

## Fall 2019 Courses for Cognitive Science Majors

The following courses satisfy degree requirements for the Cognitive Science major. **The Advanced Course Search tab in SIS also 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)); provide a course description and syllabus. Note that course offerings are always subject to change. Departments might add or cancel courses at any time.

### Math

#### Math Option A

- 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.
- AS.150.420 Mathematical Logic I
- EN.550.171 Discrete Mathematics

#### Math Option B

Required math option if Area A is one of your focal areas

- AS.200.200 Research Methods in Experimental Psychology
- [EN.553.111 Statistical Analysis I]

Stats I required only if entered Fall 2017 or prior and taking "old" Math Option B sequence  
Visit <https://bit.ly/2lvTzPp> for details.

### Courses by Focal Area

#### Area A: Cognitive Psych. & Cognitive Neuropsych. [COGS-COGPSY]

- AS.050.102 Language & Mind
- AS.050.105 Introduction to Cognitive Neuropsychology
- AS.050.206 Bilingualism
- AS.050.332 Developmental Cognitive Neuroscience
- AS.050.346 Decoding the Brain: Multivariate Analysis in Cog Neuro
- AS.050.348 Language Acquisition <sup>NEW</sup>
- AS.050.360 Computational Psycholinguistics
- 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.200.322 Clinical Neuropsychology
- AS.200.335 How Does the Brain Predict the Future?
- AS.376.371 Introduction to Music Cognition

#### Area B: Linguistics [COGS-LING]

- AS.050.102 Language & Mind
- AS.050.206 Bilingualism
- AS.050.348 Language Acquisition <sup>NEW</sup>
- AS.050.360 Computational Psycholinguistics
- EN.600.465 Natural Language Processing

#### Area C: Computational Approaches to Cognition [COGS-COMPCG]

- AS.050.102 Intro to Computational Cognitive Science
- AS.050.346 Decoding the Brain: Multivariate Analysis in Cog Neuro
- AS.050.360 Computational Psycholinguistics
- 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 Bio-Inspired Processing of A/V Signals
- EN.520.412 Machine Learning for Signal Processing
- EN.520.414 Image Processing & Analysis (EN.520.614)
- 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.601.475 Machine Learning

- EN.601.482 Machine Learning: Deep Learning
- EN.601.490 Introduction to Human-Computer Interaction

*At most, one of the following computational courses:*

- EN.500.112 Gateway Computing: JAVA
- EN.601.220 Intermediate Programming

#### Area D: Philosophy of Mind [COGS-PHLMND]

- AS.150.136 Philosophy and Science: An Introduction to Both
- AS.150.223 Formal Methods of Philosophy (AS.150.434)
- AS.150.340 Philosophy of Psychology <sup>NEW, ADDED 3.29.19</sup>

#### Area E: Neuroscience [COGS-NEURO]

- AS.050.105 Introduction to Cognitive Neuropsychology
- AS.050.332 Developmental Cognitive Neuroscience
- AS.050.346 Decoding the Brain: Multivariate Analysis in Cog Neuro
- 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.080.355 Fundamental Principles of Vision
- 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.200.329 Real World Human Data: Analysis & Visualization
- AS.200.376 Psychopharmacology
- AS.200.380 Neurobiology of Human Cognition

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

[May be applied to 9 credits of "Additional Upper-Level CogSci Electives."] 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 2 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.