BIOMEDICAL AND HEALTH SCIENCES (BHSC)

Courses

BHSC 1340. Human Cell Biology. 0 or 4 Credits.
Lecture and laboratory experiences about molecular and cellular structure, function and physiology using human cells as the model. Catamount Core: N2.

BHSC 1980. Intro to Scientific Writing. 3 Credits.
Introduction to the principles and practices of research and writing in the biomedical and health sciences. Using scientific data and literature as a foundation, students will write in multiple genres through regular assignments applicable to future course work and health science professions. Pre/co-requisites: ENGL 1001 or equivalent; Radiation Medical Science, Medical Laboratory Sciences, Health Sciences major; or Instructor permission. Catamount Core: WIL2.

BHSC 1990. Special Topics. 1-18 Credits.
See Schedule of Courses for specific titles.

BHSC 1991. Internship. 1-3 Credits.
On-site supervised work experience combined with a structured academic learning plan directed by a faculty member or a faculty-staff team in which a faculty member is the instructor of record, for which academic credit is awarded. Offered at department discretion.

BHSC 1993. Independent Study. 1-18 Credits.
A course which is tailored to fit the interests of a specific student, which occurs outside the traditional classroom/laboratory setting under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.

BHSC 2400. Radiation Science. 4 Credits.
Provides a broad based understanding of the fundamentals of radiation science including the ways in which radiation is produced and utilized, the principles of radioactive decay, radiation exposure, absorbed dose, shielding and detection of radiation. Prerequisite: MATH 1212 or MATH 1234. Co-requisites: RADT 2520 or Instructor permission for non-majors.

BHSC 2410. Advanced Radiation Science. 3 Credits.
Lecture and laboratory experiences to enhance the understanding and application of the principles of radioactive decay, radiation exposure, absorbed dose, shielding and detection of radiation. Prerequisite: MATH 1012, MATH 1034, MATH 1212 or MATH 1234.

BHSC 2750. Cross Sectional Imaging. 3 Credits.
Introduction to the radiographic anatomy and the various imaging modalities presently used to include diagnostic imaging, computed tomography (CT), magnetic resonance imaging (MRI), and nuclear medicine. Prerequisites: ANPS 1200.

BHSC 2970. Leadership & Mgt in Hlth Care. 3 Credits.
Familiarizes students with operational aspects of health care management, leadership and policy. Explores current techniques in process improvement, management methodologies, and healthcare policy with a special focus on disparities in health and healthcare. Prerequisites: College of Nursing and Health Sciences majors; minimum Junior standing.

BHSC 2990. Special Topics. 1-18 Credits.
See Schedule of Courses for specific titles.

BHSC 2991. Internship. 1-18 Credits.
On-site supervised work experience combined with a structured academic learning plan directed by a faculty member or a faculty-staff team in which a faculty member is the instructor of record, for which academic credit is awarded. Offered at department discretion.

BHSC 2993. Independent Study. 1-18 Credits.
A course which is tailored to fit the interests of a specific student, which occurs outside the traditional classroom/laboratory setting under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.

BHSC 2994. Teaching Assistantship. 1-3 Credits.
Undergraduate student service as a teaching assistant, usually in an introductory level course in the discipline, for which credit is awarded. Offered at department discretion.

BHSC 2995. Undergraduate Research. 1-18 Credits.
Undergraduate student work on individual or small team research projects under the supervision of a faculty member, for which credit is awarded. Offered at department discretion. Prerequisite: Department Permission.

BHSC 3192. Applied Biomedical Experience. 3-6 Credits.
Designed to provide a hands-on learning experience relevant to career interests and to accompany biomedical science coursework. Complete a pre-approved experience with an industry partner. Experience will permit forging new professional connections, building interpersonal communication skills, and further developing fundamental skills beneficial to future employment in the field of biomedical science. Prerequisites: Two semesters of general Chemistry and one semester of Biology; Biomedical and Clinical Sciences major; minimum Junior standing.

BHSC 3420. Immunology. 3 Credits.
Deals with cells, organs, development, interactions and the functioning (infectious process, immunodeficiency, hypersensitivity reactions, transplantation and tumor immunology) of the innate and the adaptive immune system. Prerequisites: One semester of cell biology or similar course is encouraged.

BHSC 3440. Immunology Lab. 1 Credit.
Laboratory experience dealing with cellular and humoral immunity, B cells and T cells, autoimmunity, immunodeficiency. Laboratory covers immunological techniques and applications. Credit not awarded for both BHSC 3440 and BHSC 5440. Prerequisites: One semester of biochemistry, one semester of organic chemistry. Co-requisites: BHSC 3420 or MMG 3230.

BHSC 3810. Applied Molecular Biology. 3 Credits.
Introduces students to the nucleic acid and protein-based molecular diagnostics technology through class presentation, reading, and discussions. Focuses on diagnostic applications for understanding molecular mechanisms of disease. Credit not awarded for both BHSC 3810 and BHSC 5810. Prerequisite: CHEM 1580 or CHEM 2580.

BHSC 3820. Applied Molecular Biology Lab. 1 Credit.
Laboratory experiences include practical concepts of molecular applications. Introduces basic methods used in DNA and Protein technology including plasmid isolation, polymerase chain reaction, restriction enzyme use, and related assays. Credit not awarded for both BHSC 3820 and BHSC 5820. Prerequisite: CHEM 1580 or CHEM 2580. Co-requisite: BHSC 3810.

BHSC 3990. Special Topics. 1-18 Credits.
See Schedule of Courses for specific titles. Prerequisite: Department permission.

BHSC 3991. Internship. 1-18 Credits.
On-site supervised work experience combined with a structured academic learning plan directed by a faculty member or a faculty-staff team in which a faculty member is the instructor of record, for which academic credit is awarded. Offered at department discretion.

BHSC 3993. Independent Study. 1-18 Credits.
A course which is tailored to fit the interests of a specific student, which occurs outside the traditional classroom/laboratory setting under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.

BHSC 3994. Teaching Assistantship. 1-3 Credits.
Undergraduate student service as a teaching assistant, usually in an introductory level course in the discipline, for which credit is awarded. Offered at department discretion.

BHSC 3995. Undergraduate Research. 1-18 Credits.
Individual research performed under the supervision of a faculty mentor. A written report and seminar is required. Prerequisite: Department Permission.

BHSC 4990. Special Topics. 1-18 Credits.
See Schedule of Courses for specific titles.

BHSC 4991. Internship. 1-18 Credits.
On-site supervised work experience combined with a structured academic learning plan directed by a faculty member or a faculty-staff team in which a faculty member is the instructor of record, for which academic credit is awarded. Offered at department discretion.

BHSC 4993. Independent Study. 1-18 Credits.
A course which is tailored to fit the interests of a specific student, which occurs outside the traditional classroom/laboratory setting under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.