Undergraduate Neuroscience

Major/Minor Requirements Worksheet

Bachelor of Science (BS)
[16 courses: 6 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)
[16 courses: 6 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 217D 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.
Undergraduate Neuroscience

CO-REQUISITES for the Neuroscience Major

- For the BS, 6 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

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
- 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 AP equivalent) is required (AB does not have this co-requisite):
- A score of 4 or 5 on the College AP Test in Computer Science A
- COMPSCI 20 earned by a score of 5 on the College AP test in Computer Science: Principles
- COMPSCI 94 Programming and Problem Solving
- COMPSCI 101L Introduction to Computer Science
- COMPSCI 201 Data Structures and Algorithms
- ENGINEERING 103L Computational Methods in Engineering
- NEUROSCI 104L/COMPSCI 102L Interdisciplinary Introduction to Computer Science

MATHEMATICS

- For the BS & AB, 1 course required (or AP equivalent)
- MATH 21 Introductory Calculus I 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 22 Introductory Calculus 2 earned by a score of 5 on the AP Calculus BC exam
- MATH 105L Laboratory Calculus and Functions I and MATH 106L Laboratory Calculus and Functions II
- MATH 111L Laboratory Calculus 1
- MATH 121 Introductory Calculus 1

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)

  □ College Board verification of a score of 4 or 5 on the AP Physics B exam for Mechanics and for Electricity and Magnetism, or AP Physics 1 and 2 exams
  OR
  □ PHYSICS 25/26 indicating a score of 4 or 5 on the AP Physics C exam for Mechanics and for Electricity and Magnetism
  OR
  □ PHYSICS 121L General Physics I-A (avail. F’24)
  □ PHYSICS 122L (avail. S’25)
  OR
  □ PHYSICS 151L Introductory Mechanics
  □ PHYSICS 152L Introductory Electricity, Magnetism, and Optics
  OR
  □ PHYSICS 161L Fundamentals of Physics I
  □ PHYSICS 162L Fundamentals of Physics II
  □ PHYSICS 164L Introductory Experimental Physics I
  □ PHYSICS 165L Introductory Experimental Physics II

NOTE: summer courses taken away from Duke may satisfy co-requisites, provided that the DUS in neuroscience has pre-approved the course(s) prior to enrollment.