

Honors in Neuroscience Requirements (2025-2026- NEW PROGRAM)

Foundation Courses

- BIOL 107 - Introduction to Cell Biology
- CHEM 101 - Introductory University Chemistry I
- MATH 134 - Calculus for the Life Sciences I
- PHYS 124 - Particles and Waves
- PHYS 126 - Fluids, Fields, and Radiation
- PSYCH 104 - Basic Psychological Processes

3 units from:

- MATH 136 - Calculus for the Life Sciences II
- STAT 151 - Introduction to Applied Statistics I

Senior Courses

- BIOCH 200 - Introductory Biochemistry
- BIOL 207 - Molecular Genetics and Heredity
- CHEM 261 - Organic Chemistry I
- CHEM 263 - Organic Chemistry II
- NEURO 210 - Introduction to Clinical Neuroscience
- NEURO 375 - Functional Neuroanatomy
- PHYSL 212 - Human Physiology
- PHYSL 214 - Human Physiology
- PHYSL 372 - Systems Neuroscience
- PSYCH 275 - Brain and Behavior

3 units from:

- NEURO 371 - Cellular and Molecular Neuroscience
- ZOOL 342 - Neurobiology

3 units from:

- BIOL 201 - Eukaryotic Cellular Biology
- CELL 201 - Introduction to Molecular Cell Biology

9 units from:

- GENET 270 - Foundations of Molecular Genetics
- GENET 390 - Gene Manipulation
- PSYCH 371 - The Neurobiology of Learning and Memory
- PSYCH 375 - Introduction to Cognitive Neuroscience
- PSYCH 377 - Human Neuropsychology
- ZOOL 344 - Laboratory Exercises in Animal Physiology

THESE COURSES SHOULD BE TAKEN IN YEAR 1

THESE COURSES SHOULD BE TAKEN IN YEAR 2

THESE COURSES SHOULD BE TAKEN IN YEAR 3

THESE COURSES SHOULD BE TAKEN IN YEAR 4

IN ORDER TO GRADUATE YOU ALSO NEED TO SATISFY
FACULTY OF SCIENCE STUDENTS COMMON
REQUIREMENTS

6 units from List A (Cellular and Molecular Neuroscience):

- NEURO 410 - Cellular and Molecular Aspects of Normal Aging and Neurodegenerative Disorders
- NEURO 411 - Clinical and Basic Science Aspects of Age-related Neurodegenerative Disorders
- PHYSL 444 - Current Topics in Neuroscience
- PHYSL 455 - Physiology of Lipids and Lipoproteins
- PMCOL 412 - Drugs and the Nervous System
- PMCOL 475 - Signal Transduction Systems as Pharmacological Targets
- PSYCH 478 - Behavior and Brain Chemistry

6 units from List B (Systems and Cognitive Neuroscience):

- KIN 497 - Selected Topics in Kinesiology and Sport (Intraoperative Neurophysiology)
- NEURO 520 - Neuroplasticity
- NEURO 525 - Neuroimaging in Neuroscience
- PHYSL 403 - Neuroendimmunomodulation
- PHYSL 405 - Sensory Physiology
- PSYCH 471 - Neurophysiology: Theory, Methods, and Analysis
- PSYCI 511 - Biological Aspects of Psychiatry

12 units in either:

Thesis Stream (See Note 1):

- NEURO 498 - Honors Research Project in Neuroscience I
- NEURO 499 - Honors Research Project in Neuroscience II

OR Non-Thesis Stream:

- NEURO 450 - Readings on Selected Topics in Neuroscience **AND**
- NEURO 451 - Honors Research Project in Neuroscience **AND/OR**
- NEURO 452 - Honors Research Project in Neuroscience
- 3-6 units from List A or B (See Note 2)

Notes:

1. Students following the Thesis stream are allowed to take a maximum of 3 units from NEURO 451 and NEURO 452. These units may count toward either the List A or B requirement, if an appropriate topic is selected.
2. 3 units are required from List A or B if NEURO 450, NEURO 451 and NEURO 452 are taken **OR** 6 units are required from List A or B if NEURO 450 and one of NEURO 451 or NEURO 452 are taken.
3. Some courses appear on more than one list. Students may not use the same course to satisfy more than one list requirement.