NEUROSCIENCE BS (120 hrs) Effective 2021

NAME	PID	Optional 2nd Major or Minor

FOUNDATIONS

Math PL

English Comp. and Rhetoric	Foreign Language*		Quant. Reas. (QR)	Lifetime Fitness (LFIT)
ENGL 105	1.	3.	MATH 231	(1 hr)
	2.	4.		

*** Through Level 3**

APPROACHES

Phys. and Life Sciences (PL/PX) **	Social and Behavioral Sciences***	Humanities/Fine Arts
PSYC 101	Hist. Analysis (HS):	Vis. & Perf. Arts (VP):
	Soc.Sci./Hist. Analysis (SS/HS):	Literary Arts (LA):
BIOL 101 BIOL 101L	Soc.Sci./Hist. Analysis (SS/HS):	Phil. Reasoning (PH):

**** C or better in BIOL 101 and CHEM 101 or CHEM 102 before taking BIOL 201 or 202 ***From at least two departments**

CONNECTIONS

Communication Int. (CI)	Quant. Int. (QI) or 2nd Quant. Reas. (QR)	Experiential Ed. (EE)	Global Issues (GL)
BIOL 101L	**MATH 232**	CHEM 262L	
US Diversity (US)	**North Atlantic World (NA)**	**World before 1750 (WB)**	**Beyond the NA (BN)**

MAJOR/MINOR/ELECTIVES

NEUROSCIENCE ♦ Major Core Courses	Additional Requirements	Optional Minor	Electives/Minor	Electives	Electives
NSCI 175* (3)	PSYC 101				
PSYC 210 (3), 215 (4) or STOR 155 (3)	PHYS 104, 114, 116 or 118 (4)				
NSCI 276, 278 (3)** or PSYC 270 (3)	PHYS 105, 115, 117, or 119 (4)				
NCSI 222 (3)	CHEM 101 CHEM 101L				
NSCI 225 (3)	CHEM 102 CHEM 102L				
Knowledge Electives (6 cr hrs)	CHEM 241 CHEM 241L				
	CHEM 261				
Mathematics, Methods, and Statistics Electives (6 cr hrs)	CHEM 262 CHEM 262L				
	COMP 110 or 116				
	BIOL 101 BIOL 101L				
	MATH 231				
	MATH 232				
	BIOL 202				

♦ ***2.0 OR HIGHER GPA REQUIRED IN MAJOR AND MINOR CORE COURSES***

*C or better required in NCSI 175
**NSCI 276 and NSCI 278 may count toward the major requirements as either the required methods course or as an MMS elective, but not counted as both.

-Any major in the program with an overall grade point average of 3.3 or higher and prior research experience in a faculty lab (e.g., PSYC 395 or NSCI 395) is eligible for enrollment in the departmental senior honors program. Each candidate for honors participates in a two-semester course sequence (PSYC 693H and PSYC 694H or NSCI 693H and NSCI 694H) and carries out independent research in an area of the student's choice under the guidance of a psychology and neuroscience faculty member.

Remaining courses after this term:

____	Foundations	____
____	Approaches	____
____	Connections	____
____	Supplemental	____
____	First Major	____
____	Major/Minor	____
____	Minor	____
	Requirements subtotal	0
____	Electives/Other	____
	Total	0

Hours to be deducted:

Repeated courses	____
HSFL	____
Online courses > 24	____
Other	____
Professional School > 30	____
Hours in subject (BA) > 45	____
Total	0

Hours Tally:

Hours to date:	____
Hours in progress	____
Pending Study Abroad*	____
Subtotal	0
Hours deducted	0
Hours after this term	0
Hours remaining to grad	____
Semesters left	____

Pending study abroad hours may differ from hours earned.

Notes:

This tally assumes successful completion of presently enrolled courses (not AB or IN), and it does not account for all possible overlaps

April 23, 2021

Knowledge Electives (6 credit hours)

All course are three credit hours unless otherwise noted

BIOL 205 Cellular and Developmental Biology (4)
BIOL 425 Human Genetics
BIOL 431 Biological Physics
BIOL 450 Introduction to Neurobiology
BIOL 455 Behavioral Neuroscience
BIOL 458 Sensory Neurobiology and Behavior
BIOL 542 Light Microscopy for the Biological Sciences
BIOL 547 Synaptic Plasticity: Analysis of Primary Literature
BIOL 552 Behavioral Endocrinology
BIOL 553 Mathematical and Computational Models in Biology
BIOL 554 Introduction to Computational Neuroscience
CHEM 430 Introduction to Biological Chemistry
COMP 210 Data Structures and Analysis
COMP 211 Systems Fundamentals
COMP 301 Foundations of Programming
COMP 311 Computer Organization
COMP 555 Bioalgorithms
COMP 560 Artificial Intelligence
COMP 562 Introduction to Machine Learning
COMP 576 Mathematics for Image Computing
COMP 581 Introduction to Robotics
COMP 631 Computer Networks
COMP 633 Parallel and Distributed Computing
COMP 651 Computational Geometry
COMP 665 Images, Graphics, and Vision
EXSS 175 Human Anatomy
EXSS 275L Human Anatomy Laboratory (1)
EXSS 276 Human Physiology
EXSS 380 Neuromuscular Control and Learning
NSCI 320 Neuropsychopharmacology
NSCI 325 Neuroscience of Psychiatric Disorders
NSCI 326 Neuroscience Career Development, Networking & Applications in the Working world
NSCI 401 Animal Behavior
NSCI 415 History of Neuroscience
NSCI 420 Functional Neuroanatomy
NSCI 421 Principles of Brain Circuits
NSCI 422 Genetics of Brain Diseases
NSCI 424 Neural Connections: Hands on Neuroscience
NSCI 427 Neurobiology of Aging
NSCI 428 Neuroscience, Society, and the Media
NSCI 434 Cognitive Neuroscience
NSCI 437 Neurobiology of Learning and Memory
NSCI 507 Autism
NSCI 568 Emotion
NSCI 571 Social Neuroscience
NSCI 573 Neuropsychobiology of Stress
PHYS 133 How Bio Works
PHYS 405 Biological Physics
PSYC 245 Psychopathology
PSYC 404 Clinical Psychopharmacology
PSYC 469 Evolution and Development of Biobehavioral Systems
PSYC 517 Addiction
PSYC 559 Applied Machine Learning in Psychology
PSYC 602 Evolutionary Psychology

Mathematics, Methods, and Statistics Electives (6 credit hours)

APPL 101 Exploring Engineering
APPL 240 Developing Your Sixth Sense: Designing Sensors and Electrical Circuits to Make Measurements
APPL 350 Data Science for Applied Science and Engineering
APPL 430 Optical Instrumentation for Scientists and Engineers
APPL 435 Nanophotonics (CHEM 251 is a pre-req)
BIOL 226 Mathematical Methods for Quantitative Biology
BIOL 226L Mathematical Methods for Quantitative Biology Laboratory (1)
BIOS 500H Introduction to Biostatistics
BMME 207 Biomedical Electronics
BMME 301 Human Physiology : Electrical Analysis
BMME 445 Systems Neuroscience
BMME 550 Medical Imaging I: Ultrasonic, Optical, and Magnetic Resonance Systems
COMP 283 Discrete Structures[2]
MATH 233 Calculus of Functions of Several Variables (4)
MATH 347 Linear Algebra for Applications
MATH 381 Discrete Mathematics[2]
MATH 383 First Course in Differential Equations
MATH 383L First Course in Differential Equations Laboratory (1)
MATH 523 Functions of a Complex Variable with Applications
MATH 528 Mathematical Methods for the Physical Sciences I
MATH 528L Laboratory for Mathematical Methods for the Physical Sciences I (1) MATH 529 Mathematical Methods for the Physical Sciences II
MATH 529L Laboratory for Mathematical Methods for the Physical Sciences II (1) MATH 535 Introduction to Probability
MATH 555 Introduction to Dynamics
MATH 564 Mathematical Modeling in the Life Sciences
MATH 566 Introduction to Numerical Analysis
MATH 577 Linear Algebra
MATH 661 Scientific Computation I
MATH 662 Scientific Computation II
MATH 668 Methods of Applied Mathematics I
MATH 669 Methods of Applied Mathematics II
NSCI 276** Cellular Electrophysiology Laboratory
NSCI 278** Molecular Imaging of the Brain
NSCI 395 Independent Research (Only count for 3 hours of MMS credit)
NSCI 403 Advanced Biopsychology Laboratory
NSCI 405 Advanced Molecular Neuropharmacology
NSCI 423 Neurotechnology in Modern Neuroscience Research
NSCI 439 Neuroimmunology
NSCI 493 Internship in Neuroscience
NSCI 693H Honors in Neuroscience I
NSCI 694H Honors in Neuroscience II
PSYC 533 The General Linear Model in Psychology
STOR 215 Foundations of Decision Sciences[2]
STOR 415 Introduction to Optimization
STOR 435 Introduction to Probability
STOR 445 Stochastic Modeling
STOR 455 Statistical Methods I
STOR 555 Mathematical Statistics
STOR 556 Advanced Methods of Data Analysis
STOR 565 Machine Learning

[2] ***Students may take one of COMP 283, MATH 381, or STOR 215***