



BIOMEDICAL SCIENCES

COURSE SEQUENCE OVERVIEW

BIOMEDICAL SCIENCES I

This one-year course aligns with Project Lead The Way Expectations and introduces students to the human body systems and various health conditions. Topics emphasized are human medicine, research processes, and bioinformatics. Instructional practices incorporate integration of diversity awareness including appreciation of all cultures and their important contributions to society.

BIOMEDICAL SCIENCES II

This one-year course aligns with Project Lead The Way Expectations and examines the interactions of the human body systems. Students design experiments to investigate the structures and functions of the human body.

BIOMEDICAL SCIENCES III

This one-year course aligns with Project Lead The Way expectations. Areas of emphasis include advanced study of immunology, surgery, pharmacology, medical devices, medical terminology, community health, preventing and treating pathogenic disease, molecular biology, genetic testing and bioethics, oncology and diagnostics.

ZOOLOGY

General areas of study include levels of organization, evolutionary theory, ecological adaptations, and the anatomical and physiological characteristics of all major animal phyla. Emphasis will be placed on diversity within the animal kingdom as it relates to physiological adaptations and environmental pressures. This course serves to familiarize students with educational and occupational opportunities in the field of zoology.

EPIDEMIOLOGY

Epidemiology involves the study of patterns of occurrence of disease and other phenomena in human populations to determine their cause and create solutions for prevention and control. Topics covered in this course include diseases, occupational hazards, accidents, historical perspectives, environmental problems and social determinants of health and illness. In addition, emergent issues such as ethics, biomedical engineering, research, and bioterrorism is explored.

BIOMEDICAL SCIENCES ADVANCED STUDY

This one-year course is designed to enable seniors to thoroughly investigate an approved scientific topic of their choice under the sponsorship of a mentor and/or committee. The project must be designed and approved prior to the beginning of the student senior year. Students are expected to work independently and consult with their supervising mentor for guidance.