NEUROSCIENCE BS (120 hrs) Effective 2018

NAME	PID	Optional 2nd Major or Minor

FOUNDATIONS

Math PL

English Comp. and Rhetoric	Foreign Language* HSFL(s) _____		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**	PSYC 270 (4)	
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
PSYC 175 (3)	PSYC 101				
PSYC 210 (4) or STOR 155 (3)	PHYS 104, 114, 116 or 118 (4)				
PSYC 270 (4)	PHYS 105, 115, 117, or 119 (4)				
PSYC 222 (3)	CHEM 101 CHEM 101L				
PSYC 225 (3)	CHEM 102 CHEM 102L				
Knowledge Electives (6 cr hrs)	CHEM 241 CHEM 241L				
	CHEM 261				
	CHEM 262 CHEM 262L				
Mathematics, Methods, and Statistics Electives (6 cr hrs)	COMP 116				
	BIOL 101 BIOL 101L				
	MATH 231				
	MATH 232				
	BIOL 202				

♦ 18 hours ≥ C (not C-) required in major core.
♦ Students must have a cumulative GPA of 2.0 or higher in core courses.

Remaining courses after this term:

____	Foundations	_____
____	Approaches	_____
____	Connections	_____
____	Supplemental	_____
____	First Major (hrs C____)	_____
____	Major/Minor (hrs C____)	_____
____	Minor (hrs C____)	_____
	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

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Knowledge Electives (6 credit hours)

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

All course are three credit hours unless otherwise noted

BIOL 205 Cellular and Developmental Biology

BIOL 425 Human Genetics

BIOL 450 Introduction to Neurobiology

BIOL 455 Behavioral Neuroscience or PSYC 220 Biopsychology

BIOL 458 Sensory Neurobiology and Behavior

BIOL 542 Light Microscopy for the Biological Sciences

BIOL 552 Behavioral Endocrinology

BIOL 553 Mathematical and Computational Models in Biology

CHEM 430 Introduction to Biological Chemistry

COMP 401 Foundation of Programming (4)

COMP 410 Data Structures

COMP 411 Computer Organization (4)

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

PHYS 133 How Bio Works

PHYS 405 Biological Physics

PSYC 245 Abnormal Psychology

PSYC 320 Drugs and Human Behavior

PSYC 401 Animal Behavior

PSYC 404 Clinical Psychopharmacology

PSYC 415 History of Neuroscience

PSYC 420 Functional Neuroanatomy

PSYC 424 Neural Connections: Hands on Neuroscience

PSYC 425 Advanced Perceptual Processes

PSYC 426 Molecular Mechanisms of Memory

PSYC 427 Neurobiology of Aging

PSYC 428 Neuroscience, Society, and the Media

PSYC 429 Neuroeconomics and the Science of Consequence

PSYC 434 Cognitive Neuroscience

PSYC 437 Neurobiology of Learning and Memory

PSYC 469 Evolution and Development of Biobehavioral Systems

PSYC 507 Autism

PSYC 568 Emotion

PSYC 602 Evolutionary Psychology

BIOL 226 Mathematical Methods for Quantitative Biology

BIOL 226L Mathematical Methods for Quantitative Biology Laboratory (1)

BIOS 500H Introduction to Biostatistics

BMME 350 Electronics for Biomedical Engineers (4)

BMME 351 Human Physiology and Biological Measurements for Engineers (4)

BMME 445 Systems Neuroscience

BMME 550 Medical Imaging I: Ultrasonic, Optical, and Magnetic Resonance Systems

COMP 283 Discrete Structures[2]

MATH 283 BioCalculus II

MATH 233 Calculus of Functions of Several Variables

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 547 Linear Algebra for Applications

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

PSYC 402 Advanced Biopsychology

PSYC 403 Advanced Biopsychology Laboratory

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***