

## Spring 2022 Courses for Cognitive Science Majors

The following courses satisfy degree requirements for the Cognitive Science major in the specified term. **The Advanced Course Search tab in SIS also allows you to search 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)) and provide a course description and syllabus. Note: Course offerings are subject to change; departments may add or cancel courses at any time.

Also refer to the [Cognitive Science Majors Requirements](#) and [Linguistics Minor Requirements](#).

### Math Option Courses

#### Math Option A offered courses

- AS.050.372 Foundations of Neural Network Theory
- AS.110.106/108 Calculus I
- AS.110.107/109 Calculus II
- AS.110.201/212 or EN.553.291 Linear Algebra
- AS.150.118 Introduction to Formal Logic
- EN.553.171 Discrete Mathematics

#### Math Option B/Statistics Sequence offered courses

*Required if Cognitive Psychology/Neuropsychology is a chosen focal area.*

- AS.200.201 Design & Analysis for Experimental Psychology

### Focal Area Courses

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

- AS.050.116 Visual Cognition
- AS.050.203 Neuroscience: Cognitive
- AS.050.206 Bilingualism
- AS.050.315 Cognitive Neuropsychology of Visual Perception
- AS.050.332 Developmental Cognitive Neuroscience
- AS.050.339 Cognitive Development
- AS.050.349 Second Language Acquisition
- AS.050.353 Applying Cognitive Neuroscience to AI Part II
- AS.200.110 Introduction to Cognitive Psychology
- AS.200.141 Foundations of Brain, Behavior and Cognition
- AS.200.211 Sensation & Perception
- AS.376.372 Topics in Music Cognition (PY.610.638)

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

- AS.050.206 Bilingualism
- AS.050.320 Syntax I
- AS.050.325 Phonology I
- AS.050.349 Second Language Acquisition
- AS.211.311 Introduction to Romance Linguistics

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

- AS.050.116 Visual Cognition
- AS.050.353 Applying Cognitive Neuroscience to AI Part II
- AS.050.372 Foundations of Neural Network Theory
- AS.080.321 Computational Neuroscience
- AS.200.329 Real World Human Data: Analysis & Visualization
- AS.200.330 Human and Machine Intelligence
- EN.520.415 Image Process & Analysis II
- EN.520.433 Medical Image Analysis
- EN.553.426 Introduction to Stochastic Processes
- EN.553.436 Introduction to Data Science
- EN.553.493 Mathematical Image Analysis
- EN.601.226 Data Structures
- EN.601.229 Computer System Fundamentals
- EN.601.231 Automata & Computation Theory
- EN.601.426 Principles of Programming Languages
- EN.601.433 Intro Algorithms
- EN.601.463 Algorithms for Sensor-Based Robotics
- EN.601.464 Artificial Intelligence
- EN.601.475 Machine Learning
- EN.601.482 Machine Learning: Deep Learning

- EN.601.491 Human-Robot Interaction

*At most, one of the following Area C courses:*

- AS.250.205 Introduction to Computing
- EN.500.112 Gateway Computing: JAVA
- EN.500.113 Gateway Computing: Python
- EN.500.114 Gateway Computing: Matlab
- EN.601.220 Intermediate Programming

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

- AS.150.118 Introduction to Formal Logic
- AS.150.215 Problems with Knowledge, Evidence, and Action
- AS.150.476 Philosophy & Cognitive Science

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

- AS.050.116 Visual Cognition
- AS.050.203 Neuroscience: Cognitive
- AS.050.315 Cognitive Neuropsychology of Visual Perception
- AS.050.332 Developmental Cognitive Neuroscience
- AS.050.339 Cognitive Development
- AS.050.353 Applying Cognitive Neuroscience to AI Part II
- AS.080.250 Neuroscience Laboratory
- AS.080.304 Neuroscience Learning and Memory
- AS.080.306 Neuroscience: Cellular and Systems II
- AS.080.321 Computational Neuroscience
- AS.080.328 Behavioral Neuroscience Lab
- AS.080.345 Great Discoveries in Neuroscience
- AS.200.141 Foundations of Brain, Behavior and Cognition
- AS.200.211 Sensation & Perception
- AS.200.304 Neuroscience of Decision Making
- AS.200.329 Real World Human Data: Analysis & Visualization
- AS.200.370 Functional Human Neuroanatomy
- EN.580.439 Models of the Neuron

#### **AS.050.500 (080.505) Practicum in Language Disorders (2 cr)**

Learn about adult aphasias, language disorders which are one of the common consequences of stroke. Receive training in supportive communication techniques and work as a communication partner with an individual with aphasia for 2 hrs/wk. Three class meetings will be held on campus; training and practicum will be at an aphasia support center. 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 permission required.