

Cognitive Science Minor

Program Director: Joseph Toscano, Ph.D.
Office Location: Tolentine Hall Rm M52
Telephone: (610) 519-4755
[Website](#)

About

The Cognitive Science Program offers a course of study in the interdisciplinary field of Cognitive Science, bringing together perspectives from cognitive psychology, computer science, philosophy, and biology to understand how intelligent systems function. An undergraduate concentration and an undergraduate minor are available to all students in undergraduate colleges of the University. The program is particularly well suited to students majoring in Psychology, Computing Sciences, Philosophy, and Cognitive & Behavioral Neuroscience.

Program: Cognitive Science

Type: Minor

MINOR: Cognitive Science (15 credits)

Program Notes:

- Courses that fulfill minor requirements may be used to fulfill other requirements (i.e., primary major, core curriculum, minors, concentrations, or free electives).
- The five courses used to fulfill the Minor must span at least three different disciplines.
- Choose two courses from the first three listed items. Select three electives from the list. Five courses in total are required to fulfill the minor requirements.
- Special topics, research, and independent study electives (BIO 6509, CBN 2900, CBN 5900, CSC 5930, CSC 5993, PHI 2990, PHI 4990, PSY 2900, PSY 5900) require approval of the Cognitive Science Program.
- For courses that have prerequisites, Cognitive Science students should apply to have the prerequisites waived. Decisions will be made on a case-by-case basis by the course instructor, or in some cases, the Director of the Cognitive Science Program, after considering the particular student's background. In most cases, it is expected that the prerequisites will be able to be waived.
- Students may take CSC 1010 in place of CSC 1051 for the purpose of fulfilling the elective.

Course	Title	Credits
PHI 4610	Philosophy of Mind	3
PSY 4500	Cognitive Psychology	3
	Artificial Intelligence or Machine Learning	3-4
	Cognitive Science Electives	9

Category Descriptions

Artificial Intelligence or Machine Learning

Credits: 3-4

Choose one:

Course	Title	Credits
CSC 4500	Artificial Intelligence	3
CSC 4505	Applied Machine Learning	3
CSC 4510	Machine Learn&Theory&Evolution	3
MSE 2400	CSC:Evol Lrng Cmp Robtcs Agnts	4

Cognitive Science Electives

Credits: 9

Choose three Cognitive Science approved electives from the list below.

Biology

Course	Title	Credits
BIO 3011	Animal Behavior Lecture	3
BIO 3015	Animal Behavior	4
BIO 4605	Neurobiology	4
BIO 6509	Directed Research I	2

Cognitive and Behavioral Neuroscience

Course	Title	Credits
CBN 2900	Topics in Cog & Behav Neuro	3
CBN 4100	Cognitive Neuroscience	3
CBN 5900	Undergraduate Research in CBN	3

Cognitive Science

Course	Title	Credits
CGS 2000	Linguistics as a Cognitive Sci	3
CGS 4000	Bilingualism	3
CGS 5900	Cognitive Science Seminar	3
CGS 5910	Psychology of Language	3
CGS 5990	Special Topics	3

Computer Science

Course	Title	Credits
CSC 1051	Algorithms & Data Struct I	4
CSC 4170	Theory of Computation	3
CSC 4380	Info Visualization	3
CSC 4500	Artificial Intelligence	3
CSC 4505	Applied Machine Learning	3
CSC 4510	Machine Learn&Theory&Evolution	3
CSC 4730	Human Computer Interaction	3
CSC 5930	Topics Computer Science	3
CSC 5993	Independent Study	3
MSE 2400	CSC:Evol Lrng Cmp Robtcs Agnts	4
ECE 2620	C++, Algorithms & Data Struct	4

Philosophy

Course	Title	Credits
PHI 2020	Symbolic Logic	3
PHI 2710	Information Knowledge Inquiry	3
PHI 2990	Topics in Philosophy	3
PHI 4200	Philosophy of Language	3
PHI 4610	Philosophy of Mind	3
PHI 4990	Independent Study & Research	3

Psychology

Course	Title	Credits
MSE 2701	PSY:The Sounds of Human Lang.	4
PSY 2050	Research Methods in Psy.	3
PSY 2800	Human Factors	3
PSY 2900	Special Topics	3
PSY 3300	Perception	3
PSY 4200	Biopsychology	3
PSY 4500	Cognitive Psychology	3
PSY 4600	Animal Learning & Cognition	3
PSY 5900	Independent Research Project	3

Spanish

Course	Title	Credits
SPA 3214	Intro to Spanish Linguistics	3