Name: _____

Faculty Mentor: _____

Home Department: _____

Worksheet for Neuroscience Ph.D. Graduation (updated 10-25-24)

If you feel you have completed all the credit requirements for the Neuroscience Ph.D. program and plan on graduating, please fill out the following worksheet completely and attach a copy of your transcripts. If any of your courses deviate from the specified requirements, please describe how you think these are applicable so the Admission Committee can review them. New courses are continually being developed and may not be reflected in Table 2; if you believe a course should be categorized as a depth or specialization course, you can petition to have it added to your plan of study by sending a request and the course's syllabus to the Director of the Neuroscience PhD program prior to the course's completion.

Below each requirement category, list **the courses** you have taken, **when** you took them, and for **how many credit hours**.

Required Neuroscience Core Courses

Survey and Integration of Neuroscience I (3 credit hours)

_____

Survey and Integration of Neuroscience II (3 credit hours)

_____

Advances in Neuroscience Research Seminar (3 semesters required at 2 credit hours per semester)

_____

_____

_____

Total: 12 credits

Total core credit hours: _____

Required Fundamentals of Neuroscience Depth Courses (6-9 credit hours)

Students are required to take a minimum of 3 additional Neuroscience-related courses (2-3 credit hours/course) that will provide greater depth and focus on Neuroscience fundamentals than will be possible to cover in the year-long Survey and Integration of Neuroscience course. The courses that will fulfill this requirement are Neuroscience-related courses that have been approved by the participating faculty in the Neuroscience Program (see **Table 2**). The specific depth courses that each student takes will be selected from the approved list by the student in consultation with their primary faculty advisor. These depth courses will provide the student with advanced expertise in several of the fundamental areas of neuroscience.

_____

_____

_____

Total depth credit hours: _____

Neuroscience-related Discipline Specialization (11+ credit hours)

In addition to the above neuroscience courses, students will be required to take a sequence of courses that provides an advanced graduate-level specialization in a discipline that contributes to the field of Neuroscience. In most cases these specialty courses will consist of a sequence of graduate courses offered within the faculty advisor's department/program of affiliation. This specialization can be fulfilled by courses from **Table 2** or other Neuroscience-related fields in consultation with the primary faculty advisor and in agreement with specific track/departmental requirements. This specialization is comparable to a minor requirement or *breadth* courses. The goal of the specialization courses is to make students experts within a discipline of Neuroscience.

_____

_____

_____

_____

_____

_____

Total Neuroscience-related Specialization credit hours: _____

On your attached transcripts, please mark the courses you have listed above to facilitate verification.

I have completed the following total credit hours (29-32+): _____

If you have additional comments please provide below:

Table 1. Summary of Credit Hour Requirements

Course	**Credit hours**
Survey and Integration of Neuroscience I	3
Survey and Integration of Neuroscience II	3
Advances in Neuroscience Research Seminar (2 unit/sem)	6
Neuroscience depth courses (2-3 units/course)	6-9
Additional Neuroscience-related discipline courses	11+
Total	**29-32+**

Table 2 is on following pages.

Table 2. List of Current and Pending Courses

Course department and number	Course title
Neuroscience Core Courses	
NRSC 5100-3	Survey and Integration of Neuroscience I
NRSC 5110-3	Survey and Integration of Neuroscience II
NRSC 6100-2	Advances in Neuroscience Research
Department of Chemistry, College of Arts and Sciences	
CHEM 5800-3	Cell Regulation
CHEM 5801-3	Advanced Signal Transduction and Cell Cycle Regulation
CHEM 6901-3*	Research Rotations (*with Director's approval)
Department of Computer Science, College of Engineering	
APPM 5370-3	Computational Neuroscience
APPM 5720-4	Mathematical and Computational Biology
CSCI 5423/7000-3	Biologically-Inspired Multi-Agent Systems
CSCI 5622-3	Neural Networks / Machine Learning
CSCI 5722-3	Computer Vision
CSCI 5822-3	Probabilistic Models of Human and Machine Intelligence
CSCI 5832-3	Natural Language Processing
CSCI 6118-3	Software Engineering for Scientists
CSCI 6302-3	Speech Recognition and Synthesis
CSCI 6622-3	Advanced Neural Networks / Machine Learning
Department of Electrical and Computer Engineering, College of Engineering and Applied Science	
ECEN 5811-3	Neural Signals
ECEN 5831-3	Brains, Minds and Computers
Department of Ecology and Evolutionary Biology, College of Arts and Sciences	
EBIO 5800	Animal Behavior
Department of Integrative Physiology, College of Arts and Sciences	
IPHY 5060-3	Cell Physiology
IPHY 5200-3	Physiological Genetics and Genomics
IPHY 5262-3	Applications of Bioinformatics and Genomics
IPHY 5440-3	Vertebrate Endocrinology
IPHY 5540-3	Biomechanics
IPHY 5550-3	Exercise Biochemistry
IPHY 5580-3	Sleep Physiology
IPHY 5600-3	Immunology
IPHY 5700-5	Vertebrate Histology
IPHY 5720-4	Neurophysiology
IPHY 5730-3	Integrative Motor Control
IPHY 6010-3	Neurobiology of Aging/Neurodegenerative Diseases
IPHY 6010-3	Stress Physiology

IPHY 6010-3	Methods Proseminar in Behavioral Genetics
IPHY 6010-3	Methods in Integrative Physiology, Circadian Rhythms & Sleep
IPHY 6010-3	Neuromechanics of Human Movement
IPHY 6010-3	Microbiome – Gut-Brain Axis
IPHY 6010-1	Sleep Medicine Seminar (up to 2 semesters)
IPHY 6680-3	MATLAB for Physiol. & Biomechan. Res.
Department of Molecular, Cellular and Developmental Biology, College of Arts and Sciences	
MCDB 5210-3	Cell Structure and Function
MCDB 5250-3	Topics in Developmental Genetics

MCDB 5230-3	Gene Expression
MCDB 5301-3	Immunology
MCDB 5312-4	Quantitative Optical Imaging
MCDB 5425-3	Topics in Membrane Biology: Cell Bio, Physiol & Disease
MCDB 5426-3	Cell Signaling and Dev. Regulation
MCDB 5471-3	Mechanisms of Gene Regulation in Eukaryotes
MCDB 5520-4	Bioinformatics and Genomics
MCDB 5680-3	Mechanisms of Aging
MCDB 5777-3	Molecular Neurobiology
Department of Psychology and Neuroscience, College of Arts and Sciences	
PSYC/NRSC 5015-3	Affective Neuroscience
PSYC/NRSC 5032-3	Neurobiology of Learning and Memory
PSYC/NRSC 5052-4	Behavioral Neuroscience (overlaps with NRSC 5100, depending on Instructor)
PSYC/NRSC 5072-3	Clinical Neuroscience
PSYC/NRSC 5082-3	Neural Circuits of Learning and Decision Making
PSYC/NRSC 5092-4	Behavioral Neuroendocrinology
PSYC 5102-3	Introduction to Behavioral Genetics
PSYC 5112-3	Concepts in Behavior Genetics
PSYC 5131-3	Affective Science
PSYC/NRSC 5132-3	Neuropharmacology
PSYC 5162-3	Developmental Behavioral Genetics
PSYC 5175-4	Computational Cognitive Neuroscience
PSYC 5200-3	Physiological Genetics and Genomics
PSYC 5232-2	Molecular Genetics and Physiology
PSYC/NRSC 5262-3	Mammalian Neuroanatomy
PSYC 5433	Adult Psychopathology
PSYC 5541-3	Digital Signal Processing Methods for Cognitive Sci.
PSYC 5541-3	Special Topics in Psychology: Multivariate Genomic Methods
PSYC/NRSC 5545-3	Neurobiology of Addiction
PSYC 5665-2	Prosem: Higher-level perception &attention
PSYC 5665-2	Prosem: Learning and memory
PSYC 5685-2	Prosem: Sensory Processes
PSYC 5815-2	Prosem: Language

PSYC 5815-2	Prosem: Higher-level cognition
PSYC 6841-1	Fundamentals of Neuroscience: Independent Study
PSYC/NRSC 5911-3	Teaching of Neuroscience
NRSC 6602-1	Behavioral Neuroscience Professional Skills Development
NRSC-7102-2 or 3	Topics in Neuroscience
NRSC-7112-3	Special Topics in Neuroscience I
NRSC-7122-3	Special Topics in Neuroscience II
NRSC-7132-3	Special Topics in Neuroscience III
NRSC-7142-3	Special Topics in Neuroscience IV
NRSC-7152-3	Special Topics in Neuroscience V
PSYC 7215-3	Translational Cognitive Neuroscience
PSYC 7215-3	Mathematical Modeling of Cognition
PSYC 7215-3	Principles of fMRI
PSYC 7703-3(6)	Developmental, Cognitive, Affective, and Social Psychobiology (year-long course for up to 6 credits)
PSYC 7703-3	Biological Basis of Behavior – Clinical Neuroscience
PSYC 7536-3	The Social Brain

Department of Speech, Language and Hearing Sciences, College of Arts and Sciences	
SLHS 5252-3	Acquired Adult Language Disorders
SLHS 5282-3	Acquired Cognitive Disorders
SLHS 5292-3	Motor Speech Disorders and Dysphagia
SLHS 5576-2	Communication Neuroscience
SLHS 6006-3	Advanced Hearing Science
SLHS 6564-3	Auditory Processes: Neurodiagnsotics
SLHS 7100-3	Cognitive Bases of Human Communication and its Disorders
SLHS 7540-3	Auditory Processes: Physiology, Assessment, and Management of theVestibular System
SLHS 8206-3	Models of Speech Production and Perception

Approved by NEUROSCIENCE ADMISSIONS & REVIEW COMMITTEE member:

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