

STEM 260H: INTRODUCTION TO INDEPENDENT RESEARCH IN STEM

Citrus College Course Outline of Record

Heading	Value
Effective Term:	Fall 2023
Credits:	1
Total Contact Hours:	54
Lab Hours:	54
Hours Arranged:	0
Prerequisite:	Instructor permission; student must be eligible for the Citrus College Honors Program or obtain a recommendation from an Honors instructor.
Strongly Recommended:	ENGL 101.
Transferable to CSU:	Yes
Transferable to UC:	No
Grading Method:	Standard Letter, Pass/No Pass

Catalog Course Description

An introductory course in research for students participating in team-based STEM research or projects. Topics include reading discipline-specific publications, learning to be part of an effective research/project team, and presenting research/project outcomes with discipline-specific terminology. 54 lab hours.

Course Objectives

- Learn to record and present data in a variety of formats (tables, graphs, lab notebook, etc.)
- Participate in research activities, and utilize discipline-specific methodologies and instrumentation.
- Prepare a written report or poster on the research using discipline-specific terminology.
- Deliver an oral presentation on the research methods and findings.
- Explain the importance of ethical conduct in research.

Lab Content

The specific content and methods of study may vary depending on the particular project and STEM discipline, but the following are common content areas:

1. Discipline-specific concepts and their application to the project
2. Techniques and strategies for research
 - a. Identifying credible information sources
 - b. Analyzing primary literature
 - c. Maintaining accurate records of all research
 - d. Discussion of research in written and oral formats
3. Recording and presenting data
 - a. Tables and graphs
 - b. Discussion of various methods for information visualization

4. Ethics in conducting research

Suggested Reading Other Than Required Textbook

Students will be required to read discipline-specific primary and review publications.

Examples of Required Writing Assignments

Students will be required to generate a written report or poster using discipline-specific terminology.

Examples of Outside Assignments

Students will be required to analyze data using discipline-specific methodologies. Students will be expected to evaluate research and decide on future directions for the work under faculty supervision.

Instruction Type(s)

Lab