**Undergraduate Program in Neuroscience**  
**Required Courses (17) & CAS Degree Courses (10)**

### ELECTIVES (5)

**Group 1: Cellular & Molecular**
- **Fall**
  - NE 230  
  - NE 455  
  - NE 520  
  - NE 525*  
  - NE 535  
  - NE 598  
- **Spring**
  - NE 322*  
  - NE 445*  
  - NE 481  
  - BI 594  
  - BI 599  
  - ______

**Group 2: Cognitive**
- **Fall**
  - NE 327*  
  - NE 328*  
  - NE 333*  
  - NE 337  
  - NE 338  
  - ______
- **Spring**
  - NE 234*  
  - NE 499  
  - NE 521  
  - NE 528  
  - NE 544  
  - ______

**Group 3: Computational**
- **Fall**
  - NE 360/HS 361*  
  - NE 449  
  - MA 421**  
  - MA 565*  
  - CN 500*  
  - CN 520  
  - CS 565  
  - BI 502  
  - ______
- **Spring**
  - NE 340*  
  - NE 526  
  - NE 530  
  - MA 578  
  - CS 542  
  - CN 510  
  - CN 530-580  
  - ______

**Restricted (Maximum 2)**
- **Fall**
  - BI 203  
  - CH 203  
  - MA 416  
  - CS 111#  
  - ENG EK 127#  
- **Spring**
  - MA 226  
  - MA 242  
  - BI 315#  
  - CS 112#  
  - ______

### CORE NEUROSCIENCE COURSES (5)

**Fall**
- NE 101 Introduction to Neuroscience  
- NE 203* Principles of Neuroscience  
- NE 491  
- NE 492  
- NE 401/402  

**Spring**
- NE 102* Intro to Cell & Molecular Neurobiology  
- NE 202 Intro to Cognitive Neuroscience  
- NE 204* Intro to Comp Models of Brain & Behavior  
- NE 481  
- NE 391  
- NE 392  

### BASIC SCIENCE COURSES (7)

- Chemistry: CH 101 (or equivalent)  
- Physics: PY 105 (or equivalent)  
- Calculus: MA 123 (or equivalent)  
- Statistics: NE 212 (or equivalent)

See reverse side for equivalent courses.

### CAS DEGREE COURSES (10)

**Writing Requirement:**
- WR 100  
- WR 150

**Foreign Language Requirement:**
- Language 1  
- Language 2  
- Language 3  
- Language 4

**General Education Divisional Requirement:**
- HU 1  
- HU 2  
- SS 1  
- SS 2

**Credit Requirements:** CAS requires a minimum of 128 credits, excluding PDP, ROTC, CAS FY and SY courses.

### RESEARCH REQUIREMENT

Successful completion of [NE 102 and NE 203]  

-OR-  
Successful completion of an upper-level lab course (may not be satisfied with a restricted elective)  

-OR-  
Successful completion of at least two consecutive semesters of research during Junior or Senior year; in this instance only four electives will be required.

**Elective Requirements:**

1. **Breadth Requirement:** All five electives may not be from the same group. Restricted electives do not satisfy the breadth requirement. For example, four courses from Group 1 and one course from the restricted list will not satisfy the requirement.

2. **Restricted List:** Up to two electives may come from the Restricted list (neither satisfies the Breadth or Research Requirement).

3. Students may not count both NE 337 & NE 338 toward their electives.

*Lab Course  ** Summer Term  # Offered either semester*
# Undergraduate Program in Neuroscience

## Course List

### Group 1 Electives: Cellular & Molecular
- NE 230 Behavioral Endocrinology
- NE 322* Experimental Psych: Physiology
- NE 445* Cell & Molec Neurophysiology
- NE 455 Developmental Neurobiology
- NE 481 Molecular Biology of the Neuron

### Group 2 Electives: Cognitive
- NE 340* Comp Models of Skilled Action
- NE 360/HS 361* Models of Hearing & Language
- MA 421* Modern Stat Modeling & Data Analysis

### Group 3: Computational
- NE 449* Neuroscience Design Lab
- CN 500* Techniques in Modeling
- CN 510 Cognition & Neural Models I
- CN 520 Cognition & Neural Models II
- NE 526 Motor Control

**Restricted**

### BASIC SCIENCE EQUIVALENTS

**Chemistry:**
- CH 101/102 General Chemistry I/II
- CH 109/110 Quantitative Analytical Chem I/II
- CH 111/112 Intensive General & Quantitative Analytical Chemistry I/II

**Statistics:**
- NE 212 Introduction to MATLAB Programming
- MA 115/116 Statistics I/II
- MA 213/214 Basic Stats & Prob/Applied Stats

**Physics:**
- PY 105/106 Elementary Physics I/II
- PY 211/212 General Physics I/II
- PY 241/242 Principles of General Physics I/II
- PY 251/252 Principles of Physics I/II

**Calculus:**
- MA 121/122 Calculus for the Life Sciences I/II
- MA 123/124 Calculus I/II

### PRE-MED REQUIREMENTS

- One year of Biology with lab (for neuro majors, this is satisfied by NE 102 & BI 315; BI 108 is not required)
- One course in Cell Biology
- One year of General Chemistry with lab
- One year of Physics with lab
- One year of Writing
- One course in Calculus
- One course in Statistics
- One year of Organic Chemistry with lab
- One course in Biochemistry
- One introductory course in Psychology
- One introductory course in Sociology

### PROPOSED COURSE OF STUDY

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