Biotech: Engineering Life (IG)

BTEC1000

Instructor Information

Course Description

Biotechnology uses materials from living organisms to improve the quality of life: insulin saveslives, smallpox has been eradicated, and altered organisms can produce biofuel. In this course, students conduct experiments that are used in biotechnology, explore current global issues, and consider the ethical implications and conflicts inherent in altering living organisms to improve lives.

Semester: All

Biotechnology uses materials from living organisms to improve the quality oflife: insulin saves lives, smallpox has been eradicated, and altered organisms can produce biofuel. Inthis course, students conduct experiments that are used in biotechnology, explore current global issues,and consider the ethical implications and conflicts inherent in altering living organisms to improve lives.

Course Student Learning Outcomes

- Explain how biotechnology can both benefit and harm members of the global population.

- Produce a genetically modified organism (GMO).

- Purifiy a useful protein from a genetically modified organism (GMO) in a process analogous to modern pharmaceutical production.

- Analyze their own DNA to predict a (non-medically relevant) trait.

Course Prerequisites

None

Communication 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.

Please know I love talking to students before and after class!

General Education Information

IG

Your General Education ePortfolio tells your SLCC learning story. Your ePortfolio enables you to introduce yourself to your professors, showcase your learning, and reflect on how your courses connect to each other, your life, goals, and community. The ePortfolio is intended to help you communicate with professors about how you learn, what you are taking away from your experience, and what supported your learning in their class. Professors can use your ePortfolio to get to know you before class and use your reflections and signature assignments to continuously improve their teaching.

Your General Education ePortfolio will also help you weave together the concepts you learn across all General Education courses. To do this, each General Education course you take at the college will ask you to demonstrate your engagement with the General Education learning outcomes by designing a course-specific ePortfolio page that includes a Signature Assignment and reflection. When you finish your time at SLCC, your ePortfolio should provide a multi-media showcase of your educational experience

and tell the story of your learning growth while at SLCC. You can create a SharePoint ePortfolio by completing the [Consent Form](). Visit the [ePortfolio help site]() to learn more.

SLCC allows students to use any ePortfolio platform of their choosing. We recommend SharePoint for work you want to keep private, like your Gen Ed learning portfolio. We recommend Google Sites for content you would want to make public, like a professional or program portfolio.

In order for us to learn from your ePortfolio and provide effective support, your ePortfolio must be connected to your MySLCC account. If you create your portfolio in SharePoint the link will automatically be added within 24 hours of creating your portfolio. If you are using an external site, like Google, you will have to manually add the link.

To make sure your portfolio is accessible in MySLCC:

1. Click here to access your ePortfolio links. If the link is already there, make sure it is correct.
2. If it is not there or needs to be updated, click "Submit" under "General Education ePortfolio."
3. If there is no link, Copy the URL for your ePortfolio Welcome page from the web browser and paste the copied link into the submission box.
4. Click "Save."
5. Finally, confirm that your ePortfolio Welcome page was submitted correctly by clicking on the link that now appears in the General Education ePortfolio box.

If you would like virtual or in-person help with your ePortfolio please sign up for an ePortfolio appointment [here]().

Brief Description of Assignments/Exams

30% Attendance and Participation - because this is a lab class, attendance and participation arerequired.

30% Homework on Biotech in the News - most weeks will have a homework quiz that requires you towatch/read/listen to a news or popular science article, and answer quiz questions to verify you've doneit. We will also discuss the piece in class. To facilitate

discussion, these quizzes only open one week inadvance and are due (and close for submissions) at 10am, the start of the first section. Your lowesthomework score will be dropped.

40% - Bigger Assignments, mostly for the General Education ePortfolio. Two essays on "What's Happened" and "What's Coming" in biotech, plus your reflection, a presentation on the last day of class,and posting the assignments.

Assignment Schedule

Due Date	Assignment Name	Assignment Type	Points
	Follow up from class - interesting links	Discussion	0
	Roll Call Attendance	Assignment	100
8/29	Meet the Plastic Eating Worms	Quiz	5
9/5	mRNA vaccines	Quiz	5
9/12	Henrietta Lacks	Quiz	5
9/19	US medical system still haunted by slavery	Quiz	5
9/26	Controversial future of genetic testing	Quiz	5
10/3	Twin studies & Startup lab-grown human eggs	Quiz	5
10/10	De-extinction	Quiz	5
10/24	Big Question 1: What has happened?	Assignment	48

Due Date	Assignment Name	Assignment Type	Points
10/31	How gene editing could reduce the cost of cosmetics	Quiz	5
11/7	The First CRISPR Gene Therapy Is Here	Quiz	5
11/14	Can we cure genetic diseases by rewriting DNA?	Quiz	4
11/21	Big Question 2: What is coming?	Assignment	60
12/5	This Slime Could Change The World	Quiz	5
12/6	ePortfolio Reflection: How Does This Connect With Your Life?	Assignment	10
12/12	Class Presentation	Assignment	20
12/12	Posting ePortfolio in MySLCC	Assignment	5
12/12	Posting of ePortfolio Assignments	Assignment	5

Grading Scale

Letter Grade

Range

A

94 to 100%

A-

90 to < 94%

B+

87 to < 90%

B

83 to < 87%

B-

80 to < 83%

C+

77 to < 80%

C

73 to < 77%

C-

70 to < 73%

D+

67 to < 70%

D

63 to < 67%

D-

60 to < 63%

F

0 to < 60%

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.

You can access the document by clicking on the following link: https://slcc.instructure.com/courses/530981/pages/institutional-syllabus

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, please visit the Institutional Syllabus under the Tutoring and Learning Support tab: https://slcc.instructure.com/courses/530981/pages/institutional-syllabus. 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, please visit the Institutional Syllabus under the Advising and Counseling Support Services tab: https://slcc.instructure.com/courses/530981/pages/institutional-syllabus. 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

Artificial Intelligence (AI)

Generative artificial intelligence (AI) software is a rapidly emerging tool that students may be interested in using. If doing so, SLCC students are expected to adhere to the same standards as the Code of Student Rights and Responsibilities statement on plagiarism. Presenting generative AI software content as your own is a violation of academic integrity. If you use generative AI in your work, you must indicate that you have done so.