Undergraduate Neuroscience

Major/Minor Requirements Worksheet
for Classes matriculating 2016–Forward

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 Courses

Five Foundational Courses
Complete these courses before senior year.

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

Statistics (choose 1 required course)
☐ STA 101 Data Analysis and Statistical Inference
☐ STA 102 Introductory Biostatistics
☐ STA 111 Probability and Statistical Inference
☐ STA 130 Probability and Statistics in Engineering
☐ STA 230 Probability
☐ BIOL 204 Biological Data Analysis
☐ PSY 201 Introduction to Statistical Methods in Psychology

Core Courses (3 required courses; starting with NEUROSCI 201)
☐ NEUROSCI 201 Fundamentals of Neuroscience
Neuroscience 223 and 211/212 may be taken in any order after completing NEUROSCI 201
☐ NEUROSCI 223 Cellular and Molecular Neurobiology
Choose one (or take both with one counting as elective):
☐ NEUROSCI 211 Brain and Behavior; OR
☐ NEUROSCI 212 Introduction to Cognitive Neuroscience

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.

Five Electives

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 more) Core Courses: NEUROSCI 201, 211, 212 or 223
  ▪ BME BS1/NEUROSCI BS2 majors must take BME 301L/NEUROSCI 301L
• 3 Elective Courses (2 for BME BS1/NEUROSCI BS2 majors): Allied Electives do not count

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

• AB majors must take ONE or more of the following Intersection Courses: NEUROSCI 116S Neuroscience & Human Language, NEUROSCI 237 Rel/Sci: Biol/Minds/Souls, NEUROSCI 241D Authors in French & Francophone Modernity, NEUROSCI 242A Mimetic Brain, NEUROSCI 267 Neuroethics, NEUROSCI 278 (290-01) Sex/Gender-Nature/Nurture, NEUROSCI 288S Music as Biology, NEUROSCI 289 (290.01) Music & the Brain, NEUROSCI 290-1-01 Literature & Neuroscience: Flaubert’s Brain, NEUROSCI 290A Neuroscience of Cognition & Culture, NEUROSCI 290S Brain, Self & Society
• BS majors may only count ONE intersection course
• ONE elective must be a 350-level or higher seminar
• ONE elective must be a Methods or Laboratory Course (we recommend taking this early in your program of study)
• Before NEUROSCI 493 Research Independent Study 1, must complete TWO or more courses in neuroscience
• May count no more than one Allied Elective, except for BME BS1/NEUROSCI BS2 majors who require prior approval of NEUROSCI DUS for counting any allied elective

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

☐ 1.
☐ 2.
☐ 3.
☐ 4.
☐ 5.

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

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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 201L Gateway to Biology: Molecular Biology
  - BIOLOGY 202L Gateway to Biology: Genetics and Evolution
  - BIOLOGY 20 (earned by a score of 4 or 5 on the College Board AP test in Biology)

CHEMISTRY

- 1 general chemistry course (or its equivalent) is required:
  - CHEM 20 General Chemistry Credit
  - 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)
  - A score of 4 or 5 on the College Board AP test in Chemistry can also be used to satisfy this co-requisite

COMPUTER SCIENCE

- For BS Majors only: 1 of the following courses (or its equivalent) is required (AB does not have this co-requisite):
  - NEUROSCI/COMPSCI 103L Computing and the Brain
  - COMPSCI 101L Introduction to Computer Science
  - ENGINEERING 103L Computational Methods in Engineering
  - NEUROSCI 590 Special Topics: Computational Methods in Neuroscience
  - A score of 4 or 5 on the College Board AP test in Computer Science A or Computer Science Principles can also be used to satisfy this co-requisite

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 Introductory Calculus I
  - 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
  - A score of 5 on the College Board AP test in Calculus AB or a 4 or better in Calculus BC fulfills the first term of calculus

(Mathematics Continued)

The second semester calculus (BS) requirement may be satisfied by one of the following:
  - MATH 22 Introductory Calculus II
  - MATH 112L Laboratory Calculus II
  - MATH 122 Introductory Calculus II
  - MATH 122L Laboratory Calculus II with Applications
  - A score of 4 or 5 on the College Board AP test in Calculus BC fulfills the co-requisite for both terms of calculus

PHYSICS

- 2-course sequence of algebra- or calculus-based physics is required, which may be satisfied by one of the following 3 sequences (or their equivalent)
  - PHYSICS 141L General Physics I (or course equivalent)
  - PHYSICS 142L General Physics II (or course equivalent)
  - PHYSICS 151L Introductory Mechanics (or equivalent)
  - PHYSICS 152L Introductory Electricity, Magnetism, and Optics (or course equivalent)
  - PHYSICS 161L Fundamentals of Physics I (or equivalent)
  - PHYSICS 162L Fundamentals of Physics II (or 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
  - PHYSICS 25/26 indicating a score of 4 or 5 on the AP Physics C exam for Mechanics and for Electricity and Magnetism, respectively

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