Bachelor of Arts in Neuroscience

Boston University College of Arts and Sciences
Undergraduate Program in Neuroscience

Course worksheet for Neuroscience majors entering BU prior to Fall 2018 or as transfer students

**GENERAL REQUIREMENTS**
- 17 courses with ‘C’ or higher required for credit towards Neuroscience major.
- 128 credits (excluding PDP, ROTC, FY, and SY) units required to graduate from BU.
- 4th semester of foreign language proficiency and completion of Divisional Studies required to graduate from CAS.

**CORE NEUROSCIENCE (5 courses)**

**Fall Semester**
- NE 101 Intro to Neuroscience
- NE 203 Principles of Neuroscience

**Spring Semester**
- NE 102 Intro to Cell & Molecular Biology
- NE 202 Intro to Cognitive Neuroscience
- NE 204 Intro to Comp. Models of Brain and Behavior

**RESEARCH REQUIREMENT**
- Completion of NE 102 and NE 203
- One upper-level lab course not from Restricted List
- Two consecutive semesters of research for credit totaling 8 credits during Junior or Senior year

**Directed Study**
- NE 391
- NE 392

**Senior Thesis**
- NE 401
- NE 402

**CHEMISTRY (2 courses)**
- CH 101
- CH 102

**PHYSICS (2 courses)**
- PY 105
- PY 106

**CALCULUS (2 courses)**
- MA 121
- MA 122

**STATISTICS (1 course)**
- MA 213

**ELECTIVE REQUIREMENTS**
- Students must complete at least 5 electives across all groups.
- A maximum of 2 electives may come from the Restricted List.
- All 5 electives may not be from the same group. Restricted electives do not count towards this requirement.
- Students may not count both NE 337 and NE 338 towards their electives.
- Two consecutive semesters of research for credit totaling 8 credits during Junior or Senior years counts as one elective.

**GROUP 1: Cellular & Molecular**

**Fall Semester**
- NE 230 Behavioral Endocrinology
- NE 455 Developmental Neurobiology
- NE 520 Sensory Neurobiology
- NE 525 Neurodegenerative Diseases
- NE 535 Translational Research in Alzheimer’s disease
- NE 545 Neurobiology of Motivated Behavior
- NE 598 Neural Circuits
- MET BI 566 Neurobiology of Consciousness

**Spring Semester**
- NE 322 Exp. Psych: Physiology
- NE 445 Neurophysiology
- NE 481 Molecular Neurobiology

**GROUP 2: Cognitive**

**Fall Semester**
- NE 234 Psych of Learning
- NE 327 Exp Psych: Perception
- NE 328 Exp Psych: Memory
- NE 333 Drugs & Behavior
- NE 337 Memory Systems
- NE 338 Neuropsychology

**Spring Semester**
- NE 323 Exp. Psych: Learning
- NE 499 Clinical Neuroanatomy
- NE 521 Animal Models in Behivioral Neurobiology
- NE 528 Human Brain Mapping
- NE 544 Developmental Neuropsychology

**GROUP 3: Computational**

**Fall Semester**
- NE 449 Neuroscience Design Lab
- MA 421 Stat Modeling & Data Analysis
- CN 520 Cognition & Neural Models II

**Spring Semester**
- NE 340 Comp Models of Skilled Action
- NE 526 Neural Control of Movement
- NE 530 Neural Models of Memory
- MA 578 Bayesian Statistics
- CN 510 Cognition & Neural Models I
- CS 542 Machine Learning
- CS 565 Data Mining

**Restricted Electives**
- BI 203 Cell Biology
- CH 203 Organic Chemistry I
- BI 315 Systems Physiology
- CS 111 Intro. to CS I
- MA 416 Analysis of Variance

For more information, contact Abhinav Prasad (avprasad@bu.edu | 2 Cummington, Room 212).
Key: *Lab Course, *Offered Summer Term, *Offered Either Semester

bu.edu/neuro
**COURSE OF ARTS AND SCIENCES DIVISIONAL STUDIES REQUIREMENTS**

**LANGUAGE REQUIREMENT** Choose one of the following
- 560 or above on SAT Language Test (no listening required)
- Qualifying score (4 or 5) on AP Language Test
- Native proficiency in foreign language (in-person test required)

- **Fourth** semester language course
  - Language 1 _____
  - Language 2 _____
  - Language 3 _____
  - Language 4 _____

**HUMANITIES REQUIREMENT** Two semesters of humanities courses
- Humanities 1 ______
- Humanities 2 ______

**SOCIAL SCIENCE REQUIREMENT** Two semesters of social science courses
- Social Science 1 ______
- Social Science 2 ______

**NATURAL SCIENCE REQUIREMENT** Fulfilled by Neuroscience major

**MATH & COMPUTER SCIENCE REQUIREMENT** Fulfilled by Neuroscience major

**WRITING REQUIREMENT** Two semesters of writing courses
- WR 100
- WR 150

**PRE-MED REQUIREMENTS**
- AP courses do not satisfy any pre-med requirements with the exception of AP Calculus AB/BC.
- BL 108 is not required for neuroscience majors

- One year of biology with lab (NE 102 & BI 315 for neuroscience majors)
- One semester of Calculus
- One semester in Cell Biology (BI 203)
- One year of General Chemistry with lab
- One semester of Statistics
- One year of Physics with lab
- One year of Organic Chemistry with lab
- One year of Writing
- One semester of Biochemistry (CH 373)
- One semester of Psychology (PS 101)
- One semester of Sociology (SO 100)

**PROPOSED COURSE OF STUDY**

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