BIOL C292A: WORK EXPERIENCE EDUCATION

Item	Value
Curriculum Committee Approval Date	10/25/2024
Top Code	043000 - Biotechnology and Biomedical Technology
Units	2 Total Units
Hours	108 Total Hours (Lab Hours 108)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Open Entry/Open Exit	No
Grading Policy	Standard Letter (S), • Pass/No Pass (B)

Course Description

Formerly: BIOL C292. This course enhances each work experience education (WEE) participant's job skills by bridging the gap between educational theory and on-the-job practices through individualized performance objectives related to the student's career or occupational goal. Note: 54 hours of paid or non-paid work in biological sciences and related fields, for each one-semester credit. This course aligns with updates to California Education Code (Title V) related to work experience education, revised August 2023. Transfer Credit: CSU.

Course Level Student Learning Outcome(s)

1. Evaluate education and career pathways in STEM fields.
2. Demonstrate laboratory and research skills in STEM fields and careers.
3. Develop new biology-related activities, such as new lab exercises or acquisition of novel data that may be used for scholarly publications.

Course Objectives

- 1. Collect and analyze data from a research project in a STEM-related field.
- 2. Demonstrate application of the scientific method in a completed research project via powerpoint or poster presentation, or product demonstration.

Lecture Content

Student Orientation On-site Visit with Faculty and Employer/Supervisor Determination of Individualized Project Student Follow-up and Retention End of Semester Evaluation

Method(s) of Instruction

- Work Experience (20)

Instructional Techniques

Students engage in research projects designed to support objectives of intership partners (non-profit and/or cooperate); students use advanced tools and technology in engineering and producing biotech products including 3D printing, fuel cell construction, and genetic analysis.

Reading Assignments

Assigned literature; literature review; technical manuals

Writing Assignments

final report; powerpoint or poster presentation

Out-of-class Assignments

reading; literature review

Demonstration of Critical Thinking

Finished product: data collection and analysis

Required Writing, Problem Solving, Skills Demonstration

Data collection and analysis: PowerPoint or poster presentation including demonstration of product and/or graphs of results; final report

Eligible Disciplines

Biological sciences: Master's degree in any biological science OR bachelor's degree in any biological science AND master's degree in biochemistry, biophysics, or marine science OR the equivalent. Master's degree required. Biotechnology: Bachelor's degree in biological sciences, chemistry, biochemistry, or engineering and two years of full-time related professional experience.

Other Resources

1. Depends on specific biology-related work setting. If in a laboratory environment, a text such as At the Bench: A Laboratory Navigator by Kathy Barker would be appropriate. 2. Coastline Library 3. Any manuals, reference materials, job-site documents related to the successful completion of student s job-oriented training.