

## **BIOL 2260L: Foundations of Microbiology Laboratory**

### **1 Credit Hours**

*Prerequisite: BIOL 2251 and BIOL 2251L*

Concurrent: BIOL 2260

Select laboratory exercises will provide training in the basic laboratory techniques for culture and identification of microbes.

Notes: Primarily for nursing majors. Cannot be used for credit toward a degree in Biology.

## **BIOL 3110L: Directed Methods**

### **1-3 Credit Hours**

*Prerequisite: BIOL 1107 and BIOL 1107L and permission of the instructor.*

This course will allow students to gain in-depth skills with a specific set of research methodologies through direct involvement in faculty-led research or scholarship. Course content and instructional methodologies will be identified by the faculty's needs and expectations.

## **BIOL 3250K: Ecosystem Ecology**

### **4 Credit Hours**

*Prerequisite: (BIOL 1108 and BIOL 1108L) and (CHEM 1211 and CHEM 1211L)*

Students in ecosystem ecology will study how energy and material flows and cycles through both the living (plants, animals, microbes) and non-living (soils, atmosphere) components of natural systems. Classes and lab exercises will be used to examine the influence of biological, geological and chemical processes. Students will consider factors that alter ecosystem function including human activities, from the molecular to the global scale.

## **BIOL 3300: Genetics**

### **3 Credit Hours**

*Prerequisite: (BIOL 1107 and BIOL 1107L) and (CHEM 1211 and CHEM 1211L)*

This course presents fundamental principles and applications in genetics. Students learn how traits are inherited and to use this information in predicting and analyzing genetic outcomes. Students study nucleic acid structure, learn how DNA replicates and how genes are expressed. Mutation at the gene and chromosomal levels will be surveyed, and their effect on gene structure and function examined. Finally, students will explore various genetic methods, including pedigrees, mapping, and molecular techniques.