

COGNITIVE SCIENCE: COMPUTATION AND COGNITION, BA

Cognitive science is the empirical study of intelligent systems, including the human mind. An interdisciplinary science, it combines results from biology, computer science, linguistics, mathematics, neuroscience, philosophy and psychology to the study of language processing, perception, action, learning, concept formation, inference and other activities of the mind, with applications for information technology and the study of artificial intelligence.

The minimum total course units (<https://www.college.upenn.edu/credits-needed-major/>) for graduation in this major is 36. Double majors may entail more course units.

For more information: <https://web.sas.upenn.edu/cogsci/program/major/>

For information about the General Education requirements, please visit the College of Arts & Sciences Curriculum (<https://www.college.upenn.edu/curriculum/>) page.

Code	Title	Course Units
College General Education Requirements and Free Electives		
Foundational Approaches + Sectors ¹ + Free Electives		20
Major Requirements		
<i>Core Requirement</i>		
COGS 1001	Introduction to Cognitive Science ²	1
<i>Breadth Requirement</i>		
Psychology:		
PSYC 0001	Introduction to Experimental Psychology	1
or PSYC 1310	Language and Thought	
Computation:		
Select one of the following:		1
CIS 1100	Introduction to Computer Programming	
CIS 1200	Programming Languages and Techniques I	
LGIC 1710	Introduction to Logic	
PHIL 1710	Introduction to Logic	
Language:		
LING 0001	Introduction to Linguistics	1
or LING 0500	Introduction to Formal Linguistics	
Philosophy:		
Select one of the following:		1
PHIL 1170	History of Modern Philosophy	
PHIL 2640	Introduction to Philosophy of Mind	
PHIL 4660	Philosophy of Language	
PHIL 4840	Philosophy of Psychology	
Neuroscience:		
NRSC 2249/ PSYC 1230	Cognitive Neuroscience	1
or NRSC/ BIOL 1110/ PSYC 1210	Introduction to Brain and Behavior	

Mathematics:

Select one of the following:		1
STAT 1110	Introductory Statistics	
MATH 1400	Calculus, Part I	
MATH 1410	Calculus, Part II	
MATH 1510	Calculus, Part II with Probability and Matrices	

Concentration Requirement

Select 9 course units of Concentration Electives ³	9
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Total Course Units **36**

¹ You may count no more than one course toward both a Major and a Sector requirement. For Exceptions, check the Policy Statement (<http://www.college.upenn.edu/sectors-policy/>).

² May be taken as CIS 1400 Introduction to Cognitive Science, LING 1005 Introduction to Cognitive Science, PHIL 1840 Introduction to Cognitive Science or PSYC 1333 Introduction to Cognitive Science.

³ See COGS website for lists of approved courses.

Honors

Required: A Minimum Overall GPA of 3.0 and 3.5 in Major Related Courses

The degree and major requirements displayed are intended as a guide for students entering in the Fall of 2023 and later. Students should consult with their academic program regarding final certifications and requirements for graduation.