

BIOL 3338K: Histology

4 Credit Hours

Prerequisite: (BIOL 1107 and BIOL 1107L) and (BIOL 1108 and BIOL 1108L)

This course is an investigation of structural and functional relationships in animal tissues. Students will learn to identify functional groups of tissues and relate them to organ functionality. In laboratory studies, students will practice the microscopic analysis of cells, tissues and organs to understand their structural organization from normal animal specimens.

BIOL 3340: Microbiology

3 Credit Hours

Prerequisite: (BIOL 1107 and BIOL 1107L) and (BIOL 1108 and BIOL 1108L)

This course is a study of prokaryotes, unicellular eukaryotes and viruses. Students will learn about the nature of microorganisms and the techniques used to study microbes. Students will explore the morphology, metabolism, growth, and genetics of various microbes.

BIOL 3340L: Microbiology Laboratory

1 Credit Hours

Prerequisite: (BIOL 1107 and BIOL 1107L) and (BIOL 1108 and BIOL 1108L)

Concurrent: BIOL 3340

This course emphasizes basic microbiology methods. Students will learn to culture, identify and quantify microorganisms. Students will also explore applications of microbiology, including food and environmental microbiology

BIOL 3341K: Advanced Microbiology

4 Credit Hours

Prerequisite: BIOL 3340.

This course explores microbial evolution, ecology and diversity. Students will explore infectious diseases and epidemiology to learn the applied uses of microorganisms in industry, agriculture and medicine. The laboratory exercises will help students learn the natural occurrences and processes of microbes in the environment and gene transfer in bacteria along with techniques for the isolation and identification of pathogens, and the use of microbes in industry.

BIOL 3370: Ecology

3 Credit Hours

Prerequisite: BIOL 1108 and (STAT 1401 or STAT 3125 or IET 2227 or PSYC 3000)

Students will learn about the relationships among living organisms and their environments at the individual, population, community and ecosystem level. Students will learn how and why traits evolve over time and how to evaluate scientific information.