Undergraduate Neuroscience

Major/Minor Requirements Worksheet

Bachelor of Science (BS)
[17 courses: 7 co-requisites + 10 Neuroscience courses (8 at 200-level or above)]

Bachelor of Arts (AB)
[15 courses: 5 co-requisites + 10 Neuroscience courses (8 at 200-level or above)]

Bachelor of Science for BME majors (BS2)
[17 courses: 7 co-requisites + 10 Neuroscience courses (8 at 200-level or above; BME 301L/NEUROSCI 301L is required; statistics per recommendation of BME)]

Co-Requisite Courses [go to back]

Neuroscience Course Requirements:

**Five Foundational Courses**
*Complete these courses before senior year.*

Use Checkboxes for planning:

Gateway (choose 1 required course)
☐ NEUROSCI 101 Biological Bases of Behavior
☐ NEUROSCI 102 Biological Bases of Behavior (TEAM)

Core Courses (2 required courses)
*May be taken in either order.*
☐ NEUROSCI 212 Introduction to Cognitive Neuroscience
☐ NEUROSCI 223 Cellular and Molecular Neurobiology

Statistics (choose 1 required course)
☐ Any STA 101-230 course
☐ BIOL 304 Biological Data Analysis
☐ PSY 204L & PSY 205L Quantitative Research Methods and Statistics for Psychological Science 1 & 2

Methods or Lab >300 (1 required course)
*Take early in your program of study. See website.*
☐ ONE Methods or Laboratory Course: ______________________

**Five Electives**
*May be completed concurrently with Core Courses (except when specific pre-requisites apply; see course descriptions).*

- AB majors must take ONE or more Intersection Courses (see website for complete list and details)
- BS majors may only count ONE intersection course
- ONE elective must be a 350-level or higher seminar
- Must complete TWO or more courses in Neuroscience before proposing NEUROSCI 391 Independent Scholarship 1 or NEUROSCI 493 Research Independent Study 1
- Only TWO Independent Scholarship or Research Independent Study courses may count

List Five electives planned for Neuroscience (BS/AB) major:

☐ 1.____________________
☐ 2.____________________
☐ 3.____________________
☐ 4.____________________
☐ 5.____________________

For both the AB & BS degree plans, no more than TWO of the 10 courses required for the Major (not including co-requisites) may be used to satisfy another academic plan.

Minor in Neuroscience

- minimum of 5 Neuroscience courses, with 4 at 200-level or higher
- 2 Foundation Courses (3 for BME BS1/NEUROSCI BS2 majors):
  - one Gateway Course: NEUROSCI 101 or 102
  - one (or both) Core Courses: NEUROSCI 212 or 223
  - BME BS1/NEUROSCI BS2 majors must take BME 301L/NEUROSCI 301L
- 3 Elective Courses (2 for BME BS1/NEUROSCI BS2 majors)

No more than TWO of the 5 courses required for the Minor may be used to satisfy another academic plan.

Name ____________________________
Date ______________________________
Expected Grad. Term __________________
Student ID __________________________
Checked Co-requisites on back: ☐

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CO-REQUISITES for the Neuroscience Major

- For the BS, 7 courses are required
- For the AB, 5 courses are required
- For BS2 in Pratt, same as BS

BIOLOGY

- 1 course is required
  - BIOLOGY 20 earned by a score of 4 on College Board AP test.
  - BIOLOGY 21 earned by a score of 5 on College Board AP test.
  - BIOLOGY 201L Gateway to Biology: Molecular Biology
  - BIOLOGY 202L Gateway to Biology: Genetics and Evolution
  - BIOLOGY 203L Gateway to Biology: Molecular Biology, Genetics & Evolution

CHEMISTRY

- 1 general chemistry course (or its equivalent) is required:
  - CHEM 20 earned by a score of 4 on College Board AP test.
  - CHEM 21 earned by a score of 5 on College Board AP test.
  - CHEM 101DL Core Concepts in Chemistry (or course equivalent)
  - CHEM 110DL Honors Chemistry: Core Concepts in Context (or course equivalent; higher numbered courses may substitute)

COMPUTER SCIENCE

- For BS Majors only: 1 of the following courses (or its equivalent) is required (AB does not have this co-requisite):
  - COMPSCI 92L earned by a score of 5 on Computer Science: Principles AP test.
  - COMPSCI 101L Introduction to Computer Science (or course equivalent; higher numbered courses may substitute)
  - NEUROSCI/COMPSCI 103L Computing and the Brain
  - NEUROSCI 104L/COMPSCI 102L Interdisciplinary Introduction to Computer Science
  - ENGINEERING 103L Computational Methods in Engineering (or course equivalent; higher numbered courses may substitute)

MATHEMATICS

- For the BS, 2-course sequence of calculus is required
- For the AB, just 1 term is required or AP equivalent

The first semester calculus requirement (BS) may be satisfied by one of the following:
  - MATH 21 earned by a score of 4 or 5 on the AP Calculus BC exam or a score of 5 on the AP Calculus AB exam
  - MATH 111L Laboratory Calculus I
  - MATH 121 Introductory Calculus I
  - MATH 105L Laboratory Calculus and Functions I and MATH 106L Laboratory Calculus and Functions II

(Mathematics Continued)

The second semester calculus (BS) requirement may be satisfied by one of the following:
  - MATH 22 earned by a score of 5 on the Calculus BC AP exam
  - MATH 112L Laboratory Calculus II
  - MATH 122 Introductory Calculus II
  - MATH 122L Laboratory Calculus II with Applications (or course equivalent; higher numbered courses may substitute)

PHYSICS

- 2-course sequence of algebra- or calculus-based physics is required, which may be satisfied by one of the following sequences (or their equivalent)
  - PHYSICS 141L General Physics I (or course equivalent)
  - PHYSICS 142L General Physics II (or course equivalent)
  - OR
  - PHYSICS 151L Introductory Mechanics (or equivalent)
  - PHYSICS 152L Introductory Electricity, Magnetism, and Optics (or course equivalent)
  - OR
  - PHYSICS 161L Fundamentals of Physics I (or equivalent)
  - PHYSICS 162L Fundamentals of Physics II (or equivalent)
  - OR
  - PHYSICS 25/26 indicating a score of 4 or 5 on the AP Physics C exam for Mechanics and for Electricity and Magnetism, respectively
  - OR
  - College Board verification of a score of 5 on the AP Physics 1 and 2 (algebra-based) exams
  - OR
  - a two-course sequence in college-/university-level physics taken away from Duke that is pre-approved prior to enrollment by the Director of Undergraduate Studies in Neuroscience (may be algebra-based physics; credit need not transfer back to Duke)