Cognitive Science, Bachelor of Arts

College of Letters & Science

The Major Programs

The Cognitive Science major is designed to provide a broad interdisciplinary approach to the study of mind that includes courses from different departments and attracts students with a variety of interests. It emphasizes a multifaceted approach to the study of the mind integrating concepts and techniques from psychology, artificial intelligence, linguistics, neurology, philosophy and other relevant fields.

For students interested in the liberal arts the Cognitive Science major can be pursued as a Bachelor of Arts (A.B.) program. Alternatively, it can be pursued as a Bachelor of Science (B.S.) program for students with a stronger interest in the mathematical, neurological and computational foundations of the discipline. The main objective of both programs is to give the student a broad grounding in the integrated sciences of the mind and to connect approaches from different fields. Students must complete a number of core courses for the degree, as well as a number of specialty courses on such wide-ranging topics as logic for artificial intelligence, computational linguistics, cognitive neuroscience, animal cognition and the psychology of music.

Career Alternatives

A degree in Cognitive Science provides broad intellectual foundations useful for careers in a variety of areas, including teaching, business, social work/counseling and the information technology industry. Undergraduate education in cognitive science also prepares the student for graduate study in appropriate subfields of psychology, linguistics, philosophy and informatics. It is also suitable training for pre-medicine, pre-law, and pre-management students.

Major Advisors

Staff advisors are located in Young Hall; cogsciadvising@ucdavis.edu; 530 752 5104. For more information on how to make an appointment or join Drop-In Advising hours, see Yellow Cluster Undergraduate Advising Center (https://yellowcluster.ucdavis.edu/advising/undergraduate/).

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<tr>
<th>Code</th>
<th>Title</th>
<th>Units</th>
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<tr>
<td>CGS 001</td>
<td>Introduction to Cognitive Science</td>
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<td>PHI 010</td>
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<td>LIN 001</td>
<td>Introduction to Linguistics</td>
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<td>Introduction to Linguistics</td>
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<td>PHI 012</td>
<td>Introduction to Symbolic Logic</td>
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<td>PHI 013G</td>
<td>Minds, Brains, &amp; Computers with Discussion</td>
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<td>PSC 001</td>
<td>General Psychology</td>
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<td>STA 013</td>
<td>Elementary Statistics</td>
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Preparatory Subject Matter Subtotal 28

Depth Subject Matter

Group A: Core

All courses from Group A: 12

PSC 100  Introduction to Cognitive Psychology
or PSC 100Y Introduction to Cognitive Psychology

PHI 112  Intermediate Symbolic Logic

CGS Topical Course: one upper division CGS course

Group B: Computation

One course from Group B: 4

LIN 177  Computational Linguistics

PHI 133  Logic, Probability, & Artificial Intelligence

CMN 150V Computational Social Science

CMN 151  Simulating Communication Processes

Concentration Areas: 16 units from your choice of two groups from Groups B-F

CGS Electives: 12 additional units from Groups B-G 12

Group C: Neuroscience

CGS/ECN 107/ PSC 133  Neuroeconomics/Reinforcement Learning & Decision Making

PSC 121  Physiological Psychology

PSC 135  Cognitive Neuroscience: The Biological Foundations of the Mind

PSC 139  Advanced Cognitive Neuroscience

PSC 145  Developmental Cognitive Neuroscience

Group D: Linguistics

LIN 103A  Linguistic Analysis I: Phonetics, Phonology, Morphology

LIN 103B  Linguistic Analysis II: Morphology, Syntax, Semantics

LIN 131  Introduction to Syntactic Theory

LIN 141  Semantics

LIN 171  Introduction to Psycholinguistics

LIN/EDU 173 Language Development

Group E: Philosophy

PHI 103  Philosophy on Mind

PHI 104  The Evolution of Mind

PHI 129  Knowledge & the A Priori

PHI 136  Formal Epistemology

Group F: Psychology

PSC 101  Introduction to Biological Psychology

PSC 130  Human Learning & Memory

PSC 131  Perception

PSC 132  Language & Cognition

PSC 136  Psychology of Music

PSC 137  Neurobiology of Learning & Memory

PSC 140  Developmental Psychology

or STA 100  Applied Statistics for Biological Sciences

Research Methods

PSC 041  Research Methods in Psychology
(recommended to take Statistics before Research Methods)

Preparatory Subject Matter Subtotal 28

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<td>PSC 141</td>
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<td>or HDE 101</td>
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<tr>
<td>CMN 101</td>
<td>Communication Theories</td>
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<td>CMN 101Y</td>
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<td>CMN 121</td>
<td>Language Use in Conversation</td>
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<td>EDU 110</td>
<td>Educational Psychology: General</td>
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<td>EDU/LIN 173</td>
<td>Language Development</td>
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<td>HDE 100C</td>
<td>Adulthood &amp; Aging</td>
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<td>HDE 161</td>
<td>Technology Use, Health, &amp; Aging</td>
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<td>HDE 163</td>
<td>Cognitive Neuropsychology in Adulthood &amp; Aging</td>
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<td>LIN 121</td>
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<td>Languages of the World</td>
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<td>LIN 152</td>
<td>Language Universals &amp; Typology</td>
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<td>PHI 125</td>
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<td>Philosophy of Language: Theory of Reference</td>
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<td>PHI 137B</td>
<td>Philosophy of Language: Truth &amp; Meaning</td>
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<td>PHI 137C</td>
<td>Philosophy of Language: Semantics &amp; Pragmatics</td>
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<td>PSC/NPB 124</td>
<td>Comparative Neuroanatomy</td>
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<td>PSC 142</td>
<td>Social &amp; Personality Development</td>
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<tr>
<td>or HDE 102</td>
<td>Social &amp; Personality Development</td>
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<td>PSC 148</td>
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<td>PSC 152</td>
<td>Social Cognition</td>
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<td>STA 106</td>
<td>Applied Statistical Methods: Analysis of Variance</td>
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<td>STA 108</td>
<td>Applied Statistical Methods: Regression Analysis</td>
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**Depth Subject Matter Subtotal**  

44

**Total Units**  

72

1 For a list of approved CGS Topical Courses, please see the major worksheet (https://yellowcluster.ucdavis.edu/cognitivescience/).