Syllabus

BIO 283 - Electrophoresis

General Information

Date November 25th, 2019
Department Science and Technology
Course Prefix BIO
Course Number 283
Course Title Electrophoresis

Course Information

Catalog Description A laboratory module introducing the student to polyacrylamide and agarose gel electrophoresis. Seven weekly laboratory exercises (3 hours each).
Credit Hours 1
Lecture Contact Hours 0
Lab Contact Hours 2
Other Contact Hours 0
Grading Scheme Letter

Prerequisites

BIO 121 or BIO 171

Co-requisites

None

First Year Experience/Capstone Designation

This course DOES NOT satisfy the outcomes applicable for status as a FYE or Capstone.
This course is designated as satisfying a requirement in the following SUNY Gen Ed category
None

Institutional Learning Outcomes Addressed by the Course
Vitality, Inquiry, Perseverance, and Interconnectedness

Course Learning Outcomes

1. Differentiate between the use of polyacrylamide and agarose gel electrophoresis techniques in the laboratory.
2. Design an experiment based on a testable hypothesis.
3. Communicate experimental results using standard scientific journal formatting

Outline of Topics Covered

- Polyacrylamide Gel Electrophoresis Principles
- Polyacrylamide Gel Electrophoresis Equipment and Set Up
- Pipetting and micropipetting
- Gel Staining & Photography
- Standard Curves
- Western Blotting
- Agarose Gel Electrophoresis Principles
- Agarose Gel Electrophoresis Equipment and Set Up
- Restriction Enzymes
- Southern Blotting
- Journal Manuscript Drafting, Submission and Peer Review