

NEUROSCIENCE MAJOR

Major Requirements

The requirements for a **major in neuroscience** are 39 credits:

Code	Title	Hours
Neuroscience Courses		
NEU 109	Introduction to Neuroscience	4
NEU/CHEM 475	Neurochemistry	4
NEU/BIOL 400	Neurobiology	4
CHEM 142	Survey of Organic and Biochemistry	4
or CHEM 373	Biochemistry I	
MATH 205	Introduction to Statistics	4
or PSYC 230	Statistics and Psychology Measurement	
NEU 406	Senior Seminar	1
Select one of the following:		4
PSYC 324	Drugs and Behavior	
NEU/PSYC 328	Human Neuropsychology	
PSYC 323	Perception	
PSYC 361	Cognitive Psychology	
Experiential Learning		
Select 2 credits from the following: ²		2
NEU 390	Internship	
NEU 480	Independent Study	
NEU 487	Directed Research	
Neuroscience Electives		
Select 4 credits from the following neuroscience electives:		4
NEU 252	Physical Neuroscience	
NEU/PSYC 328	Human Neuropsychology	
NEU 480	Independent Study	
NEU/BIOL 487	Directed Research	
PSYC 319	Behavioral Neuroscience	
PSYC 323	Perception	
PSYC 324	Drugs and Behavior	
PSYC 361	Cognitive Psychology ¹	
NEU 380	Special Topics	
Elective Courses		
Select 8 credits from the following (at least 4 credits must be in a lab science):		8
BIOL 306	Human Anatomy and Physiology	
BIOL 336	Histology ³	
BIOL 350	Animal Behavior ³	
BIOL 352	Immunology and Parasitology	
BIOL 402	Embryology ³	
BIOL 406	Advanced Cell Biology	
BIOL 412	Integrated Vertebrate Anatomy and Physiology II	
BIOL 416	Advanced Topics in Genetics	
BIOL 497	Research Seminar (with approval, topic rotates)	
CHEM 330	Analytical Chemistry I	
CHEM 374	Biochemistry II	

DATA 200	Introduction to Data Analytics
DATA 318	Data Mining
MATH 315	Probability and Mathematical Statistics
MATH/DATA 316	Applied Statistical Models
PSYC 318	Learning and Behavior ¹
PSYC 325	Health Psychology ¹
PSYC 357	Abnormal Psychology ¹
Total Hours	39

¹ PSYC 111 Introductory Psychology or equivalent is a prerequisite.

² See www.ConcordiaCollege.edu/experientiallearning (<http://www.ConcordiaCollege.edu/experientiallearning/>)

³ NEU 109 Introduction to Neuroscience and junior or senior standing may be used as the prerequisite.

The following courses are recommended but not required:

Code	Title	Hours
BIOL 121	Cell Biology	4
BIOL 222	Genetics and Molecular Biology	4
CHEM 127	General Chemistry I	4
CHEM 128	General Chemistry II	4
MATH 121	Calculus I	4
PHYS 111	General College Physics I	4
PHYS 112	General College Physics II	4
PSYC 111	Introductory Psychology	4

The neuroscience major can be completed in 39 credits; however depending on course selection and whether a student chooses to double major or complete a minor in a related program, it may take up to 71 credits. To have flexibility in course selection, it is recommended that students take BIOL 121 and PSYC 111, which are prerequisite courses for many of the elective course options. Advisors and students are encouraged to review the policies about unique credits required for majors and minors as detailed in the Office of the Registrar Glossary of Terms (<https://catalog.concordiacollege.edu/undergraduate-academic-community/office-registrar/glossary/>). Students pursuing a major in neuroscience are encouraged to contact the chair of the neuroscience program early in their studies to discuss the complexity of the program.

The following courses have prerequisites offered in complementary majors:

Code	Title	Hours
BIOL 222	Genetics and Molecular Biology	4
BIOL 306	Human Anatomy and Physiology	4
BIOL 352	Immunology and Parasitology	4
BIOL 406	Advanced Cell Biology	4
BIOL 411	Integrated Vertebrate Anatomy and Physiology I	4
BIOL 412	Integrated Vertebrate Anatomy and Physiology II	4
BIOL 416	Advanced Topics in Genetics	4
BIOL 497	Research Seminar	4
CHEM 128	General Chemistry II	4
CHEM 330	Analytical Chemistry I	4
CHEM 373	Biochemistry I	4
CHEM 374	Biochemistry II	4

CHEM 431	Analytical Chemistry II	4
MATH 315	Probability and Mathematical Statistics	4
MATH 316	Applied Statistical Models	4
DATA 316	Applied Statistical Models	4
PHYS 112	General College Physics II	4

Degree and Graduation Requirements

In addition to the program-specific requirements listed above, all students must complete the graduation requirements specified for their degree. See the Degree and Graduation Requirements (<https://catalog.concordiacollege.edu/undergraduate-academic-community/degree-graduation-requirements/>) section for more information.