

Pre-Professional Track

Choose 12 credit hours from the following list of courses:

Courses	Prerequisites	Semesters offered
BIO 380 (1-4) Special Topics in Biology (Intermediate Level)	Determined by Instructor.	TBD
BIO 302 (3) Introduction to Neuroscience	BIO 152 or equivalent or permission of instructor.	Fall/Spring
BIO 305 (4) Intro to Neuroscience Techniques	BIO 302 Introduction to Neuroscience or equivalent.	Fall/Spring
BIO 308 (3) Microbiology	BIO 304 OR ABT 360 OR ENT 360 AND CHE 230 OR CHE 236.	Fall/Spring
BIO 309 (2) Microbiology Lab	BIO 304 OR ABT 360 OR ENT 360 AND CHE 230 OR CHE 236.	Fall/Spring
BIO 394/395/397 (1-3) Research in Neuroscience/Biology/Microbiology (max 3 credit hours toward track)	BIO 152 and BIO 302 or PSY 312 / BIO 148, BIO 152 and BIO 155 or equivalent. Completion of at least one of the Biology core courses (Cell Biology, Evolution, Genetics, Physiology, Ecology) is strongly recommended / BIO 308 and BIO 309.	Fall/Summer/Spring
BIO 405 (3) Human Genetics	Grade of C or better in BIO 304 or permission of instructor.	Spring
BIO 410 (3) Vertebrate Endocrinology	BIO 302 or BIO 315 or BIO 350	Spring
BIO 429 (3) Developmental Biology	BIO 304 or equivalent, or graduate standing in life sciences, or consent of instructor.	Fall/Spring
BIO 440 (4) Comparative and Functional Anatomy	BIO 302 or consent of Instructor.	
BIO 445 (3) Biology of Sex	Determined by Instructor.	Sometimes Spring
BIO 446 (3) Neurophysiology Laboratory	BIO 302 or BIO 350 or consent of instructor.	Fall
BIO 494G (3) Immunobiology	BCH 401G (may be taken concurrently) and BIO 208 or BIO 308 or consent of instructor.	Fall/Spring
BIO 495G (3) Bacterial Pathogenesis	BIO 308, BIO 315, BCH 401 recommended, or permission of instructor.	Spring

BIO 502 (5) Principles of Systems, Cellular and Molecular Physiology	One year each, physics, general chemistry; PGY 206 or its equivalent.	Fall
BIO 507 (3) Biology of Sleep and Circadian Rhythms	BIO 304 OR BIO 302 or consent of instructor.	Spring
BIO 510 (4) Recombinant DNA Techniques Lab	BIO 304 and BIO 315 or equivalent with consent of instructor.	Fall
BIO 520 (3) Bioinformatics	BIO 315 or BIO 304 or BCH 304 or BCH 401 or instructor. BCH 501 or BCH 502 or BIO 510 or consent of instructor.	Fall
BIO 527 (3) Stem Cells, Tissue Engineering, and Regenerative Medicine	BIO 315 and BIO 304.	
BIO 535 (3) Comparative Neurobiology	BIO 350 or consent of instructor.	Spring
BIO 550 (3) Advanced Physiology	One year college chemistry, BIO 350 or equivalent, one year college physics or consent of instructor.	Fall
BIO 582 (3) Virology	BIO 304 and biochemistry or equivalent strongly recommended, or consent of instructor.	Fall
BIO 542 (5) Histology	BIO 315 or consent of instructor.	
BIO 350 (4) Animal Physiology**	BIO 148, BIO 152, BIO 155 or BIO 198, CHE 105 (or CHE 109 and CHE 110) and CHE 107 or consent of Instructor.	Fall/Spring

***Subtitle must be approved by Director of Undergraduate Studies**

****only for students who do not use the course to fulfill the 2nd Tier Core**

Courses from outside the Biology Department:

Courses	Prerequisites	Semesters offered
ANA 410G (3) Neurobiology of Brain Disorders	For undergraduate students: BIO 302 or PSY 312 or consent of course directors. For graduate students: Enrollment in a graduate program in biomedical sciences, gerontological sciences or consent of one of the course directors.	Fall/Spring
ANA 442 (3) Molecular and Cellular Neurobiology	BIO 152 or an equivalent; BIO 302 or PSY 312, or consent of course director.	Spring

BCH 401G (3) Fundamentals of Biochemistry	CHE 107, CHE 236 and BIO 152 or equivalent.	Fall/Spring
CHE 550 (3) Biological Chemistry I	CHE 232	Fall
CHE 552 (3) Biological Chemistry II	CHE 232	Spring
MI/PAT 598 (3) Clinical Microbiology	BIO 208 and 209, BIO 476G recommended, CHE 230 or 236, or consent of instructor.	Sometimes Spring
PGY 560 (1) Pathophysiology: Integrative Study in Physiology and Medicine	PGY 412G, PGY 502 or consent of instructor.	Spring
PGY 512 (3) Evolutionary Medicine	BIO 150-153 or equivalent introductory biology sequence, BIO 315 or equivalent, and an introductory physiology course (PGY 206, BIO 350, or PGY 412G).	Fall/Spring
PGY 431 (3) Introduction to Neuroendocrinology	PGY 206, BIO 302, or BIO 350 or instructor approval.	Fall
PSY 459 (3) Neuropharmacology: Drugs and Behavior	PSY 215 and PSY 312, or BIO 148 or equivalent.	Fall/Spring

** Other courses can be accepted by the Director of Undergraduate Studies in Biology on a case by case basis.