

BHS-Biomedical & Health Sciences

BHS 501. Seminar I. 1 Hour.

The first of a three-course series to prepare students for application, admission, and success in professional school and the biomedical workforce. Topics will include study skills, interview skills, and test taking strategies.

BHS 502. Molecules and Cells. 4 Hours.

Chemical structures and functions of biomolecules and human cells. The disciplines of biochemistry, genetics, cell biology, and histology will be integrated to provide a framework for understanding normal and abnormal cellular states. Topics will include cellular physiology, metabolic pathways, inheritance, molecular genetics, and basic histology.

BHS 503. Microbiology and Immunology. 4 Hours.

Biology of viruses, bacteria, parasites, and fungi as well as the natural human responses to these pathogens. Innate and adaptive immunity will be explored in the context of pathogenic and non-pathogenic assault. Introduction to concepts in general pathology including mechanisms of cell injury and repair, cell adaptation, and inflammation.

BHS 550. Integrated Systems I: Neuroendocrine. 3 Hours.

Integrated study of the nervous and endocrine body systems. The gross anatomy, histology, and physiology of each system will be examined through an integrated approach, which will include a study of the interrelationships of these controlling body systems. Correlations to disease states and disease treatments will be stressed throughout.

BHS 551. Integrated systems VI: NEUROSCIENCE. 3 Hours.

This graduate-level course provides students with an integrated understanding of the human nervous system, combining core functional neuroscience principles with clinical applications. The course emphasizes how disruptions in neuroanatomy and neurophysiology contribute to common neurological and neuropsychiatric disorders. Students will engage in active learning through clinical cases, problem-based group discussions, and applied neuroimaging interpretation.

BHS 555. Integrated Systems II: Cardiopulmonary. 3 Hours.

Integrated study of the cardiovascular and respiratory body systems. The gross anatomy, histology, and physiology of each system will be examined through an integrated approach, which will include a study of the interrelationships of these systems and the gross anatomy of the thorax. Correlations to disease states and disease treatments will be stressed throughout.

BHS 560. Integrated Systems III: Genitourinary. 3 Hours.

Exploration and integration of the urinary and reproductive systems of the human body, including development and anatomical features and differences between males and females. Microanatomy of kidneys correlated with body fluid homeostasis and urine production, and clinical disorders of the urinary tract. Male and female reproductive tracts' structure, function and gametogenesis. Female menstrual cycle at the level of hormonal regulation, events at the ovary, and changes in the uterus. Microanatomy and physiology of pregnancy. Diseases associated with the genitourinary tracts.

BHS 600. Integrated Systems IV: Gastrointestinal. 3 Hours.

Integrated study of the gastrointestinal body system. The gross anatomy, histology, and physiology of each organ will be examined through an integrated approach, which will include a study of the gross anatomy of the abdomen. Correlations to disease states and disease treatments will be stressed throughout.

BHS 601. Seminar II. 1 Hour.

The second of a three-course series to prepare students for application, admission, and success in professional school and the biomedical workforce. Topics will include professionalism, cultural competence, and ethical behavior.

BHS 602. Seminar III. 1 Hour.

The third of a three-course series to prepare students for application, admission, and success in professional school and the biomedical workforce. Topics will include interpersonal skills and teamwork.

BHS 605. Integrated Systems V: Musculoskeletal and Skin. 3 Hours.

Integrated study of the skeletal, muscular and integumentary body systems. The gross anatomy, histology, and physiology of each system will be examined through an integrated approach, which will include a study of the interrelationships of these systems and the gross anatomy of the back and limbs. Correlations to disease states and disease treatments will be stressed throughout.

BHS 610. Clinical Application and Simulation. 1-2 Hour.

Development of critical thinking skills regarding the effects of disease at various levels of organization on multiple organ systems. Activities will include small-group case studies and simulation.

BHS 675. Special Topics in Biomedical and Health Sciences. 1-4 Hour.

Exploration of current issues in Biomedical and Health Sciences.

BHS 680. Biomedical Research Methodology and Communication. 3 Hours.

This course will direct students as they conduct original hypothesis based biomedical science research under a mentor's supervision. Special attention will be given to best practices for designing systematic approaches to research questions, data analysis, maintenance of laboratory notes, and presenting findings during formal research symposia.

BHS 690. Capstone: Integrating Basic and Clinical Sciences. 1-4 Hour.

Integration of knowledge from basic and clinical science courses to define and pose ethical resolutions to problems and clinical cases in the biomedical sciences.

BHS 698. Non-Thesis Research. 4 Hours.

This course will provide students with the opportunity to engage in inquiry and problem solving in the biomedical sciences. Students may engage in a research project or literature review on a topic related to health and disease. A written report will be the culmination of these activities.