

**Course # BIOL 117 Introductory Physiology****Credit Hours:** 4**Scheduled hours per week**

Lecture: 3

Lab: 2

**Catalog Course Description:** Continuation of BIOL 115. The course focuses on the structure, function and diversity of reproductive, developmental, functional and integrative mechanisms in plants and animals. In combination with the accompanying laboratory (BIOL 117L), the course represents the second in an integrated sequence required of biology major transfer students; students who elect biology as a minor in the Multidisciplinary studies BA degree program; or to fulfill the general education requirement in science. Students must register for both a lecture section and a laboratory section.

**Pre-requisites:** BIOL 115, CHEM 115, CHEM 116

**Co-requisites:** CHEM 116

**Course Learning Outcomes (CLO):**

- Knowledge and understanding of plant and animal diversity.
- Knowledge and understanding of plant and animal evolution.
- Formulate hypotheses and design experiments related to biological principles.
- Evaluate information and form conclusions based on experimental findings.
- Critical thinking to solve problems using experimental data and information.
- Solve applications using material gleaned from scientific literature.
- Critical reading skills of scientific literature.

**CLO Assessment Methods:**

Direct: Lab activities, exams, quizzes, written papers, projects

Indirect Methods: Course Evaluations

**Topics to be studied:**

- Evolutionary processes
- Speciation
- Phylogenies and the history of life
- Diversity of life to include Bacteria, Archaea, Protista, Fungi, Animals, and Plants

- Animal anatomy and physiology to include development, structure and function, osmoregulation, gas exchange and circulation, chemical signals, electrical signals, reproduction, and immunity
- Plant anatomy and physiology to include transport, chemical signals, and reproduction.
- Phylogenetics
- Electrophoresis
- Dissections of representative animal and plant specimens
- Qualitative and quantitative analyses of organic compounds
- Formulating research hypotheses
- Designing experiments to test research hypotheses
- Scientific writing and reporting of experimental findings

**Relationship of Course to Program Learning Outcomes (PLO) or Institutional Learning Outcomes:**

Check if approved as:  Foundational Learning Course     Reinforcement Learning Course

**Special requirements of the course:**

N/A

**Additional information:**

N/A

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