

# COGNITIVE SCIENCE: INDIVIDUALIZED, 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
<b>College General Education Requirements and Free Electives</b>		
Foundational Approaches + Sectors <sup>1</sup> + Free Electives		20
<b>Major Requirements</b>		
<i>Core Requirement</i>		
COGS 001	Introduction to Cognitive Science <sup>2</sup>	1
<i>Breadth Requirement</i>		
Psychology:		
PSYC 001 or PSYC 151	Introduction to Experimental Psychology Language and Thought	1
Computation:		
Select one of the following:		1
CIS 110	Introduction to Computer Programming	
CIS 120	Programming Languages and Techniques I	
PHIL 005	Formal Logic I	
Language:		
LING 001 or LING 106	Introduction to Linguistics Introduction to Formal Linguistics	1
Philosophy:		
Select one of the following:		1
PHIL 004	History of Modern Philosophy	
PHIL 244	Introduction to Philosophy of Mind	
PHIL 405	Philosophy of Language	
PHIL 426	Philosophy of Psychology	
Neuroscience:		
BIBB 249/ PSYC 149	Cognitive Neuroscience	1
	or BIBB/BIOL/ PSYC 109	Introduction to Brain and Behavior
Mathematics:		
Select one of the following:		1
STAT 111	Introductory Statistics	

MATH 104	Calculus, Part I	
MATH 114	Calculus, Part II	
MATH 115	Calculus, Part II with Probability and Matrices	
<i>Concentration Requirement</i>		
Select 9 course units of Concentration Electives <sup>3,4</sup>		9
Total Course Units		36

- <sup>1</sup> 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>).
- <sup>2</sup> May be taken as CIS 140 Introduction to Cognitive Science, LING 105 Introduction to Cognitive Science, PHIL 044 Introduction to Cognitive Science, or PSYC 207 Introduction to Cognitive Science.
- <sup>3</sup> ALL Courses must be approved by your advisor.
- <sup>4</sup> 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 2018 and later. Students should consult with their academic program regarding final certifications and requirements for graduation.