ANAT 403. Human Neuroanatomy. 3 hours.
Morphological organization of the nervous system. Functional correlations of neural structures. Course Information: Same as NEUS 403. Meets eight weeks of the semester. Prerequisite(s): Graduate standing and consent of the instructor. Must be in a degree program. Class Schedule Information: To be properly registered, students must enroll in one Laboratory and one Lecture.
ANAT 521. Plasticity in the Nervous System. 2 hours.
Neural plasticity is the ability to adaptively modify neural structure or function. Topics range from developmental plasticity to aging, including response to injury and neurodegenerative diseases, trophic factors, learning and memory, and neural transplantation. Course Information: Prerequisite(s): ANAT 403 or consent of instructor.

ANAT 523. Biology of MicroRNAs and other Small RNAs. 2 hours.
History, overview and biology of small RNA pathways, including microRNAs, siRNAs, RNA interference, roles in various biological processes, implication in disease pathophysiology, and potential therapies. Course Information: Same as BIOS 523. Prerequisite(s): Consent of the instructor.

ANAT 525. Molecular and Cellular Mechanisms of Neurodegenerative Diseases. 2 hours.
Molecular, cellular and physiological mechanisms underlying neuropathology in neurodegenerative diseases and trauma to the central and peripheral nervous system of humans. Course Information: Same as NEUS 525. Recommended background: A basic course in neuroscience.

ANAT 527. Cellular and Systems Neurobiology. 3 hours.
Molecular and cellular properties of ion channels in neurons and sensory cells and their relationship to brain and sensory systems. Course Information: Same as BIOS 527 and NEUS 527. Prerequisite(s): Credit in one neuroscience course or consent of the instructor.

ANAT 544. Advanced Craniofacial Anatomy. 3 hours.
Functional and clinical aspects of head and neck anatomy. Includes laboratory dissection and readings from the anatomical, clinical and other literature. Course Information: Same as OSCI 544. Specimen provision by sponsoring department required. Prerequisite(s): DDS or MD degrees, a course in human head and neck anatomy. Class Schedule Information: To be properly registered, students must enroll in one Laboratory-Discussion and one Lecture-Discussion.

ANAT 545. Neuroendocrinology. 2 hours.
Survey of neuroendocrine integration including neuroendocrine regulation of development, homeostasis, reproduction, and behavior. The hypothalamohypophyseal axis receives special attention from both morphologic and functional viewpoints. Course Information: Prerequisite(s): ANAT 403 or the equivalent.

Provides an opportunity for supervised discussion and evaluation of materials and methods in teaching the basic anatomical sciences. Course Information: Satisfactory/Unsatisfactory grading only. May be repeated. No graduation credit. For anatomy and cell biology teaching assistants. Prerequisite(s): Consent of the instructor.

ANAT 555. Cell Biology. 4 hours.
Functional and structural organization of the cell with emphasis on the cellular basis of physiological activity. Course Information: Same as MIM 585 and PHYB 585.

ANAT 556. Cell and Molecular Neurobiology. 3 hours.
Structure and function of voltage-dependent and neurotransmitter-gated ion channels; the role of these ion channels in synaptic transmission, synaptic modification, and neuromodulation. Course Information: Same as BIOS 586. Prerequisite(s): BIOS 442 or consent of the instructor.

ANAT 559. Research in Anatomy. 0-16 hours.
Independent research, directed by a faculty member. Course Information: Satisfactory/Unsatisfactory grading only.