BIOL C291A: WORK EXPERIENCE EDUCATION

Item	Value
Curriculum Committee Approval Date	10/25/2024
Top Code	043000 - Biotechnology and Biomedical Technology
Units	1 Total Units
Hours	54 Total Hours (Lab Hours 54)
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 C291. 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

APPROVED RESEARCH TOPIC IN COOPERATION WITH CORPORATE OR NON-PROFIT ORGANIZATION Background information research and/or protocol review Research question development Hypothesis testing Data collection Data analysis Discussion of results PRESENTATION OF RESULTS PowerPoint or poster presentation

Method(s) of Instruction

- Work Experience (20)

Instructional Techniques

Research design and experimentation; presentation skill development; discussions with faculty mentor and professional in related field

Reading Assignments

Literature review of topic; manuals, protocols

Writing Assignments

Final presentation of product or research results

Out-of-class Assignments

Independent research through literature and protocol review; data collection in the field

Demonstration of Critical Thinking

Finished product: data collection and analysisRequired Writing, Problem Solving, Skills Demonstration

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.

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. Any manuals, reference materials, job-site documents related to the successful completion of student s job-oriented training. 3. Coastline Library