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

effective 05/17/23

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), one History & Social Sciences (HS), and one Scholarship in Practice (DSSP). 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)
			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 (30)	_____
Elective	_____
Subtotal	_____
Duplicate credits	_____
Total Credits	_____

4. Advanced Program (30 credits minimum)

At least two courses designated as **Lab** must be taken

a. Required Courses (15 credits)

Sem	Gr	Cr	Course
		3	NEUR200: Introduction to Neuroscience
		3	NEUR305: Neural Systems and Circuits
		3	NEUR306: Cellular and Molecular Neuroscience
		3	NEUR405: Neurobiology **Lab** [DSSP]
		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. One of these 5 courses must be a Lab course. Neuroscience Research credits [NEUR379(H) **OR** NEUR479(H)*] may be used to satisfy **1 of 5** track courses. A total of 3 credits of NEUR379(H) must be earned to utilize research as a track course. *(Neuroscience Research credits may be taken across multiple semesters.)* *Four pre-approved NEUR479(H) credits in the same research lab can satisfy the lab requirement, but then would not count towards the 5 track course requirement. A maximum of 3 credits of NEUR379(H) or NEUR479(H) can be taken within a single semester.
For the most up to date list of Neuroscience track courses: go.umd.edu/NEURTrackCourses

Sem	Gr	Cr	Course	Track: MCP or BC
			(Lab)	

Neuroscience Track Course Options:

Molecular, Cellular, and Physiological Track (0425M)
ANSC327: Molecular & Quantitative Animal Genetics[7] [3c]
BCHM461/463: Biochemistry I or Biochemistry of Physiology [3c]
BSCI222 or HLSC322: Principles of Genetics[7] [4c]
BSCI330 or BSCI330H: Cell Biology & Physiology [4c] **Lab**
BSCI339: Selected Topics (including F)[8] [3c]
BSCI343: Cellular Mechanisms of Aging and Disease [3c]
BSCI356 or BSCI339P: The Future of the Brain [3c]
BSCI357: Neurobiology of Chemosensory Systems [3c]
BSCI381: Molecular Neuroethology [3c]
BSCI402: Genomics of Sensory Systems [3c]
BSCI403: Biology of Vision [3c]
BSCI410: Molecular Genetics [3c]
BSCI415: Molecular Genetics [3c] **Lab**
BSCI430: Developmental Biology [3c]
BSCI431: Origins and Evolution of Nervous Systems [3c]
BSCI450: Mammalian Systems Physiology (formerly BSCI440) [3c]
BSCI451: Mammalian Systems Physiology (formerly BSCI441) [2c] **Lab**
BSCI446: Neural Systems [3c]
BSCI456: Advanced Cellular Neuroscience [3c]
BSCI452: Diseases of the Nervous System [3c]
KNES370: Motor Development [3c][9]
KNES462: Neural Basis of Human Movement [3c][9]

Behavioral & Cognitive Track (0425B)
BSCI338: Advanced Special Topics (including N)[8] [3c]
BSCI355: Neurobiology of Extraordinary Senses [3c]
BSCI360: Principles of Animal Behavior [3c]
BSCI401: Animal Communication [3c]
BSCI407: Behavioral Genetics [3c]
EDHD310: The Neuroscience of Learning and Development [3c]
KNES385: Motor Control and Learning [3c][9]
KNES445: Exercise and Brain Health [3c][9]
PHIL202: Know Thyself: Wisdom Through Cognitive Science [3c]
PHIL366: Introduction to Philosophy of Mind [3c]
PSYC300: Research Methods in Psychology [4c] **Lab**
PSYC302: Fundamentals of Learning and Behavior [3c]
PSYC341: Introduction to Memory and Cognition [3c]
PSYC403: Animal Behavior [3c]
PSYC404: Intro to Psychopharmacology [3c]
PSYC406: Neuroethology [3c]
PSYC407: Behavioral Neurobiology [4c] **Lab**
PSYC411: Introduction to Functional Magnetic Resonance Imaging [3c]
PSYC414: Science of Sleep and Biological Rhythms [3c]
PSYC417: Data Science for PSYC and NEUR Majors[4c] **Lab**
PSYC431: Human and Animal Intelligence [3c]
PSYC442: Psychology of Language [3c]
PSYC455: Cognitive Development [3c]
PSYC489: Advanced Special Topics (including G, J)[8] [3c]

[7] Students may not use both ANSC327 and BSCI222/HLSC322 toward filling Neuroscience track requirements.
[8] Special & Selected Topics courses are allowed if approved for upper level courses in NEUR. See the NEUR website for a full list of pre-approved courses or speak with your advisor for new courses.
[9] Permission for regular-term KNES courses are requested through your academic advisor. Permissions are granted at the discretion of KNES dept.

NEUR Research Credit - Track Assignment Based on Laboratory Home Department
NEUR379: Neuroscience Research [10] [1-3c]
NEUR479: Neuroscience Research **Lab**[11] [1-3c]
[10] NEUR379, with permission, may be substituted with BSCI399, BSCI399H, PSYC479, PSYC468H, PSYC499H.
[11] NEUR479, with permission, may be substituted with BSCI399L.

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 05/17/23*