

## Fall 2018 Courses for Cognitive Science Majors

The following courses satisfy degree requirements for the Cognitive Science major. Additionally, the Advanced Course Search tab in SIS allows you to look up focal area courses using POS Tags starting with "COGS-...". If you believe a course qualifies to be added to one of these lists, contact Sarah Ciotola, Academic Program Coordinator ([sciotol3@jhu.edu](mailto:sciotol3@jhu.edu)). Please provide a course description and a syllabus.

Please note that course offerings are always subject to change. After this list is posted, departments might add or cancel courses.

### Required for all Cognitive Science Majors: AS.050.101 Cognition

#### Math

##### Option A (any two of the following)

- AS.110.106/108 Calculus I
- AS.110.107/109 Calculus II  
OR AS.110.113 Honors Single Variable Calculus
- AS.110.201 Linear Algebra  
OR AS.110.212 Honors Linear Algebra  
OR EN.553.291 Linear Algebra & Differential Eq.
- EN.550.171 Discrete Mathematics

##### Option B (all three required for the Statistics sequence)

*Required math option if Area A (below) is one of your focal areas*

- AS.200.207 Research Methods in Experimental Psychology
- EN.550.111 Statistical Analysis I
- EN.550.112 Statistical Analysis II

#### Courses by Focal Area

##### Area A: Cognitive Psychology & Cognitive Neuropsychology

- AS.050.102 Language & Mind
- AS.050.339 Cognitive Development
- AS.050.346 Decoding the Brain: Multivariate Analysis in Cognitive Neuroscience
- AS.050.358 Language and Thought
- AS.200.101 Introduction to Psychology
- AS.200.132 Introduction to Developmental Psychology
- AS.200.141 Foundations of Brain, Behavior & Cognition
- AS.200.211 Sensation & Perception
- AS.376.371 Introduction to Music Cognition

##### Area B: Linguistics

- AS.050.102 Language & Mind
- AS.050.317 Semantics I
- AS.050.358 Language & Thought
- EN.600.465 Natural Language Processing

##### Area C: Computational Approaches to Cognition

- AS.050.375 Probabilistic Models of the Visual Cortex
- AS.200.313 Models of Mind and Brain
- AS.200.329 Real World Human Data: Analysis & Visualization
- AS.250.205 Introduction to Computing
- EN.520.315 Intro to Information Processing of Sensory Signals
- EN.520.412 Machine Learning for Signal Processing
- EN.520.414 Image Processing & Analysis
- EN.601.226 Data Structures
- EN.601.229 Computer System Fundamentals
- EN.601.231 Automata & Computation Theory
- EN.601.433 Intro Algorithms
- EN.601.461 Computer Vision
- EN.601.463 Algorithms for Sensor-Based Robotics
- EN.601.464 Artificial Intelligence
- EN.601.465 Natural Language Processing
- EN.601.468 Machine Translation
- EN.601.475 Machine Learning
- EN.601.482 Machine Learning: Deep Learning
- EN.601.490 Introduction to Human-Computer Interaction

*At most one of the following courses:*

- EN.601.107 Introductory Programming in Java

- EN.601.220 Intermediate Programming

##### Area D: Philosophy of Mind

- AS.150.136 Philosophy of Science
- AS.150.140 Minds, Bodies, and Persons
- AS.150.223 Formal Methods of Philosophy (AS.150.434)
- AS.150.476 Philosophy and Cognitive Science

##### Area E: Neuroscience

- AS.050.346 Decoding the Brain: Multivariate Analysis in Cognitive Neuroscience
- AS.080.250 Neuroscience Laboratory
- AS.080.305 Neuroscience: Cellular and Systems I
- AS.080.308 Neuroeconomics
- AS.080.345 Great Discoveries in Neuroscience
- AS.080.348 Science of Learning
- AS.080.360 Diseases & Disorders of the Nervous System
- AS.080.370 The Cerebellum: Is it just for motor control?
- AS.200.141 Foundations of Brain, Behavior & Cognition
- AS.200.211 Sensation & Perception
- AS.200.324 Choosing the 'champion' animal in neuroscience research
- AS.200.329 Real World Human Data: Analysis & Visualization
- AS.200.376 Psychopharmacology

##### **AS.050.318 (080.400) Practicum in Lang Disorders (2 credits)**

This course provides the opportunity to learn about adult aphasia, language disorders which are one of the most common consequences of stroke. You will receive training in supportive communication techniques and work as a communication partner with an individual with aphasia for two hours per week. Three class meetings for orientation and reading assignments will be held on campus; training and practicum will be conducted at a local aphasia support center. Transportation required. Student must have an A- or better in AS.050.203, AS.080.203, AS.050.105, or AS.050.311; have junior or senior status; and hold a 3.5 GPA or better. Instructor's permission required. Find more details on the Neuroscience Dept website.