

Course Number: BTN1110 **Section:** 110 **Term:** 13FA

Credits: 3.000

Room: 1 123 **Meeting Days:** TTH **Meeting Time:** 12:30 PM - 01:45 PM

Faculty Information:

Instructor(s):	Luken, Susan		
Department:	Biology	Division:	Science, Mathematics and Engineering
Phone Number:	512-3049	Alternate Number:	
Use Course Mail:	Yes	Alternate Email:	susan.luken@sinclair.edu (direct email for faster response)
Office Location:	3012B	Office Hours:	MWF 12 noon - 1 PM

Prerequisites: NONE

Other Prerequisite(s): NONE

Textbook(s):
INTRO TO BIOTECHNOLOGY, THIEMAN

Edition: 3	Copyright: 13	Used	New
ISBN: 978-0-321-76611-3	Req	\$100.50	\$133.97

eBOOK INTRO TO BIOTECHNOLOGY, THIEMAN

Edition: 3	Copyright: 13	Used	New
ISBN: 978-0-321-81481-4	Opt	\$41.30	\$55.07

Technical Requirements:

- Internet access at home or on campus
- word processing software at home or on campus (such as Microsoft word)

Course Description:

Introduction to the major fields in biotechnology and the basic science involved in understanding those fields.

Course Objectives/Competencies:
General Education Outcomes:

- Critical Thinking/Problem Solving Competency
- Information Literacy Competency
- Oral Communication Competency
- Written Communication Competency
- Values/Citizenship/Community Competency
- Computer Literacy Competency

Course Outcomes:
Chemistry and genetics

Describe the basics of chemistry, such as atomic structure and chemical bonding as well as the basics of genetics, such as DNA structure and synthesis, protein synthesis and mitosis.

Major fields in the biotechnology industry

Describe the major fields in the biotechnology industry, which include molecular genetics, proteins, microbiotechnology, plant and animal biotechnology, forensic analysis, bioremediation, aquatic biotechnology and medical biotechnology.

Ethical debates within the biotechnology industry

Describe ethics debates as they impact the biotechnology industry, both in how they affect the industry now and the impacts they may have on the future.

Course Outline:

Basic chemistry and molecular biology
Recombinant DNA technology, proteins, microbial biotechnology, plant and animal biotechnology, forensic analysis, bioremediation, and aquatic and medical biotechnologies
Biotechnology regulations
Bio ethics
ossible career types and fields in the biotechnology industry

Class Policies:

Attendance will be taken at each class. If you have a planned absence, please notify me ahead of time.

Evaluation/Grades:

Exams and Assignments	Points/Percentage	Grading Scale
Exams 50 points x 6	300	100-90 A
Discussion forums on ANGEL 5 points x 12	30	89-80 B
assignments 10 points x 5	50	79-70 C
Oral Presentation	50	69-60 D
Project Report	50	59 Below F

Course Schedule:

Course Schedule for BTN1110 - 110		
Week/Date	Material to be covered	Assignments Due
Week 1: Tuesday	Introduction to the program and the course	
Week 1: Thursday	Chapter 1: The Biotechnology Century and Its Workforce	
Week 2: Tuesday	Chemistry and Macromolecules (powerpoint)	Homework 1 due at the beginning of class
Week 2: Thursday	Chemistry and Macromolecules (powerpoint)	
Week 3: Tuesday	No Class - Faculty Learning Day	
Week 3: Thursday	Chapter 2: An Introduction to Genes and Genomes	Exam 1 (Chapter 1 & Chemistry)
Week 4: Tuesday	Chapter 2: An Introduction to Genes and Genomes	
Week 4: Thursday	Chapter 3: Recombinant DNA Technology and Genomics	
Week 5: Tuesday	Chapter 3: Recombinant DNA Technology and Genomics	
Week 5: Thursday	Review of genetics, genes and recombinant DNA	
Week 6: Tuesday	Chapter 4: Proteins as Products	Homework 2 due before exam Exam 2 (Chapters 2 & 3)
Week 6: Thursday	Chapter 4: Proteins as Products	
Week 7: Tuesday	Chapter 5: Microbial Biotechnology	
Week 7: Thursday	Chapter 5: Microbial Biotechnology	
Week 8: Tuesday	Chapter 6: Plant Biotechnology	Exam 3 (Chapters 4 & 5)
Week 8: Thursday	Chapter 6: Plant Biotechnology	Homework 3 due at the beginning of class
Week 9: Tuesday	Chapter 7: Animal Biotechnology	
Week 9: Thursday	Chapter 7: Animal Biotechnology	
Week 10: Tuesday	Chapter 8: DNA Fingerprinting and Forensic Analysis	Exam 4 (Chapters 6 & 7)
Week 10: Thursday	Chapter 8: DNA Fingerprinting and Forensic Analysis	
Week 11: Tuesday	Chapter 9: Bioremediation	
Week 11: Thursday	Chapter 9: Bioremediation	
Week 12: Tuesday	Chapter 10: Aquatic Biotechnology	Exam 5 (Chapters 8 & 9)
Week 12: Thursday	Chapter 10: Aquatic Biotechnology	
Week 13: Tuesday	Chapter 11: Medical Biotechnology	
Week 13: Thursday	Chapter 11: Medical Biotechnology	
Week 14: Tuesday	Student Presentations	Homework 4 due before exam Exam 6 (Chapters 10 & 11)
Week 14: Thursday	Student Presentations	

Week 15a: Tuesday	Student Presentations	
Week 15a: Thursday	Thanksgiving	No Class
Week 15b: Tuesday	Student Presentations	
Week 15b: Thursday	Chapter 13: Ethics and Biotechnology	Homework 5
Week 16: Evaluation Week		Cumulative Final

Make-up Work:

If you miss a class it is YOUR RESPONSIBILITY to get information and assignments you missed.

You will still need to turn in assignments that are due by turning it into my mailbox in 3041 or through email.

Additional Information:

Assignments: The goal of these assignments is to provide additional emphasis on a particular topic discussed in class. All assignments must be completed on their due date- NO EXCEPTIONS. Students will be penalized one point for each day that the assignment is late.

ANGEL Discussion Groups: Each chapter will include an online discussion during the week it is presented in class. Each student is expected to read/watch the discussion topic for that week and then respond. Each student will also give feedback/respond to 2 other student's posts. These will be due at Sunday midnight each week, but you may complete it early.

Special Project Instructions: Each student will pick a different topic to work on for the special project, an area of biotechnology that they would most like to explore as a career path. Students will each submit a typewritten report on the subject. Students may use the Web, journal articles, textbooks and interviews with professionals as resource materials for this project. All references used should be included as a bibliography list using the MLA format. Illustrations may be used where appropriate. PLAGARISM will be checked and those papers containing plagiarized passages will not be graded and will receive a grade of 0. Students will be organized into groups by field of biotechnology they chose and will present an oral report together. Each member of the group is expected to contribute equally to the research, development and preparation of the oral report. Each group will be given 20 minutes for the presentation. All students are expected to participate in the oral presentation.

Testing Information:

You will take six tests consisting of any of the following styles: multiple choice, matching, true-false, and short answer/essay. These tests will include questions based on lecture material and reading assignments.

If you feel you need more time for tests or for a special environment, please let me know by email or appointment and we will set you up in the testing center for exams.

Sinclair Policies:

Sinclair Academic Policies

Visit the links below to view Sinclair policies regarding adding or dropping a course, withdrawing from college, late registrations, change of schedule, administrative withdrawal, student behavior guidelines, safety and security, and other academic policies. Understanding these policies is the responsibility of every student.

- Policies for Academic Progress, Academically Dismissed Students, FERPA Records, Fresh Start <http://www.sinclair.edu/services/registration/Policies/>
- Add/Drop a Course <http://www.sinclair.edu/services/registration/Registration/AddorDropClasses/>
- Honor Code and Plagiarism Policies: <http://www.sinclair.edu/about/learning/gened/hc/>
- Student Handbook <http://www.sinclair.edu/student/leader/handbook/>
- Policies, Procedures & Services <http://www.sinclair.edu/catalog/pub/2012/policiesandprocedures.pdf>
- Disabilities Policy & Procedure Guidelines for Students <http://www.sinclair.edu/support/disability/policies/>

Attendance

Students are expected to be present at all class sessions. It is the students' responsibility to read and understand the class attendance policy or the SinclairOnline course participation policy that will be defined in the syllabus for each course. It is the faculty member's responsibility to define attendance or participation requirements and to monitor and record the students' fulfillment of these requirements. It is a program's prerogative to have specific policies across multiple sections due to the unique requirements of that program. Attendance for traditional classes or participation for SinclairOnline classes may affect final grades, financial aid eligibility, and V.A. benefits.

Sinclair Semester Dates

Click the link below to view important semester dates such as registration deadlines, payment deadlines, start and end dates for the semester as well as the last day to withdraw with a refund and the last day that withdrawal is allowed. <http://www.sinclair.edu/stservices/rsr/dates/index.cfm>