

# Cognitive Science Concentration

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## 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:** Concentration

## Concentration: Cognitive Science (21 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).
- Students may take CSC 1010 to fulfill the CSC 1051 requirement.
- 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.

<b>Course</b>	<b>Title</b>	<b>Credits</b>
CSC 1051	Algorithms & Data Struc I	4
	Artificial Intelligence or Machine Learning	3-4
PHI 4610	Philosophy of Mind	3
PSY 4500	Cognitive Psychology	3
CGS 5900	Cognitive Science Seminar	3
	Cognitive Science Concentration Electives	6

## Category Descriptions

### Artificial Intelligence or Machine Learning

Credits: 3-4

Choose one:

<b>Course</b>	<b>Title</b>	<b>Credits</b>
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 Concentration Electives

Credits: 6

Choose two Cognitive Science approved electives from the list below.

## Biology

<b>Course</b>	<b>Title</b>	<b>Credits</b>
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

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

## Cognitive Science

<b>Course</b>	<b>Title</b>	<b>Credits</b>
CGS 2000	Linguistics as a Cognitive Sci	3
CGS 4000	Bilingualism	3
CGS 5910	Psychology of Language	3
CGS 5990	Special Topics	3

## Computer Science

<b>Course</b>	<b>Title</b>	<b>Credits</b>
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

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

## Psychology

<b>Course</b>	<b>Title</b>	<b>Credits</b>
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 4600	Animal Learning & Cognition	3
PSY 5900	Independent Research Project	3

## Spanish