

COGNITIVE SCIENCE - CERTIFICATE

Undergraduate students majoring in psychology and neuroscience; philosophy; linguistics; computer science; speech, language and hearing sciences; education; integrative physiology; information science; or architecture and planning may be interested in extending the breadth of their undergraduate studies to earn a certificate in cognitive science.

Training in cognitive science prepares students admirably well for many of the fields that are targeted as the major growth fields of the 21st century: telecommunications, information processing, medical analysis, data retrieval, education and multimedia. As the world is enveloped by the information age, cognitive scientists will be uniquely positioned to deal with this information.

Students interested in the program can learn more on the department's Undergraduate Program (<https://www.colorado.edu/ics/undergraduate-program/>) webpage.

Requirements

To earn the certificate, students must take at least six courses for a minimum of 18 credit hours. Students must receive a grade of C or better in all courses for the certificate and must have an overall grade point average of 3.0 or better.

Additional credit hours may be required as prerequisites to classes chosen to fulfill the certificate plan of study, but these courses usually also fulfill degree requirements. Proposed substitute courses must be preapproved by the ICS Academic Director.

Required Courses and Credits

| Code | Title | Credit Hours |
|--|-----------------------------------|--------------|
| Required Courses | | |
| PSYC 2145 | Introductory Cognitive Psychology | 3 |
| CSCI 3702/ PHIL 3310/ LING 3005/PSYC 3005/SLHS 3003 | Cognitive Science | 3 |

Advanced Skills Requirements 12-14

Take a two-course advanced skills sequence from two of the following five areas, one sequence may be in the student's major.

Psychology

Taking classes in the psychology focus area would require a minimum of 7 units, and an additional minimum of 4 units for prerequisites.

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|-----------|--|
| PSYC 4145 | Advanced Cognitive Psychology |
| NRSC 4032 | Neurobiology of Learning and Memory |
| PSYC 4155 | Cognitive Neuroscience/ Neuropsychology |
| PSYC 4165 | Psychology of Perception |
| PSYC 4175 | Computational Cognitive Neuroscience |
| PSYC 4220 | Language and Mind |

Linguistics

Taking classes in the linguistics focus area would require a minimum of 6 units, and an additional minimum of 3 units for prerequisites.

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|-----------|---------------------------|
| LING 3100 | Language Sound Structures |
| LING 3430 | Semantics |
| LING 4220 | Language and Mind |
| LING 4420 | Morphology and Syntax |
| LING 4560 | Language Development |

Computer Science

Taking classes in the computer science focus area would require a minimum of 6 units and an additional minimum of 4 units for prerequisites. Choose two of the following:

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|-----------|--|
| CSCI 3002 | Fundamentals of Human Computer Interaction |
| CSCI 3202 | Introduction to Artificial Intelligence |
| CSCI 4830 | Special Topics in Computer Science |

Philosophy

Taking classes in the Philosophy focus area would require a minimum of 6 units, and an additional minimum of 3 units for prerequisites. Two of the following six courses in Philosophy:

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|-----------|------------------------|
| PHIL 4300 | Philosophy of Mind |
| PHIL 4340 | Epistemology |
| PHIL 4400 | Philosophy of Science |
| PHIL 4460 | Modal Logic |
| PHIL 4490 | Philosophy of Language |

Speech, Language and Hearing Sciences

Taking classes in the speech, language and hearing Sciences focus area would require a minimum of 6 units, and an additional 3 units for prerequisites.

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|-----------|--|
| SLHS 3006 | Phonetics |
| SLHS 3106 | Hearing Science |
| SLHS 3116 | Anatomy, Physiology, and Science of Speech |
| SLHS 4502 | Language Disorders Across the Lifespan |
| SLHS 4560 | Language Development |

Total Credit Hours 18-20