Neuroscience (BS)
(Cognitive Neuroscience Concentration)

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Neuroscience is an interdisciplinary field in which scientists from many backgrounds apply the tools of biology, cognitive science, psychology, chemistry, mathematics, statistics, computer science, and engineering to develop a comprehensive understanding of brain function at the level of molecules, neurons, brain circuits, cognitive brain modules, and behavior.

The goal of this interdisciplinary program between the Dietrich College and the Mellon College of Science is to provide an intensive interdisciplinary education to enable outstanding students to become leaders in identifying and solving tomorrow's Neuroscience problems using a variety of methods. There are three concentration areas: Neurobiology; Cognitive Neuroscience; Computation Neuroscience. Students may complete only one concentration.

This is a suggested 4-year schedule for a Primary Major.

Suggested Plan for Neuroscience with Cognitive Neuroscience concentration:

1st semester
- Complete 2: First-Year Writing (FYW)
- 79-104, Global Histories
- Freshman Seminar
- 99-101, C@CM
- 85-102, Introduction to Psychology
- 21-120, Diff. & Integral Calculus*
- 09-105, Intro to Modern Chem. I**

2nd semester
- Complete 1: First-Year Writing (FYW)
- 79-104, Global Histories
- Freshman Seminar
- 36-200, Reasoning with Data***
- 21-122, Int., Diff., Equ., & Approx.
- 09-106, Modern Chemistry II
- 03-121 Modern Biology

3rd semester
- 36-309, Exp. Des. for Beh. & S. S.
- 33-111, Physics I for Sci Students
- 03-220, Genetics
- 85-219, Biological Fnds. of Beh.
- GenEd+

4th semester
- 33-122, Physics II for Bio. & Chem
- 85-211, Cognitive Psychology
- GenEd+

5th semester
- 03-124, Modern Bio Lab.
- 03-362, Cellular Neuroscience
- 15-110 Principles of Computing
- GenEd**

6th semester
- 85-419, Intro Parallel Dist. Process
- 03-363, Systems Neuroscience
- Neuroscience Elective +++
- GenEd**

7th semester
- xx-3xx, Neurosci Elective +++
- xx-xxx, Elective**
- xx-xxx, Elective**
- xx-xxx, Elective**
- xx-xxx, Elective**

8th semester
- 85-3xx, Cog. Neurosci Elective++
- xx-xxx, Elective**
- xx-xxx, Elective**
- xx-xxx, Elective**
- xx-xxx, Elective**

*If required to start with 21-111, complete 21-112, then 21-122.
**It is essential to start with the chemistry course, 09-105, in the first semester.
***Suggested alternative statistics course for this major: 36-247, Statistics for Lab Sciences (prereq: 21-120).
++Elective: This space can be used for a pre-requisite course, another GenEd course, major course, or for a course you are interested in.
+++Samples of Cognitive Neuroscience Electives    +++Recommended Neuroscience Electives