Undergraduate Neuroscience
Major/Minor Requirements Worksheet

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; 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.

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 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):
  A score of 4 or 5 on the College Board Advance Placement Test in Computer Science A or Computer Science Principles
  COMPSCI 92L earned by a score of 5 on Computer Science Principles AP test
  COMPSCI 94 *Programming and Problem Solving*
  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
  A score of 4 or 5 on the College Board AP test in Calculus BC fulfills the co-requisite for both terms of calculus

The first semester calculus requirement (BS) may be satisfied by one of the following:
  MATH 21 *Introductory Calculus 1 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 *Introductory Calculus 2 earned by a score of 5 on the AP Calculus BC exam*
  MATH 112L *Laboratory Calculus II*
  MATH 122 *Introductory Calculus II*
  MATH 122L *Introductory Calculus II w/ Applications*

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