BIMS 5311  Principles of Oncology
3 Semester Credit Hours (3 Lecture Hours)
This course is a study of the profile of cancer cells, and the various
causes of human cancer. Contribution of heredity, environmental
factors, and infectious agents to oncogenesis will be studied. The latest
published information on cancer screening, diagnosis, and treatment will
be discussed. Various types of cancer will be presented.
Prerequisite: BIOL 2416.

BIMS 5323  Neurosciences
3 Semester Credit Hours (3 Lecture Hours)
The anatomy and physiology of the vertebrate nervous system with
emphasis on functions and actions of the central nervous system.
Prerequisite: CHEM 3412.

BIMS 5327  Toxicology
3 Semester Credit Hours (3 Lecture Hours)
This course will provide students requisite knowledge to design and
supervise appropriate tests in vivo and in vitro in order to investigate
the toxicity of substances and to assess the implications of the
results. Students will be expected to have an appreciation of the
toxicity of a number of representative compounds and be able to apply
their knowledge to the evaluation of chemicals in pharmaceutical
preparations, agriculture, food and consumer products, the work place
and the environment.

BIMS 5330  Biology of Aging
3 Semester Credit Hours (3 Lecture Hours)
An examination of one phase of the developmental process - the aging
organism. Perspectives of aging in human beings and other organisms
are reviewed. Topics include: demographics of human aging; research
methodologies and measurements; development of age-related diseases;
theories of aging; and anti-aging interventions.
Prerequisite: CHEM 3412, 4402 and BIOL 3430.

BIMS 5333  Public Health Entomology
3 Semester Credit Hours (3 Lecture Hours)
The medical, veterinary and forensic importance of arthropods: especially
their relationships with host organisms, their role as hosts and vectors
disease-causing organisms, and strategies for their control. Involves
discussion of research papers on these topics.

BIMS 5334  Medical Genetics
3 Semester Credit Hours (3 Lecture Hours)
A study of genetic influences on health and disease.
Prerequisite: CHEM 3412 and BIOL 2416.

BIMS 5375  Microbial Pathogenesis
3 Semester Credit Hours (3 Lecture Hours)
Study of the mechanisms by which microorganisms invade a host and
produce pathological symptoms associated with disease. Emphasis is on
the chemical and molecular interaction between various pathogens and
host cells, especially immune responses. Involves discussion of research
papers on these topics.
Prerequisite: BIOL 2421.

BIMS 5396  Directed Independent Study
1-3 Semester Credit Hours
Study in an area of current interest. Credit is not given for research on
the thesis project. A total of six semester hours of Directed Independent
Study may be counted toward the MS degree.

BIMS 5410  Cells and Tissues
4 Semester Credit Hours (4 Lecture Hours)
Analysis of tissues: their cellular and sub-cellular components, and the
unique properties that emerge when they interact to form organs. Lecture
and laboratory emphasize normal mammalian tissues, and students
explore other aspects of tissue biology through individual research
projects.
Co-requisite: SMTE 0092.

BIMS 5439  Case Work Methods in Forensic Anthropology
4 Semester Credit Hours (3 Lecture Hours, 3 Lab Hours)
This course combines the study of human bones (osteology) with hands-
on examination of disarticulated skeletal remains using established and
validated forensic anthropological methods to develop the demographic
profile of the living individual, including assessment of trauma and
pathological conditions. Graduate-level students will apply currently
validated and accepted methods to their assigned individual skeleton.
Cross listed with BIMS 4439, BIOL 4439, and BIOL 5439.
Prerequisite: BIOL 2401.
Co-requisite: SMTE 0092.

BIMS 5590  Special Topics
1-5 Semester Credit Hours (1-5 Lecture Hours)
Variable content. Advanced study of a biomedical topic that may include
current literature research. May be repeated for credit when topics are
sufficiently different.