

Bachelor of Arts in Neuroscience

Boston University College of Arts and Sciences
Undergraduate Program in Neuroscience

Course worksheet for Neuroscience majors entering BU in or after Fall 2026.

CORE NEUROSCIENCE COURSES (5 COURSES)

- ☐ NE 101 Intro to Neuroscience
- ☐ NE 102* Intro to Cell & Molecular Biology
- ☐ NE 202 Intro to Cognitive Neuroscience
- ☐ NE 203* Principles of Neuroscience
- ☐ NE 204 Intro to Comp. Models of Brain and Behavior

*NE 203 is only offered in the Fall semester. NE 102, NE 202, and NE 204 are only offered in the Spring semester.

REQUIRED BASIC SCIENCE/MATH COURSES

CHEMISTRY REQUIREMENT* (2 COURSES) Choose one sequence.

- | | |
|---------------------------------|--|
| ☐ CH 101 | ☐ CH 109 |
| ☐ CH 102 | ☐ CH 110 <u>or</u> CH 112 |

PHYSICS REQUIREMENT* (2 COURSES) Choose one sequence.

- | | | |
|---------------------------------|---------------------------------|---------------------------------|
| ☐ PY 105 | ☐ PY 211 | ☐ PY 241 |
| ☐ PY 106 | ☐ PY 212 | ☐ PY 242 |

CALCULUS, COMPUTER SCIENCE & DATA SCIENCE REQUIREMENT (2 COURSES) Choose one from each list.

List 1: Calculus List 2: Calculus, Computer Science & Data Science

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|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| ☐ MA 121 | ☐ MA 122 | ☐ CS 111 | ☐ DS 110 |
| ☐ MA 123 | ☐ MA 124 | | ☐ DS 100 |

*If using CS 111 or DS 110 towards this requirement, the course cannot be used as a Restricted Elective.

STATISTICS REQUIREMENT (1 COURSE or 2 COURSES) Choose one option.

- | | | |
|---------------------------------|---------------------------------|---------------------------------|
| ☐ NE 212 | ☐ MA 115 | ☐ MA 213 |
| | ☐ MA 116 | ☐ MA 214 |

RESEARCH REQUIREMENT Choose one of the following.

- ☐ Completion of NE 102 and NE 203
- ☐ **One** upper-level lab course **not** from Restricted List
- ☐ **One** semester of research for units totaling 4 units during Junior or Senior year

*A maximum of one faculty-mentored independent research course (4 units) taken Junior or Senior year can be used toward the elective requirement for the major.

*Students may complete a maximum of 12 units in research for units while at CAS.

RESEARCH FOR UNITS COURSES (OPTIONAL)

JR/SR Research in Neuroscience

Honors Research

- | | | |
|---------------------------------|---------------------------------|---------------------------------|
| ☐ NE 391 | ☐ NE 491 | ☐ NE 401 |
| ☐ NE 392 | ☐ NE 492 | ☐ NE 402 |
| ☐ NE 393 | ☐ NE 493 | |

*Note that electives may not be offered every semester or every year. Please refer to MyBU Student for the most up to date information on class scheduling for the current/upcoming semesters. | Updated 8/20/2026

Key: *Lab Course

NEUROSCIENCE ELECTIVE REQUIREMENT

- ✓ Students must complete at least **5 electives total** from at least 2 of the 3 groups (Neurobiology, Cognitive and Computational).
- ✓ A maximum of 2 of the 5 electives may come from the Restricted List.
- ✓ One faculty-mentored independent research course (4 units) taken Junior or Senior year counts as one elective.

GROUP 1: NEUROBIOLOGY

- ☐ NE 230 Behavioral Endocrinology
- ☐ NE 293 Methods in Cell and Molecular Neurobiology
- ☐ NE 445* Neurophysiology
- ☐ NE 447* Neurotoxins
- ☐ NE 455 Developmental Neurobiology
- ☐ NE 460 Neuroscience Enquiry Lab
- ☐ NE 481 Molecular Neurobiology
- ☐ NE 503 Neuroimmunology
- ☐ NE 512 Neurogenetics
- ☐ NE 520 Sensory Neurobiology
- ☐ NE 525 Neurodegenerative Diseases
- ☐ NE 535 Translational Research in Alzheimer's disease
- ☐ NE 542 Neuroethology
- ☐ NE 556 Drug Discovery in Neuro
- ☐ NE 557 Neurobio. of Brain Disorders
- ☐ NE 561* Proteostasis in the Biology of Neurodegen. Diseases
- ☐ NE 589 Neural Impacts on Tumorigenesis
- ☐ NE 594 Topics in Neurobiology
- ☐ NE 598 Neural Circuits
- ☐ BI 599 Physiology of the Synapse
- ☐ SAR HS 549 Mechanisms of Disruption in Brain Dis.

GROUP 2: COGNITIVE

- ☐ NE 234 Psych of Learning
- ☐ NE 323* Exp. Psych: Learning
- ☐ NE 327* Exp. Psych: Perception
- ☐ NE 328* Exp. Psych: Memory
- ☐ NE 329* Exp. Psych: Cognitive Neuro
- ☐ NE 333 Drugs & Behavior
- ☐ NE 337 Memory Systems
- ☐ NE 338 Neuropsychology
- ☐ NE 456 Neurobiology of Sex and Aggression
- ☐ NE 521 Animal Models in Behavioral Neurobiology
- ☐ NE 527 Building an Adaptive Brain
- ☐ NE 528 Human Brain Mapping
- ☐ NE 529 Neuroplasticity
- ☐ NE 531 Imaging & Manipulating Memories
- ☐ NE 532 Neurobiology of Motivation, Decision Making, & Learning
- ☐ NE 544 Developmental Neuropsychology
- ☐ NE 592 Topics in Cognitive Neuro

GROUP 3: COMPUTATIONAL

- ☐ NE 449* Neuro. Design Lab
- ☐ NE 530 Neural Models of Memory
- ☐ NE 593 Topics in Computational Neuroscience
- ☐ MA 242 Linear Algebra
- ☐ MA 565 Math Models in Life Sci.
- ☐ MA 573 Qualitative Theory of Differential Equations
- ☐ MA 578 Bayesian Statistics
- ☐ CN 510 Cognition & Neural Models I
- ☐ CN 530 Neural & Comp Model of Vision
- ☐ CS 542* Machine Learning OR
- ☐ CDS DS 340 Intro. to Machine Learning and AI
- ☐ CS 565* Data Mining

RESTRICTED ELECTIVES

- ☐ BI 203 Cell Biology OR
- ☐ BI 213 Intensive Cell Biology
- ☐ BI 315* Systems Physiology
- ☐ CH 203* Organic Chemistry I
- ☐ CS 111 Intro. to CS I OR
- ☐ CDS DS 110 Intro. to DS w/ Python
- ☐ CS 112 Intro. to CS II
- ☐ MA 226 Differential Equations
- ☐ MA 416 Analysis of Variance
- ☐ CDS DS 210 Programming for Data Science
- ☐ ENG EK 125 Intro to Programming for Eng.

GENERAL EDUCATION REQUIREMENTS *For more details visit the [CAS Degree Overview page](#).*

- ✓ 'C-' or higher required for general chemistry sequence. 'C' or higher required for all other Neuroscience major courses.
- ✓ 128 units (excluding PDP, ROTC, FY, and SY) and successful completion of BU Hub requirements required to graduate from BU.
- ✓ 4th semester of foreign language proficiency required to graduate from CAS.
- ✓ Natural Sciences Lab Requirement (fulfilled through major requirements).

CAS 2nd LANGUAGE REQUIREMENT: *Can be completed by one of the following.*

- Proficiency through the 4th semester: I ☐ II ☐ III ☐ IV ☐
- AP or IB Credit: ☐
- Bilingual Proficiency Evaluation: ☐

BU HUB REQUIREMENTS:

- PLM ☐ SI1 ☐ QR1 ☐ IIC ☐ FYW ☐ CRT ☐ ☐
- AEX ☐ SO1 ☐ QR2 ☐ GCI ☐ ☐ WRI ☐ RIL ☐ ☐
- HCO ☐ SI2/ ☐ ☐ ETR ☐ WIN ☐ ☐ TWC ☐ ☐
- OSC ☐ CRI ☐ ☐
- DME ☐

BU HUB REQUIREMENTS (FOR TRANSFER STUDENTS):

- PLM or AEX or HCO ☐ QR2 ☐ CRT ☐
- SI1 or SI2 ☐ IIC or GCI or ETR ☐ RIL ☐
- SO1 or SO2 ☐ WRI or WIN ☐ TWC ☐
- CRI ☐

PRE-HEALTH REQUIREMENTS

- ✓ AP courses do not satisfy any pre-health requirements with the exception of AP Calculus AB/BC.
- ✓ Neuroscience majors are not required to take BI 107. The Pre-Health office recommends that Neuroscience majors take NE 102 and BI 203 or BI 213 (Cell Biology) and BI 315 (Systems Physiology) to complete the pre-health biology requirement.
- ✓ This check list is for guidance only and does not substitute an appointment with the Pre-Professional Advising Office.

- ☐ One year of biology with lab (NE 102 & [BI 315](#))
- ☐ One semester of Cell Biology ([BI 203](#) or [BI 213](#))
- ☐ One year of General Chemistry with lab
- ☐ One year of Physics with lab
- ☐ One year of Writing
- ☐ One semester of Calculus
- ☐ One semester of Statistics
- ☐ One year of Organic Chemistry with lab ([CH 203](#) and [CH 204](#))
- ☐ One semester of Biochemistry ([CH 373](#))
- ☐ One semester of Psychology ([PS 101](#) or [PS 261](#))
- ☐ One semester of Sociology ([SO 100](#) or [SO 215](#))

*Any courses in [red](#) are not met through Neuroscience major requirements.

*Any courses in [blue](#) are Restricted Electives for the Neuroscience major. A maximum of 2 of these courses can be used toward the elective requirement for the major.

PROPOSED COURSE OF STUDY

	FALL	SPRING
YEAR ONE		

	FALL	SPRING
YEAR TWO		

	FALL	SPRING
YEAR THREE		

	FALL	SPRING
YEAR FOUR		

SUMMER COURSES	

NOTES: