Undergraduate Neuroscience

Major/Minor Requirements Worksheet

for Classes matriculating 2016–2017

Name _____
Date _____
Expected Grad. Term _____
Student ID _____
Checked Co-requisites on back: ☐

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)

Co-Requisite Courses [go to back]

Neuroscience Courses

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 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)*

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)

Choose one (or take both with one counting as elective):
- ☐ NEUROSCI 201 *Fundamentals of Neuroscience*; OR
- ☐ NEUROSCI 202 *Medical Neuroscience* (summer only)

Choose one (or take both with one counting as elective):
- ☐ NEUROSCI 211 *Brain and Behavior; OR*
- ☐ NEUROSCI 212 *Intro to Cognitive Neuroscience*

Required of all majors (take other 2 core courses first):
- ☐ NEUROSCI 223 *Cellular and Molecular Neurobiology*

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
- ONE elective must be a *Methods or Laboratory Course (we recommend taking this early in your program of study)*
- Must complete TWO or more courses in Neuroscience *before* proposing NEUROSCI 391 *Independent Scholarship 1* or NEUROSCI 493 *Research Independent Study 1*
- Only one allied elective may count

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

- ☐ 1.) _____
- ☐ 2.) _____
- ☐ 3.) _____
- ☐ 4.) _____
- ☐ 5.) _____

Minor in Neuroscience

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, 202, 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

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, 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 203L *Gateway to Biology: Molecular Biology, Genetics & Evolution*

OR

☐ 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 21 *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)

OR

☐ 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*

OR

☐ 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

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*

OR

☐ 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*

OR

☐ A score of 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)

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 4 or 5 on the AP Physics B exam for Mechanics and for Electricity and Magnetism, or AP Physics 1 and 2 exams