

BIOMEDICAL SCIENCES (BIOM)

BIOM 3101 Biomedical Ethics**Credit:** 1 (1-0-0)

Through a series of lectures, case studies, and small group discussions, this course will provide information about the important practices and topics that the National Institutes of Health and other federal agencies consider to be essential knowledge for the responsible conduct of biomedical research. While some of the issues and guidelines that will be discussed are straightforward and clear-cut, others require ethical or moral considerations. In such cases, the dilemmas may be difficult to resolve, as they often lack clear, explicit answers. In other instances, US federal law will guide and determine which steps are taken. As scientists, we must engage in open dialogue (including honest disagreement) as we make every effort to understand and apply ethical and responsible research principles to our work. The course will also feature guest visits by the biosafety office and members of the university compliance community. TSI Restriction(s): Reading, Math, and Writing

Prerequisites: An earned grade of C or better in BIOL 1306, 1106, 1307 and 1107.

Restrictions: Graduate level students may not enroll.

BIOM 3402 Human Physiology**Credits:** 4 (3-3-0)

The purpose of this course in human physiology is to help students acquire a deeper understanding of the fundamental organization and functions of each of several major organ systems and their integration by the nervous and endocrine systems. Students are expected to learn the basic principles and concepts of human physiology both at the molecular and cellular levels, to learn to reason scientifically and to understand and describe the cooperative function of multiple organ systems in the human body. The emphasis is on understanding mechanisms rather than on memorizing details, but sufficient detail must be included to serve as a basis for later understanding of abnormal function and its consequences in disease states and for understanding rational therapy with drugs and other interventions. With laboratory section. Recommended: CHEM 2323 and CHEM 2123. TSI Restriction(s): Reading, Writing and Math

Prerequisites: An earned C or better in BIOL 2411, BIOL 2421.

Restrictions: Graduate level students may not enroll.

BIOM 3410 Biomedical Sciences Internship**Credits:** 4 (0-0-4)

Biomedical Science Internship is an educational program between a major in the Department of Natural Sciences in the College of Arts and Sciences at Texas A&M University-San Antonio and approved collaborators who furnish facilities and instruction to help students improve their skills and knowledge. The course provides academic credit and supervised experience related to the student's professional interests. This course can be used as either a major's directed elective or as a free elective. It is available to students each regular semester and during summer. The course is limited to students who have Junior or Senior classification and a cumulative grade average 2.00 or higher overall and in their major. TSI Restriction(s): Reading, Math, and Writing

Prerequisites: A passing grade of C or better in BIOL 1306, BIOL 1106, BIOL 1307, and BIOL 1107.

Restrictions: Graduate level students may not enroll.

BIOM 4101 Seminar in Biomedical Science**Credit:** 1 (1-0-0)

Student-led reviews of current scientific literature and historic significance on topics in biomedical sciences with critical class analyses. Students will refine their ability to search, read, understand, discuss, and critique the primary scientific literature, both orally and in writing. TSI Restriction(s): Reading, Math, and Writing

Prerequisites: BIOL 3304 and ENGL 2311 or ENGL 1302 must be completed first.

Restrictions: Graduate level students may not enroll.