

COGNITIVE SCIENCE

Director: [Hank Gorman](#)

The mission of the cognitive science program is to provide students in the minor with a faithful representation of the significant issues in cognitive science. Cognitive science is an interdisciplinary field of study which unites people from philosophy, psychology, mathematics, computer science, linguistics, and biology around the common theme of mind. Inquiry in the cognitive sciences involves questions of semantics; knowledge representation; ontology; the functional architecture of human mind; planning, search and control; natural language parsing; cognitive development; and natural and artificial intelligence.

A **minor in cognitive science** consists of:

Introduction to Cognitive Science (1 course)

_____ COG 120 Introduction to Cognitive Science

_____ PSY 220 Introduction to Cognitive Psychology

Introduction to Formal Representation Systems (1 course)

_____ MATH 141 Discrete Mathematics

_____ CS 201 Discrete Mathematics

_____ PHIL 110 Modern Logic

Philosophical Background of Cognitive Science (1 course)

_____ PHIL 225 Early Modern Philosophy

_____ PHIL 230 Contemporary Philosophy

Knowledge representation, intelligence, natural language parsing, and thinking from Computer Science, Philosophy, or Psychology emphasis (1 course)

_____ PHIL 306 Knowledge and Reality

_____ PHIL 310 Mind and Language

_____ PSY 355 Learning, Memory, and Cognition

_____ CS 440 Artificial Intelligence

Elective from Computer Science, Philosophy, or Psychology emphasis (1 course)

_____ CS 410 Programming Languages

_____ CS 412 Data Structures and Algorithms

_____ PHIL 225 Early Modern Philosophy

_____ PHIL 230 Contemporary Philosophy

_____ PHIL 310 Mind and Language

_____ PSY 215 Behavioral Neuroscience

Total Credits Requirement = 5 course credits

COURSE

COGS 120 Cognitive Science

Addresses some of the ways in which such varied disciplines as psychology, computer science, linguistics, philosophy, and mathematics ask questions about the nature of mind. Specific content varies, but may include aspects of philosophy of mind, knowledge representation, language processing, artificial intelligence, and neurophysiology. Often includes lab work in robotics and artificial intelligence programming.

COGS 294 Intermediate Student Research

Intended for less experienced students to develop and execute a research project related to cognitive science, beyond the constraints of the normal classroom, suitable for public dissemination on or off campus under mentorship of a faculty member. Typically, this work results in a formal presentation, written work, or creative works. Course credit varies from 0-1.00. PREQ: Instructor permission required.

COGS 394/494 Advanced Student Research

Intended for advanced students to develop and execute a research project related to cognitive science suitable for public dissemination under mentorship of a faculty member. Students are expected to present the results of their research in a public forum. Typically, this work results in a formal presentation, written work, or creative works. Course credit varies from 0-1.00. PREQ: Instructor permission required.