

COGNITIVE SCIENCE

PROFESSOR ELMES*

MAJOR

A major in **cognitive science** leading to a Bachelor of Arts degree requires the completion of at least 43 credits including the following:

1. *Core courses*: Cognitive Science 110, 395, 403, 473; Computer Science 111, 211; Philosophy 106, 313; Psychology 112, 180
2. Four courses chosen from one of the following tracks:
 - a. *Formal Systems in Cognitive Science*: Computer Science 295 (LISP, PROLOG or C), 313, 315; Psychology 207
 - b. *Philosophical Foundations of Cognitive Science*: Philosophy 205, 255, 305 (Psychology 305), 312; Sociology 222 (Classics 222)
 - c. *Experimental Cognitive Science*: Psychology 207, 251, 252, 254, 255
 - d. *Cognitive Neuropsychology*: Neuroscience 120; Psychology 111, 253, 255

Additional courses required as prerequisites for the completion of the above core include Psychology 120 and Mathematics 121. Psychology 111 is a prerequisite for Psychology 255 in the Experimental Cognitive Science track.

Cognitive Science courses are as follows; for course descriptions, see the appropriate departmental listings:

Classics 222—Structural Linguistics
 Cognitive Science 110—Introduction to Cognitive Science
 Cognitive Science 395—Special Topics in Cognitive Science
 Cognitive Science 403—Directed Individual Study
 Cognitive Science 473—Senior Thesis
 Computer Science 111—Fundamentals of Computer Science I
 Computer Science 211—Data Structure and Algorithms
 Computer Science 295—Language Laboratory
 Computer Science 313—Theory of Computation
 Computer Science 315—Artificial Intelligence
 Neuroscience 120—Introduction to Neuroscience
 Philosophy 106—Introduction to Logic
 Philosophy 205—Philosophy of Language
 Philosophy 255—Philosophy of Science
 Philosophy 305—Speech and Cognition
 Philosophy 312—Theory of Knowledge
 Philosophy 313—Philosophy of Mind
 Psychology 111—Brain and Behavior
 Psychology 112—Cognition
 Psychology 180—Research Design and Analysis
 Psychology 207—A Psychological Approach to Artificial Intelligence
 Psychology 251—Experimental Psychology: Learning and Retention

Psychology 252—Experimental Psychology: Perception
 Psychology 253—Physiological Psychology
 Psychology 254—Experimental Psychology: Language and Thought
 Psychology 255—Cognitive Neuroscience
 Psychology 305—Speech and Cognition
 Sociology 222—Structural Linguistics

★COGNITIVE SCIENCE 110 (3)—Introduction to Cognitive Science

This course introduces the student to the information processing approach of cognitive science from the perspectives of computer science, linguistics, neuroscience, philosophy, and psychology. *Staff*
Spring

COGNITIVE SCIENCE 395 (1, 2, or 3)—Special Topics in Cognitive Science

Prerequisites: Cognitive Science 110 and six credits chosen from Computer Science 111, 301; Philosophy 106, 313; Psychology 112, 180. This seminar provides the advanced student with a more thorough knowledge of the methods of cognitive science. The course focuses on a specific cognitive capacity—spatial memory, word recognition, sentence processing, or visual pattern recognition, for instance—and compares competing information processing models, examining how they can be tested in the laboratory and by computer simulation. Topics will vary and may be determined, in part, by student interest. May be repeated for degree credit with permission and if the topics are different. *Staff*.

COGNITIVE SCIENCE 403 (3)—Directed Individual Study

Prerequisites: Cognitive Science 395 or permission of the Cognitive Science program adviser. Conferences, independent reading, and research leading to a topic for the senior thesis. This course is taken by all Cognitive Science majors in preparation for the senior thesis. *Cognitive Science faculty*.

COGNITIVE SCIENCE 473 (3)—Senior Thesis

Prerequisite: Cognitive Science 403. Cognitive Science faculty.
Winter