

# LINC 91B: EVALUATING TECHNOLOGY-BASED LEARNING OUTCOMES

## Foothill College Course Outline of Record

Heading	Value
<b>Effective Term:</b>	Summer 2021
<b>Units:</b>	3
<b>Hours:</b>	3 lecture per week (36 total per quarter)
<b>Advisory:</b>	It is advised, but not required that students have the background knowledge and skill taught in LINC 91A; basic skills using standard computer systems and internet-based technologies.
<b>Degree &amp; Credit Status:</b>	Degree-Applicable Credit Course
<b>Foothill GE:</b>	Non-GE
<b>Transferable:</b>	CSU
<b>Grade Type:</b>	Letter Grade (Request for Pass/No Pass)
<b>Repeatability:</b>	Not Repeatable

## Student Learning Outcomes

- Conduct a data analysis
- Differentiate formative and summative assessments
- Collect data

## Description

This instructional design and technology course builds on the coursework of LINC 91A and focuses on evaluating learning outcomes in educational and business training contexts. Students will design and develop technology-based authentic and performance-based assessments, rubrics, needs assessment plans, learner analysis instruments, adaptive testing, and surveys. Coursework includes managing data collection, analyzing results, and reporting findings. This course is part of the Instructional Design and Technology program sequence.

## Course Objectives

The student will be able to:

- Apply formative and summative assessment processes and instruments to evaluate the outcomes of instructional objectives
- Use technology to create different evaluation and assessment tools
- Manage the evaluation process
- Explore techniques for creating conditional and adaptive tests
- Design an effective survey
- Collect data
- Conduct a data analysis
- Report the results

## Course Content

- Learning outcomes
  - Goals and objectives analysis

- Task analysis
- Using Bloom's Taxonomy to write learning outcomes
- Evaluate the outcomes of instructional objectives
  - Formative
  - Summative
  - Evaluation instruments
  - Authentic assessments
  - Performance-based assessments
  - Rubrics
- Use technology to create different evaluation and assessment tools
  - Technology enabled observation tools
  - Paper-based resources
- Managing evaluation processes
  - Project tracking tools and processes
  - Finding evaluation instruments vs. making one
- Conditional and adaptive tests
  - Test content
  - Adaptive software
  - Use in personalization of learning
- Effective surveys
  - Objectives
  - High quality questions
  - Response choices
  - Pilot
- Data collection
  - Questionnaires
  - Focus groups
  - Interviews
- Data analysis
  - Review data
  - Organize data
  - Code data
  - Conduct statistical analyses
  - Interpret data
- Data reporting
  - Audience
  - Format for presenting findings

## Lab Content

Not applicable.

## Special Facilities and/or Equipment

- When offered on/off campus: Lecture room equipped with computer projector system, whiteboard, and internet connectivity. Computer laboratories with internet connectivity and computers or internet enabled devices running standard operating systems (e.g., iOS, MacOS, Windows, Android, Linux)
- When taught online via Foothill Global Access students must have current email accounts and/or ongoing access to computers with email and web browsing capability

## Method(s) of Evaluation

Methods of Evaluation may include but are not limited to the following:

- Writing learning outcomes and developing an evaluation method to measure the outcomes
- Presenting the evaluation project and plan to peers, capturing feedback, and using it to revise the product or project

Making constructive contributions to class discussions and peer review feedback

## **Method(s) of Instruction**

Methods of Instruction may include but are not limited to the following:

Writing notes, listening, and participating in lecture presentation  
Observing an instructor-led demonstration and/or actively practicing the demonstrated skills  
Presenting and communicating their ideas in discussion and/or participating in peer reviews

## **Representative Text(s) and Other Materials**

Privitera, Gregory J.. Research Methods for Education. 2018.

Cresswell, John W.. Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research, 6th ed. 2018.

## **Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments**

- A. Writing assignments include a major course project and multiple developmental projects, online discussion response, and critical analysis of peer's educational projects.
- B. Outside assignments include conducting project development, writing the instructional plan, reading, and developing the project through an iterative process.
- C. When taught online these methods may take the form of video, audio, animation and webpage presentations. Writing assignments are completed online.

## **Discipline(s)**

Instructional Design/Technology