural and peripheral physiological perspectives, with an emphasis with how emotions shape different aspects of cognition and behavior.

Distribution Requirements: (KCM-HE, PBS-HE, SBA-HE)

Last Four Terms Offered: Spring 2025, Spring 2024, Spring 2023, Spring 2022

Learning Outcomes:

- Demonstrate knowledge of the principles of how human brain activity results in emotions and their influence on cognition and behavior.
- Apply and integrate knowledge from neuroscience and psychology to design and execute an empirical research study.
- Develop skills to be able to synthesize discussions of assigned reading material in both written and oral form.
- Create a proposed research project of their design.

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 4730 - Topics in the Philosophy of Language (3 Credits)

Crosslisted with PHIL 4710, LING 4712

An investigation of varying topics in the philosophy of language including reference, meaning, the relationship between language and thought, communication, modality, logic and pragmatics.

Last Four Terms Offered: Fall 2024, Spring 2023, Fall 2020, Spring 2020
Schedule of Classes (<https://classes.cornell.edu/>)

COGST 4740 - Natural Language Processing (4 Credits)

Crosslisted with CS 4740, LING 4474

This course constitutes an introduction to natural language processing (NLP), the goal of which is to enable computers to use human languages as input, output, or both. NLP is at the heart of many of today's most exciting technological achievements, including machine translation, question answering and automatic conversational assistants. The course will introduce core problems and methodologies in NLP, including machine learning, problem design, and evaluation methods. This class satisfies the practicum/project requirement for CS majors. As a consequence, expect each of the roughly four connected programming assignments to take tens of hours, although this time is distributed over multiple weeks; to require writing code to massage raw-ish data into different formats and other accessory functions as well as to implement core algorithms; and to necessitate much independent examination of documentation.

Distribution Requirements: (SMR-AS)

Last Four Terms Offered: Spring 2025, Fall 2023, Fall 2022, Fall 2021
Schedule of Classes (<https://classes.cornell.edu/>)

COGST 4910 - Research Methods in Psychology (4 Credits)

Crosslisted with PSYCH 4910

Research methods are the tools that allow psychologists to test the validity of hypotheses. This course provides a survey of the methods used by scientists in personality and social psychology as well as related behavioral sciences to empirically test hypotheses. Specifically, this course will discuss the following topics: (1) philosophy of science; (2) research designs and methods; (3) data collection, analysis, and validity; (4) report writing; and (5) recurrent and emerging trends and issues in the field of research methods and quantitative analysis. The final project consists of writing a research proposal and giving a short oral presentation.

Distribution Requirements: (OPHLS-AG), (SDS-AS)

Last Four Terms Offered: Spring 2022, Spring 2021, Spring 2018, Spring 2017

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 4940 - Moral Psychology in Action (3 Credits)

Crosslisted with PSYCH 4940, PHIL 3915, HD 4940

Moral Psychology in Action is an applied psychology course for students who want to make a difference in the world through ethical leadership and positive contributions in organizations, and who are drawn to scholarly work on psychology, ethics, and morality. The course is experiential and takes place mostly outside the classroom through students' individualized partnerships in community organizations, businesses, and institutions. Learning outcomes include enhanced critical reflection, intercultural competence, ethical practice, and the practice of applied moral psychology research methods.

Exploratory Studies: (CU-CEL)

Last Four Terms Offered: Spring 2025, Spring 2024, Spring 2023, Spring 2022

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 6020 - Research in Risk and Rational Decision Making (3 Credits)

Crosslisted with HD 6020

This hands-on laboratory course will develop research skills in the context of risk and rational decision making in human development from multiple disciplinary perspectives and with respect to different kinds of decision-making under risk and uncertainty. Topics will depend on student interests but may include decisions about war, terrorism, cancer control and prevention (e.g., screening tests), personal behaviors that involve risk (e.g., HIV prevention), and other public health risks (e.g., vaccinations), law enforcement (e.g., use of a weapon), and legal decision making (e.g., jury deliberations). Students will read the research literature, discuss the latest empirical findings and scientific theories of risk and rationality, and engage in group work and peer review to hone their skills. Students will then design research projects and engage in research activities as well as read additional references tailored to their interests.

Last Four Terms Offered: Fall 2024, Fall 2023, Fall 2022, Fall 2021

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 6025 - Methods in Neuroscience (3 Credits)

Crosslisted with PSYCH 6020

This course will expose students to a wide range of commonly used methods in neuroscience research (theory behind the method, common applications of the method, how data are collected and analyzed using the method, strengths and weaknesses of the method, etc.). The goal for students is that by the end of the course, they will be able to read and critically evaluate primary literature from many areas of neuroscience and to understand how the methods used in the study helped the researchers come to their conclusions. This course will explore methods including (but not necessarily limited to): microscopy, methods to visualize neuronal structure and function, electrophysiology, methods to neural activity, methods to measure and manipulate expression of genes/mRNA/protein, machine learning methods for behavioral analysis, and whole brain imaging methods in humans and non-human animals.

Last Four Terms Offered: Fall 2024, Fall 2023, Fall 2021

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 6101 - Cognitive Science Proseminar (3 Credits)

This seminar surveys the study of how the mind/brain works, drawing primarily from six disciplines: philosophy, psychology, developmental science, neuroscience, linguistics, and computer science. It consists of lectures and discussions of readings by Cornell cognitive science faculty.

Last Four Terms Offered: Spring 2025, Spring 2024, Spring 2023, Spring 2022

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 6140 - Computational Psychology (3 Credits)

Crosslisted with PSYCH 6140

This course states and motivates the observation that cognition is fundamentally a computational process and explores the implications of this idea. Students are introduced to a variety of conceptual tools for thinking about cognitive information processing, including statistical learning from experience and the use of patterns distilled from past experience in guiding future actions. They learn to apply these tools to gain understanding of perception, memory, motor control, language, action planning, problem solving, decision making, reasoning, intelligence, and creativity. Applications of the newly acquired computational cognitive science concepts and tools to ecological issues - in particular, the accelerating climate catastrophe - are discussed in this course on a regular basis.

Last Four Terms Offered: Spring 2025, Spring 2024, Spring 2023, Spring 2022

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 6150 - Culture, Cognition, Humanities (3 Credits)

Last Four Terms Offered: Fall 2023, Fall 2021, Fall 2019

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 6210 - Behavioral and Brain Sciences (3 Credits)

Crosslisted with PSYCH 6210

Last Four Terms Offered: Spring 2023, Spring 2022, Fall 2021, Spring 2021

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 6311 - Topics in Cognitive Science (3 Credits)

A seminar series examining current and classical ideas in human sciences and the humanities. Themes vary from semester to semester. Topic: Changes by semester. For the recent and upcoming topics, see the instructor's web page: <https://shimon-edelman.github.io>

Last Four Terms Offered: Spring 2025

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 6331 - Event Cognition: How Minds, Brains and Bodies Experience Events (3 Credits)

Crosslisted with PSYCH 6331

Last Four Terms Offered: Fall 2024, Fall 2020

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 6333 - Problems in Semantics (3 Credits)

Crosslisted with LING 6333, PHIL 6700

Concepts are properties of individuals that approximately correspond to word meanings. They play a role in Linguistics, Cognitive Science, Philosophy, and Artificial Intelligence. The course looks at phenomena and accounts of concepts from these different perspectives. Looks at problems in the semantic analysis of natural languages, critically examining work in linguistics and philosophy on particular topics of current interest. Topics vary. Not taught every year.

Prerequisites: logic or semantics course or permission of instructor.

Last Four Terms Offered: Fall 2023, Fall 2021, Fall 2019

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 6420 - Human Perception: Applications to Computer Graphics, Art, and Visual Display (3 Credits)

Crosslisted with PSYCH 6420

Our present technology allows us to transmit and display information through a variety of media. To make the most of these media channels, it is important to consider the limitations and abilities of the human observer. The course considers a number of applied aspects of human perception with an emphasis on the display of visual information. Topics include three-dimensional display systems, color theory, spatial and temporal limitations of the visual systems, attempts at subliminal communication, and visual effects in film and television.

Last Four Terms Offered: Spring 2023, Spring 2022, Spring 2021, Fall 2019

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 6425 - Pragmatics (4 Credits)

Crosslisted with LING 6425, PHIL 6720

What is the relationship between what words mean and how they are used? What is part of the grammar and what is a result of general reasoning? Pragmatics is often thought of as the study of how meaning depends on the context of utterance. However, it can be difficult to draw a line between pragmatics and semantics. In this course, we will investigate various topics that walk this line, including varieties of linguistic inference including entailment, presupposition, and implicature), anaphora, indexicals, and speech acts.

Prerequisites: LING 3303 or PHIL 2310, or permission of instructor.

Last Four Terms Offered: Spring 2025, Spring 2023, Spring 2022, Spring 2021

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 6477 - Experimental Methods in Language Sciences (4 Credits)

Crosslisted with LING 6477

The class offers an introduction to the experimental methods and data analysis techniques commonly used in linguistics. Topics covered in the course will include basics of experimental design and statistical inference for hypothesis testing, as well as practical training on a variety of experimental paradigms used in syntax and semantics/pragmatics.

Prerequisites: must have previous knowledge of Syntax and Semantics.

Last Four Terms Offered: Spring 2025, Fall 2023, Spring 2023, Spring 2022

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 6510 - Topics in the Philosophy of Aesthetics (3 Credits)

Crosslisted with PHIL 6510

An investigation of central topics in the philosophy of art, with an emphasis on issues about the mind. Readings will be drawn from philosophy and psychology.

Prerequisites: at least one prior course in Philosophy.

Last Four Terms Offered: Spring 2024, Spring 2023

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 6620 - Topics in Philosophy of Mind (3 Credits)

Crosslisted with PHIL 6620

Advanced discussion of a topic in Philosophy of Mind.

Last Four Terms Offered: Spring 2024, Fall 2021, Spring 2021, Spring 2020

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 6710 - Topics in the Philosophy of Language (3 Credits)

Crosslisted with PHIL 6710, LING 6634

An investigation of varying topics in the philosophy of language including reference, meaning, the relationship between language and thought, communication, modality, logic and pragmatics.

Exploratory Studies: (EUAREA)

Last Four Terms Offered: Fall 2024, Spring 2023, Fall 2020, Spring 2020

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 6910 - Research Methods in Psychology (4 Credits)

Crosslisted with PSYCH 6910

Research methods are the tools that allow psychologists to test the validity of hypotheses. This course provides a survey of the methods used by scientists in personality and social psychology as well as related behavioral sciences to empirically test hypotheses. Specifically, this course will discuss the following topics: (1) philosophy of science; (2) research designs and methods; (3) data collection, analysis, and validity; (4) report writing; and (5) recurrent and emerging trends and issues in the field of research methods and quantitative analysis. The final project consists of writing a research proposal and giving a short oral presentation.

Last Four Terms Offered: Spring 2022, Spring 2021, Spring 2018, Spring 2017

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 7090 - Developmental Psychology (3 Credits)

Crosslisted with PSYCH 7090

One of four introductory courses in cognition and perception. A comprehensive introduction to current thinking and research in developmental psychology that approaches problems from both psychobiological and cognitive perspectives. We will use a comparative approach to assess principles of development change. The course focuses on the development of perception, action, cognition, language, and social understanding in infancy and early childhood.

Last Four Terms Offered: Spring 2025, Spring 2024, Spring 2023, Spring 2022

Schedule of Classes (<https://classes.cornell.edu/>)

COGST 7710 - Computational Seminar (4 Credits)

Crosslisted with LING 7710

Addresses current theoretical and empirical issues in computational linguistics.

Last Four Terms Offered: Fall 2024, Spring 2022, Spring 2021, Fall 2019

Schedule of Classes (<https://classes.cornell.edu/>)