

SOUTHEAST COMMUNITY COLLEGE
ARTS AND SCIENCES DIVISION
Sciences
Revision Date: 07-01-19

I. CATALOG DESCRIPTION

Course Number: BIOT2450
Course Title: Current Topics in Biotechnology
Prerequisite(s): BIOT1400, Introduction to Biotechnology I w/Lab
Corequisite(s): None
Catalog Description: An in-depth exploration of emerging technologies, innovations, and new products that are noteworthy to the biotechnology industry. The course will focus on what new scientific discoveries may have an impact on the biotechnology industry. Alternative instruction styles such as a seminar-type atmosphere and student research presentations about current biotechnology topics will be the main method of course instruction. The goal is to give students an opportunity to translate scientific discovery into biotechnology products.

Credit Hours: 3.0
Class Hours: 45
Practicum Hours: 0
Total Contact Hours: 45

II. COURSE OBJECTIVES: *Course will:*

- A. Give the student an opportunity to investigate the most current trends, procedures, and tools in the field of biotechnology.
- B. Allow the student to lead a discussion about current biotechnology industry innovations.
- C. Provide the student with an opportunity to give a presentation to the class and instructor based on his/her research into modern biotechnology.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES

- A. Student Learning Outcomes: *Student will be able to:*
 - 1. Lead academic discussions about subjects relevant to biotechnology.
 - 2. Gain a knowledge of some of the most current trends in biotechnology.
 - 3. Understand the vast diversity of specialties that biotechnology encompasses.
 - 4. Engage other students in discussion about topics of interest to them.
 - 5. Research a scientific topic, gain an understanding of the topic, and assemble notes and educational materials for other students in the class in order to lead a discussion.
- B. General Education Learning Outcomes
 - 1. GELO #1: Oral Communication
 - Outcome: Develop a central idea for presentations.
 - Outcome: Organize information clearly and logically, in an outline format, citing sources when appropriate.
 - Outcome: Assess an audience and situation so as to adapt verbal and nonverbal messages to best meet the needs and expectations of the audience.
 - 2. GELO #2: Written Communication
 - Outcome: Comprehend, analyze, and evaluate a given text.

- Outcome: Develop a focused thesis statement and write with a clear purpose, using relevant examples, claims, and evidence.
- Outcome: Identify and evaluate evidence from a variety of printed, visual, and electronic sources.
- Outcome: Use content and style appropriate to a given audience.
- Outcome: Read and write in mechanically-sound, college-level English.
3. GELO #3: Critical Thinking & Problem Solving
- Outcome: Collect, identify, interpret and analyze data.
- Outcome: Synthesize information to arrive at reasoned solutions to problems.
- Outcome: Evaluate ideas presented in writing, media, speech, or artistic presentations.
- Outcome: Acquire and integrate knowledge and construct relationships across disciplines.

IV. CONTENT/TOPICAL OUTLINE (*course outline may provide more detailed information*)

- A. Biomedical techniques
- B. Pharmaceutical techniques
- C. Agricultural techniques
- D. Microbiological techniques
- E. Bioprocessing
- F. Biocomputing
- G. Bioethical aspects of biotechnology
 - 1. (Sub-topic)

V. INSTRUCTIONAL MATERIALS

- A. Required Text(s):
 - 1. There are no required textbooks for this course.
- B. Other Resources:
 - 1. Copies of scientific journal articles may be handed out for review and discussion.

VI. METHODS OF PRESENTATION/INSTRUCTION

- A. Methods of presentation typically include a combination of the following:
 - 1. Instructor may present a topic for discussion by the entire class.
 - 2. Each student will choose a topic and present a short informative lecture followed by a discussion with the class.
 - 3. Guest presenters from industry or academia may present discussion topics or research results pertinent to contemporary methods in biotechnology.

VII. METHODS OF EVALUATION

- A. Methods of evaluation typically include a combination of the following:
 - 1. Students must participate in class discussions.
 - 2. Students must lead at least one discussion and give one presentation.
 - 3. Material must be relevant to modern trends in biotechnology.
 - 4. Assessments will be based on preparedness, relevancy, presentation, and participation.
 - 5. Each student will submit a written summary of the biotechnology topic/journal article chosen as well as an explanation of why it was chosen.
- B. SCC GRADING SCALE

A+	95-100	C+	75-79	F	59 or less
A	90-94	C	70-74		
B+	85-89	D+	65-69		

B 80-84 D 60-64

VIII. SPECIFIC COURSE REQUIREMENTS

A. None.