NEUROSCIENCE (NEU)

NEU 109 - Introduction to Neuroscience, 4 credits.
This course will serve as the introductory course for the program and it will cover the basics of neuroscience, which will be expanded upon in other neuroscience courses. Three lectures and three hours of laboratory per week.
Frequency: *Every Year - Second Semester*
Core designations: Natural Science N

NEU 252 - Physical Neuroscience, 4 credits.
This course will build upon the physical principles underlying neuroscience that were surveyed in NEU 109 - Introduction to Neuroscience. Topics include passive and active potential propagation, membrane and ion channel energetics, and the physical events underlying neurotransmitter release and binding.
Frequency: *Alternate Years - 2nd Semester*
Prerequisites: NEU 109

NEU 328 / PSYC 328 - Human Neuropsychology, 4 credits.
This course will provide a comprehensive understanding of brain and nervous system physiology. The focus will be on how the nervous system governs behavioral and cognitive processes. Functional and dysfunctional physiology and what this tells us about maladaptive behaviors will also be discussed.
Frequency: *Alternate Years - 2nd Semester*
Prerequisites: NEU 109 or (PSYC 319 or PSYC 321)
Corequisites: PEAK 400
This course is PEAK Required

NEU 380 - Special Topics, 0-4 credits.
Courses covering various topics of interest in this particular discipline are offered regularly. Contact program chair for more information.
Frequency: *Not offered on a Regular Basis*
Repeatable: Yes

NEU 390 - Academic Internship, 1-8 credits.
Frequency: *Every Semester*
Repeatable: Yes

NEU 400 / BIOL 400 - Neurobiology, 4 credits.
This course expands upon content covered in NEU 109 and BIO 222 and explores a variety of topics including neuroanatomy, neural cell characteristics and communication, and mechanisms of nervous system injury and repair. There is an emphasis on active learning, experimental design, and reading scientific literature. Three lectures and four hours of laboratory per week.
Frequency: *Every Year - First Semester*
Prerequisites: BIOL 222 or NEU 109
Core designations: Natural Science N

NEU 406 - Senior Seminar, 1 credits.
This senior-level course will serve as the capstone for the major and is recommended for the minor. The purpose of this class is to summarize and integrate experiences from the neuroscience major by revisiting numerous topics of study. It is expected that students will have completed most other requirements for the neuroscience major before enrolling in this course.
Frequency: *Every Year - Second Semester*
Prerequisites: NEU 109

NEU 475 / CHEM 475 - Neurochemistry, 4 credits.
This junior/senior level course studies the chemical and biochemical aspect of neuroscience including ligand binding, pharmacokinetics and second messenger cascades.
Frequency: *Every Year - Second Semester*
Prerequisites: (NEU 109 and CHEM 142) or CHEM 373

NEU 480 - Independent Study, 1-4 credits.
This course provides an opportunity for individual students to conduct in-depth study of a particular topic under the supervision of a faculty member. Contact the program chair for more information.
Frequency: *Not offered on a Regular Basis*
Repeatable: Yes

NEU 487 - Directed Research, 1-4 credits.
This course provides an opportunity for individual students to conduct research in a specific area of study, completed under the direction of a faculty mentor. Specific expectations of the research experience to be determined by the faculty. Repeatable for credit. PEAK optional with certain instructors. Prerequisite: consent of instructor.
Frequency: *Not offered on a Regular Basis*
Repeatable: Yes