

**SOUTHEAST COMMUNITY COLLEGE
ARTS AND SCIENCES DIVISION**

Sciences

Revision Date: 07-01-22

I. CATALOG DESCRIPTION

Course Number: BIOT2500
Course Title: Applied Biosciences: Practicum
Prerequisite(s): Completion with a C or higher of BIOT2400 or BIOT 1400 AND either BIOS1400 and CHEM1090.
Corequisite(s): None
Catalog Description: This is an experience external to the college for an advanced student in a specialized field involving a written agreement between the educational institution and a business or industry partner. The student will be mentored and supervised by a workplace employee, with oversight from the college.
Credit Hours: 3.0
Class Hours: 0
Practicum Hours: 135
Total Contact Hours: 135

II. COURSE OBJECTIVES: *Course will:*

- A. Help the student transition from academia to a career as a biotechnician.
- B. Allow the student to apply academic and technical competencies acquired in classroom and lab settings to real world problems.
- C. Develop employability skills that will assist the student in becoming a successful biotechnician.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES

- A. Student Learning Outcomes: *Student will be able to:*
 - 1. Demonstrate skills of an employable technician
 - 2. Demonstrate the academic and technical competencies required by the practicum host business
 - 3. Gain a knowledge of the various local biotechnology business
 - 4. Understand how a biotechnology company operates
 - 5. Gain practical experience working with a biotechnology company
 - 6. Work at a local biotechnology business for a full quarter and a minimum of 180.0 hours
- B. General Education Learning Outcomes
 - 1. 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: Evaluate the validity of arguments, alternatives, data, outcomes, and/or impacts of actions.
 - Outcome: Acquire and integrate knowledge and construct relationships across disciplines.
 - 2. GELO #5: Analytical, Quantitative, and Scientific Reasoning
 - Outcome: Apply mathematical and scientific methods to solve problems from an array of contexts and everyday situations.
 - Outcome: Understand and create logical arguments supported by quantitative and scientific evidence and communicate those arguments in a variety of formats.

Outcome: Effectively develop strategies, algorithms, or experiments (or performing experiments) to better describe the systems or to solve the problems.

Outcome: Manipulate formulas, data sets, graphs, tables, etc. in a way to produce a meaningful outcome.

3. GELO #6: Career and Life Skills

Outcome: Employ effective interpersonal and intrapersonal communication skills.

Outcome: Acquire entrepreneurial skills and attitudes.

Outcome: Demonstrate financial literacy.

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

- A. Perform assays and experiments
- B. Troubleshoot experiments and equipment
- C. Perform data analysis
- D. Communicate assay and experimental results
- E. Participate in employer-based safety training
- F. Offer employer-based feedback and suggestions for improvements
- G. Work in a team-based environment
- H. Handle and dispose of hazardous materials
- I. Comply with employer-based security and nondisclosure standards

V. INSTRUCTIONAL MATERIALS

- A. Required Text(s):
 - 1. There are no required textbooks for this course.
- B. Other Resources:
 - 1. None

VI. METHODS OF PRESENTATION/INSTRUCTION

- A. Methods of presentation typically include a combination of the following:
 - 1. Students will be assigned tasks to complete by the host business or industry partner offering the practicum experience.
 - 2. The students will be performing tasks under real world production circumstances as if they were employees of the host organization.
 - 3. Students will meet regularly with their academic instructor(s) to discuss course progress.

VII. METHODS OF EVALUATION

- A. Methods of evaluation typically include a combination of the following:
 - 1. Practicum host organizations will provide students and SCC program instructors with scheduled performance assessments evaluating practicum successes and failures.
 - 2. Students must perform the minimum number of work practicum hours to obtain full credit for the course; hours will be logged by the practicum host organization.
 - 3. Final student grades will either be “pass” or “fail” based on the assessment provided by the host organization.

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