

Name: \_\_\_\_\_ Email: \_\_\_\_\_  
BU ID: \_\_\_\_\_ Expected Graduation Date: \_\_\_\_\_

## Course Worksheet for Neuroscience Concentration

### REQUIRED BASIC SCIENCE COURSES (6):

CH 101 _____ (or CH 109)	CH 102 _____ (or CH 110)
MA 123 _____ (or MA 121)	MA 124 _____ (or MA 122)
PS 211 _____ (or MA 115/116 or MA 213/214)	BI 108 _____ (or BI 118)

### CAS REQUIREMENTS (10):

WR 100 _____	WR 150 _____
Language 1 _____	Language 2 _____
Language 3 _____	Language 4 _____

### Divisional Courses

HU 1 _____	HU 2 _____
SS 1 _____	SS 2 _____

### NEUROSCIENCE CORE COURSES (3):

<u>Fall</u>	<u>Spring</u>
NE 201 _____	NE 204 _____
NE 202 _____	

### REQUIRED ELECTIVES (7):

#### Group 1

<u>Fall</u>	<u>Spring</u>
BI 230 _____	PS 322* _____
BI 444 _____	BI 455 _____
BI 445* _____	BI 520* _____
BI 575 _____	BI 545 _____
BI 481 _____	
BI 554 _____	
BI 599 _____	

#### Group 2

<u>Fall</u>	<u>Spring</u>
PS 222# _____	PS 520* _____
PS 234# _____	PS 323*# _____
PS 333# _____	PS 336 _____
PS 338 _____	PS 337 _____
PS 525 _____	PS 528 _____
PS 544 _____	
PS 529 _____	

#### Group 3

<u>Fall</u>	<u>Spring</u>
NE 330* _____	NE 340* _____
NE 350* _____	SAR/NE 360* _____
MA 565# _____	PS 530 _____
CS 565 _____	MA 578 _____
MA 421** _____	CS 542 _____
CN 500* _____	CN 510 _____
CN 520 _____	CN 530-580 _____

### Restricted

<u>Fall</u>	<u>Spring</u>
BI 203 _____	MA 226# _____
CH 203 _____	MA 242# _____
MA 416 _____	BI 315# _____
CS 111# _____	CS 112# _____
PY 105# _____ (or equivalent)	PY 106# _____ (or equivalent)

\* Lab Course  
\*\* Summer Term 1  
# Offered either semester

1. One of the seven Required Electives must contain a laboratory component.
2. Breadth Requirement: One of the seven required electives must come from a second group.
3. Up to two electives may come from the Restricted list (which will not satisfy Breadth Requirement).

### SENIOR RESEARCH REQUIREMENT (1):

Directed Study (1 semester)

NE 391 _____	NE 392 _____
NE 491 _____	NE 492 _____

-or-

Senior Work for Distinction (2 semesters)

NE 401/402 \_\_\_\_\_

-or-

2<sup>nd</sup> Upper Level Laboratory Course

BI 575 _____	PS 322 _____
CN/NE 330 _____	CN/NE 340 _____
CN/NE 350 _____	CN/NE 360 _____
CN 500 _____	PS 323 _____
	PS 520 _____

**Biology**

BI 108 Biology II or BI 118 Biology II w/Honors  
 BI 203 Cell Biology  
 BI 230 Behavioral Endocrinology  
 BI 315 Systems Physiology  
 BI 444 Neuroethology  
 BI 445\* Cellular and Molecular Neurophysiology  
 BI 455 Developmental Neurobiology  
 BI 520\* Sensory Neurobiology  
 BI 545 Neurobiology of Motivated Behavior  
 BI 575 Techniques in Cellular and Molecular Neuro  
 BI 481 Molecular Biology of the Neuron  
 BI 554 Neuroendocrinology  
 BI 599 Neurobiology of Synapses

**Cognitive and Neural Systems**

CN/NE 330\* Intro to Comp Models of Vision  
 CN/NE 340\* Intro to Comp Models of Skilled Action  
 CN/NE 350\* Intro to Comp Models of Perceptual Memory  
 SAR/CN/NE 360\* Intro to Comp Models of Hearing  
 CN 500\* Techniques in Modeling  
 CN 510/520 Principles & Methods of Cognition & Neural Models I/II  
 CN 530-570 Comp Models of Vision/Movement/Memory/Speech  
 CN 580 Introduction to Computational Modeling

**Mathematics and Statistics**

MA 115/116 Statistics I/II  
 MA 213/214 Basic Stats and Probability / Applied Stats  
 MA 242 Linear Algebra  
 MA 226 Differential Equations  
 MA 416 Intermediate Stats  
 MA 421 Modern Stat Modeling and Data Analysis  
 MA 565 Math Models in Life Sciences  
 MA 578 Bayesian Stats

**Psychology**

PS 211 Statistics  
 PS 222 Perception  
 PS 234 Psychology of Learning  
 PS 322\* Experimental Psych: Physiology  
 PS 323\* Experimental Psych: Learning  
 PS 333 Drugs and Behavior  
 PS 336 Cognitive Psychology  
 PS 337 Memory Systems  
 PS 338 Neuropsychology  
 PS 520\* Research Methods: Perception and Cognition  
 PS 528 Brain Mapping  
 PS 529 Neuroplasticity  
 PS/NE 530 Neural Models of Memory  
 PS 544 Developmental Neuropsychology

\* Laboratory Course

NB: A grade of 'C' or higher is required for all courses taken for credit toward Neuroscience major.

For more information see Dr. Paul Lipton, Director of Undergraduate Academic and Research Affairs, 114, 2 Cummington Street ([palipton@bu.edu](mailto:palipton@bu.edu); 617-358-5150), or Lindsey Clarkson, Program Administrator, 109, 2 Cummington Street ([lclarkso@bu.edu](mailto:lclarkso@bu.edu))

**Chemistry**

CH 101 General Chemistry I  
 CH 102 General Chemistry II  
 CH 203 Organic Chemistry I

**Computer Science**

CS 111 Intro to Computer Science I  
 CS 112 Intro to Computer Science II  
 CS 542 Machine Learning  
 CS 565 Data Mining

**Physics**

PY 105/106 Elementary Physics I/II  
 or PY 211/212 General Physics I/II  
 or PY 241/242 Principles of General Physics I/II  
 or PY 251/252 Principles of Physics I/II

**PROPOSED COURSE OF STUDY**FallSpring

## First Year

1. _____	1. _____
2. _____	2. _____
3. _____	3. _____
4. _____	4. _____

## Second Year

1. _____	1. _____
2. _____	2. _____
3. _____	3. _____
4. _____	4. _____

## Third Year

1. _____	1. _____
2. _____	2. _____
3. _____	3. _____
4. _____	4. _____

## Fourth Year

1. _____	1. _____
2. _____	2. _____
3. _____	3. _____
4. _____	4. _____

1. 32 Courses (128 credits) required to graduate.
2. 17 courses for the Neuroscience Major.
3. Five free electives.