BIOL 4440: Toxicology

3 Credit Hours

Prerequisite: (BIOL 1108 and BIOL 1108L) and CHEM 3361

This course is an introduction to the principles and mechanisms of toxicology as applied to toxicants encountered in the environment. Students will learn how toxins are absorbed, distributed, stored, and eliminated across a range of organisms. Students will also explore the transport of environmental contaminants and the characteristics of specific classes of toxicants as they relate to testing and regulation.

BIOL 4450: Team Research

1-4 Credit Hours

Prerequisite: BIOL 3300 and BIOL 3300L and permission of instructor.

This course is a group experience in biological research in which class members form a research team to design, perform, analyze and write up for publication a single project or group of related projects under the supervision and direction of a faculty member.

BIOL 4455: Case Studies in Forensic Science

3 Credit Hours

Prerequisite: BIOL 3300 and BIOL 3300L; Recommended - CRJU 3320

This course will discuss the role and application of forensic science in criminal investigations and legal proceedings. Students will learn forensic DNA analysis and other aspects of forensic science as utilized in the modern US legal system.

BIOL 4460K: Medical Microbiology

4 Credit Hours

Prerequisite: BIOL 3340

This course will explore the disease process of, the immune response to, and the prevention and treatment of the medically important Monera, Viruses, Fungi and some microscopic Protista with emphasis on emerging infections, including a laboratory experience that focuses on enhancing laboratory and investigative skills.

BIOL 4465: Immunology

3 Credit Hours

Prerequisite: BIOL 3300 and BIOL 3300L; Recommended - BIOL 3340

This course will explore current concepts of the immune system. Emphasis will be placed on the induction of the immune response, on the mechanism(s) of those responses, and on the mechanism(s) by which the immune system protects against disease. The development and the role of each of the components involved in the immune response as well as immunological applications will be discussed.