

Neuroscience Undergraduate Major (NEUR 04250/0425M/0425B)

effective 09/16/2020

Name: _____

UID: _____

Date: _____

A minimum of 120 credits earned and a 2.0 cumulative GPA is needed to meet University graduation requirements. Major courses (Gateway, Supporting, and Advanced) require a C– or better in each and a 2.0 average GPA.

1. LEP Gateway Courses (20 credits)

Sem	Gr	Cr	Course
		3	BSCI160: Ecology and Evolution
		1	BSCI161: Ecology and Evolution Lab
		3	BSCI170: Molecular and Cellular Biology
		1	BSCI171: Molecular and Cellular Biology Lab
		4	MATH135 ¹ : Discrete Mathematics OR MATH140 ² : Calculus I
		3	CHEM131: General Chemistry I
		1	CHEM132: General Chemistry I Lab
		3	CHEM231: Organic Chemistry I
		1	CHEM232: Organic Chemistry I Lab

¹ Students taking MATH135 for their gateway course should take MATH136 for their supporting course.
² Students taking MATH140 for their gateway course should take MATH135 **OR** MATH141 for their supporting course.

2. Supporting Courses (24 credits)

Sem	Gr	Cr	Course
		1	Freshman Seminar: UNIV100 ³ , HNUH100, GEMS100, HLSC100, HACS100 ⁴ , HDCC105 ⁴ , HEIP143, HHUM105 ⁵ , BSCV181, IDEA101, BSGC100
		3	PSYC100: Introduction to Psychology
		3	CHEM241: Organic Chemistry II
		1	CHEM242: Organic Chemistry II Lab
		2	CHEM271: Gen Chem & Energetics
		2	CHEM272: Gen Bioanalytical Chem Lab
		4	PHYS131: Fund of Phys for Life Sci I ⁶
		4	PHYS132: Fund of Phys for Life Sci II ⁶
		4	MATH135 ² : Discrete Mathematics OR MATH136 ¹ : Calculus OR MATH141 ² : Calculus II

³ All NEUR majors must take UNIV100 or another approved freshman seminar from the list above in their first semester.
⁴ Two credit course. ⁵ Three credit course.
⁶ PHYS131/132 is recommended. Prior Learning Credit for PHYS141, PHYS142, PHYS161, and PHYS260/261 may be substituted.

3. General Education Requirements (at least 27 credits) For more information on General Education visit: www.gened.umd.edu.

Fundamental Studies Math (MA), Analytic Reasoning (AR), Natural Sciences (NS), Natural Sci. Lab (NL), and one History & Social Sciences (HS) General Education Categories will be satisfied by major requirements and are therefore not listed below. Courses may double or triple count between Distributive Studies, I-Series, and Diversity.

Sem	Gr	Course	General Education Categories
			Fundamental Studies
			Academic Writing (AW) (ENGL101)
			Professional Writing (PW)
			Oral Communication (OC)
			Distributive Studies
			History and Social Sciences (HS)
			Humanities (HU)
			Humanities (HU)
			Scholarship in Practice (SP)
			Scholarship in Practice (SP)
			I-Series
			I-Series (IS)
			I-Series (IS)
			Diversity
			Understanding Plural Societies (UP)
			Understanding Plural Societies (UP) or Cultural Competence (CC) (1–3 credits)

Summary of Credits	
Required	Completed
LEP Gateway Program (20)	_____
Supporting Courses (24)	_____
Gen. Ed. (27+)	_____
Advanced Program (31)	_____
Elective	_____
Subtotal	_____
Duplicate credits (Subtract from subtotal)	_____
Total Credits	_____

4. Advanced Program (31 credits minimum) At least two courses designated as **Lab** must be taken

a. Required Courses (16 credits)

Sem	Gr	Cr	Course
		3	NEUR200: Introduction to Neuroscience
		3	NEUR305: Neural Systems and Circuits
		3	NEUR306: Cellular and Molecular Neuroscience
		4	NEUR405: Neurobiology Lab
		3	STATISTICS: BIOM301, EPIB315, PSYC200, STAT400, or STAT464

b. Track Courses: Complete at least 5 courses (15 credits minimum), including at least 3 courses from within one track and at least 1 lab course. Up to 3 pre-approved Neuroscience Research credits can be applied to the major. Neuroscience Research credits may be taken across multiple semesters, with a total of 3 Neuroscience Research credits satisfying one track course. Four pre-approved NEUR479 credits in the same faculty research laboratory can satisfy the lab requirement, but do not count towards the five track course requirement.

Molecular, Cellular, and Physiological Track (0425M)

Sem	Gr	Cr	Courses
		3	ANSC327: Molecular & Quantitative Animal Genetics ⁷
		3	BCHM463: Biochemistry of Physiology
		4	BSCI222: Principles of Genetics ⁷
		4	BSCI330: Cell Biology & Physiology Lab
		3	BSCI339D: Biology of Chemosensory Systems
		3	BSCI339F: Neurophysiology of Cells and Circuits
		3	BSCI339W: Molecular Neuroethology
		3	BSCI402: Genomics of Sensory Systems
		3	BSCI403: Biology of Vision
		3	BSCI410: Molecular Genetics
		3	BSCI415: Molecular Genetics Lab
		3	BSCI430: Developmental Biology
		4	BSCI440: Mammalian Physiology
		2	BSCI441: Mammalian Physiology Lab
		3	BSCI446: Neural Systems
		3	BSCI452: Diseases of the Nervous System
		3	BSCI338: Special Topics ⁸
		3	BSCI339: Special Topics ⁸
		3	KNES370: Motor Development
		3	KNES462: Neural Basis of Human Movement

⁷ Students may not use both ANSC327 and BSCI222 toward filling Neuroscience track requirements.

⁸ Special Topics courses are allowed if approved for upper level courses in NEUR. See your advisor.

⁹ NEUR379, with permission, may be substituted with BSCI399, BSCI399H, PSYC479, PSYC468H, PSYC499H.

¹⁰ NEUR479, with permission, may be substituted with BSCI399L.

Behavioral & Cognitive Track (0425B)

Sem	Gr	Cr	Courses
		3	BSCI360: Principles of Animal Behavior
		3	BSCI401: Animal Communication
		3	BSCI407: Behavioral Genetics
		3	KNES385: Motor Control and Learning
		3	KNES445 Exercise and Brain Health
		3	PHIL202: Know Thyself: Wisdom Through Cognitive Science
		3	PHIL366: Introduction to Philosophy of Mind
		4	PSYC300: Research Methods in Psychology Lab
		3	PSYC302: Fundamentals of Learning and Behavior
		3	PSYC341: Introduction to Memory and Cognition
		3	PSYC403: Animal Behavior
		3	PSYC404: Intro to Psychopharmacology
		3	PSYC406: Neuroethology
		4	PSYC407: Behavioral Neurobiology Lab
		3	PSYC414: Science of Sleep and Biological Rhythms
		4	PSYC417: Data Science for Psychology and Neuroscience Majors Lab
		3	PSYC442: Psychology of Language
		3	PSYC455: Cognitive Development
		3	PSYC489G: Hormones & Behavior

Courses Applicable to Either Track

Sem	Gr	Cr	Courses
		1-3	NEUR379: Neuroscience Research ⁹
		1-4	NEUR479: Neuroscience Research Lab ¹⁰

Total Molec 0425M Courses: _____ **Total Behav 0425B Course:** _____ **Declared Track:** _____

NOTE: The curriculum in NEUR changes as faculty review and improve the program. The curriculum descriptions provided here are the latest versions. Your academic advisor can provide you with the most accurate information on which curriculum you are under.

effective 09/16/2020