Biomol Separation & Analysis

BTEC - 2020 301

Course Description

Students are taught how to apply purification and analysis techniques to biologically active substances. The class emphasizes applying electrophoretic and chromatographic technologies to protein purification and kinetic analysis of enzymes.

Prerequisite: BTEC 1300 with a B or better.

Semester: All

Course Student Learning Outcomes

- Explain the four levels of protein structure.
- Express a protein of interest.
- Separate molecules using chromatography.
- Separate proteins using SDS-PAGE.
- Determine the turnover rate of an enzyme in particular conditions.

Course Prerequisites

BTFC 1500 with a B or better

Engagement Plan

I will respond to email within two business days. I will offer feedback on major assignments within seven days. The best way to contact me is via the Canvas Inbox.

Brief Description of Assignments/Exams

2020 assignments

Assignment Schedule

| Due Date | Assignment Name | Assignment Type | Points |
|----------|---|-----------------|--------|
| | Final Exam Form A | Quiz | 32 |
| | Final Exam Form B | Quiz | 32 |
| | Graded Lab: BglA Expression, Purification, and Kinetics | Assignment | 65 |
| | Introduce Yourself | Discussion | 0 |
| | Introduce Yourself | Discussion | 0 |
| | Introduce Yourself | Discussion | 0 |
| | <u>Lab: Bradford Assay</u> | Assignment | 100 |
| | Lab: Purify Small Molecules Via Chromatography | Assignment | 25 |
| | Milestone Lab: Completing an SDS- PAGE | Assignment | 100 |
| | Milestone Lab: Trypsin Kinetics | Assignment | 100 |
| | Quiz: Chromatography | Quiz | 15 |
| | Quiz: Enzyme Kinetics | Quiz | 30 |

| Due Date | Assignment Name | Assignment Type | Points |
|----------|---|-----------------|--------|
| | Quiz: Pouring SDS- PAGE Gels | Quiz | 15 |
| | Quiz: Protein Structure | Quiz | 16 |
| | Quiz: SDS-PAGE | Quiz | 25 |
| | Quiz: What Factors Influence Protein Migration? | Quiz | 20 |

Grading Scale

Bradford assay

How to Navigate to Canvas

Institutional Policies

As members of our academic community, we would like to invite you to review the Institutional Syllabus which covers important policies and procedures. This document contains important links for students on the code of student rights and responsibilities, academic integrity, and grading policies, Title IX and other important acknowledgements. By familiarizing yourself with this information, you can help us create a safe and respectful environment for everyone.

For more information, navigate to the Institutional Policies tab on the <u>Institutional Syllabus</u> page.

Learning Support and Tutoring Services

We are pleased to offer a range of tutoring and learning support services to help you achieve your academic goals. Whether you need assistance with a specific subject or want to improve your study skills, you have many options for tutoring or other support.

To learn more about the services we offer and how to access them, visit the <u>Institutional Syllabus</u> page under the Tutoring and Learning Support tab. We encourage you to take advantage of these resources to help you succeed in your studies. If you have any questions or would like to schedule a tutoring session, please don't hesitate to reach out to us. We are here to support you in any way we can.

Advising and Counseling Support Services

At our institution, we are committed to supporting your academic and personal growth. That's why we offer a range of advising and counseling services to help you navigate the challenges of college life. To learn more about the resources available to you and how to access them, visit the <u>Institutional Syllabus</u> page under the Advising and Counseling Support Services tab. Our advising team and the support centers across campus are here to support you in achieving your goals and overcoming any obstacles you may face.

Student Academic Calendar

As students you should be aware of all important dates in the semester, such as the day that courses begin and end, as well as the drop date and the last day to withdraw. To learn more about those dates, navigate to the Student Academic Calendar below:

SLCC Student Academic Calendar