

Indiana State University

BIO 112L Section 004

Exploration of Biological Phenomena

Catalog Course Description

A laboratory which must be taken in conjunction with 112 or 113. It is designed to help students develop the capacity to recognize and pose scientific questions, to appreciate how scientific data are collected and analyzed, and to better understand how hypotheses are validated or rejected. The laboratory also provides hands-on exercises based on topics covered in 112, including microscope use, cell division, genetic variation in populations, DNA structure, natural selection, nutrition, and food production by plants.

Faculty Information

Name: Patricia Bollinger

Email: Patricia.Bollinger@indstate.edu

Department: Biology

Office Hours: Monday 3:00-5:00 or by appointment

Course Learning Objectives

This course meets the following Foundational Studies Learning Objectives for the Laboratory Science requirement:

- Evaluate the usefulness or veracity of a hypothesis or theory using data and logic
- Present scientific data in graphical or tabular format
- Interpret and/or draw evidence-based conclusions from scientific data
- Communicate the results of an analysis.

Course activities also help to develop critical thinking and information literacy skills.

Required Textbooks and Materials

No textbook or laboratory manual is required as all written material will be provided. A laptop is required.

Graded Elements of the Course

Quizzes, weekly lab worksheets, attendance, and components of an independent research project including data collection, data organization and graphing, a short scientific paper, and a group presentation.