

ACE Biology I (Fall Semester)

Course Description: General Biology I is an introductory course for science majors that is designed to provide you with the knowledge and skills necessary to succeed in upper-level biology courses or a career in the biological sciences. This course will cover a wide variety of topics, thereby giving you a solid foundation upon which to build your future in the sciences. The modern aspects and techniques of biology will be emphasized. BIOL 1510 will cover scientific methodology, biochemistry, cell structure and physiology (September/October), taxonomy, and bacterial, protist, fungal, and plant diversity (November), plant structure and physiology (December), genetic mechanisms (January).

Course Objectives: The student will understand many of the concepts associated with a majors-level, introductory biology course. By

the end of the course, he or she will:

1. Understand the major principles of biochemistry, cell biology, photosynthesis & cell respiration, plant biology, genetics & molecular biology, and bacterial, protist, fungal, and plant diversity and taxonomy.
2. Be able to explain the importance of various biological themes, including enzymes, the role of cells, inheritance, and energy exchange.
3. Understand and be able to apply the scientific method in practice.
4. Demonstrate the ability to dissect a plant, locate relevant anatomical structures, and understand the anatomy contained therein.
5. Be able to competently use various pieces of biological equipment to take measurements and collect data in the field and laboratory.
6. Be able to calculate and analyze biological data, so that reasonable conclusions can be drawn and interpreted from them.

ACE Biology II (Spring Semester)

Course Description: General Biology II is an introductory course for science majors that is designed to provide you with the knowledge and skills necessary to succeed in upper-level biology courses or a career in the biological sciences. This course will cover a wide variety of topics, thereby giving you a solid foundation upon which to build your future in the sciences. The modern aspects and techniques of biology will be emphasized. BIOL 1520 will cover evolution (February), animal diversity, reproduction, development (February/March), animal anatomy & physiology (April), behavior, and ecology (May/June).

Course Objectives: The student will understand many of the concepts associated with a majors-level, introductory biology course. By the end of the course, he or she will:

1. Understand the major principles of evolution, animal taxonomy, anatomy & physiology (including all of the principal human organ systems), animal reproduction & development, animal behavior, and ecology.
2. Explain various biological themes, including unifying factors, surface area, exchange mechanisms, feedback, and specificity.
3. Understand and be able to apply the scientific method in practice.
4. Demonstrate the ability to dissect an animal, locate relevant anatomical structures, and understand the anatomy contained therein.
5. Be able to competently use various pieces of biological equipment to take measurements and collect data in the field and laboratory.
6. Be able to calculate and analyze biological data, so that reasonable conclusions can be drawn and interpreted from them.