BHA-Cognitive Neuroscience

Fall 2024

Bachelor of Humanities and Arts (BHA)

Dietrich College (DC) Concentration in Cognitive Neuroscience **81 units (minimum)**

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Cognitive neuroscience is a science concerned with discovering biological bases of psychological functions. It addresses questions of how behavior is produced by neural circuits of the brain and also how those neural circuits are in turn influenced by behavioral experiences. Students with a concentration in Cognitive Neuroscience are expected to learn about existing findings within the field and also to become proficient in how to conduct and analyze scientific investigations directed toward understanding the biological basis of behavior. This includes observing behavior, formulating hypotheses, designing experiments to test these hypotheses, running experiments, performing statistical analyses and writing reports.

BHA students take at least 9 courses in their DC concentration, for a minimum of 81 units. A completed DC Concentration Declaration Sheet must be approved by the concentration advisor and submitted to the BXA office by spring mid-semester break of the student's sophomore year. BHA students who are admitted through internal transfer must have chosen a DC concentration at the time of their application, which serves as declaration.

Introductory and Survey Coursework **(4 courses, 36 units)**

03-121	Modern Biology	9
03-363	Systems Neuroscience	9
85-219	Foundations of Brain and Behavior	9
85-211	Cognitive Psychology	9
or 85-213	Human Information Processing and Artificial Intelligence	

Research Methods Training **(2 courses, 18 units)**

36-309	Experimental Design for Behavioral & Social Sciences	9
or 85-309	Statistical Concepts and Methods for Behavioral and Social Science	
85-314	Cognitive Neuroscience Research Methods *	9

* 85-310 Research Methods in Cognitive Psychology may be substituted if necessary.

Distribution Requirements **(3 courses, 27 units)**

Complete three courses with at least one from each category below.

Approaches to Cognitive Neuroscience:

15-386	Neural Computation	9
85-351	What is Attention?	9
85-407	How the Brain Makes Meaning	9
85-412	Cognitive Modeling	9
85-414	Cognitive Neuropsychology	9
85-417	Multilingual Minds and the Brain	9
85-419	Introduction to Parallel Distributed Processing	9

Cognitive Neuroscience Electives:

03-133	Neurobiology of Disease	9
03-362	Cellular Neuroscience	9
85-370	Perception	9
85-385	Auditory Perception: Sense of Sound	9
85-408	Visual Cognition	9
85-435	Biologically Intelligent Exploration	9
85-442	Health Psychology	9