

# LINC 91A: INTRODUCTION TO ASSESSING INSTRUCTIONAL TECHNOLOGY

## 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>	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

- Describe the basic principles of educational research
- Use qualitative evaluation strategies
- Apply research strategies to measure outcomes for learners, instruction, and instructional programs

## Description

This introductory course in assessing instructional technologies is for students, educators, and trainers interested in instructional design and technology. Students develop critical thinking skills and use evaluation processes, resources, and instruments to select and evaluate instructional materials, technologies, resources, and programs that meet specific learning outcomes for educational and training contexts. Coursework includes using technology to conduct survey research and basic data analysis. This course is part of the Instructional Design and Technology program sequence.

## Course Objectives

The student will be able to:

- Describe the basics of evaluation processes and research for instructional technology
- Apply critical thinking skills
- Use quantitative evaluation strategies
- Use qualitative evaluation strategies
- Use action research
- Describe application of research methodologies to instructional design and technology
- Apply research strategies to measure outcomes for learners, instruction, and instructional programs
- Assess and select instructional technology tools and resources for research
- Create an assessment instrument
- Analyze data for instructional design purposes
- Explain the ethical standards of educational research

## Course Content

- The basics of instructional technology evaluation
  - Research problem
  - Variables and hypotheses
  - Sampling
  - Instrumentation
  - Validity and reliability
  - Evaluation, assessment, and testing
- Critical thinking
  - Observation
  - Compare and contrast items and topics
  - Discuss and analyze items and topics
  - Encourage collaboration in analysis process
  - Facilitate open-ended discussion
  - Practice Socratic method
  - Use argument analysis
- Quantitative evaluation strategies
  - Experimental research
  - Survey research
  - How to use quantitative research in instructional technology
- Qualitative evaluation strategies
  - Observation, interviews, focus groups
  - Content analysis
  - How to use qualitative research in instructional technology
- Action research
  - Practical research methods and strategies
  - How to use action research in instructional technology
- Choosing a research methodology to evaluate instructional technology
  - Formative and summative assessment
  - Kirkpatrick's Four Levels of Evaluation
- Apply research strategies to measure outcomes for learners, instruction, and instructional programs
  - Learner analysis techniques
  - Assessing instructional outcomes for an activity, lesson, or unit of learning
  - Evaluating outcomes of instructional programs
- Assess and select instructional technology tools and resources for evaluation
  - Paper survey instruments
  - Online resources for data collection
  - Computer-based methods
    - Create an assessment instrument
      - Compare instruments and contexts for use
      - Compare delivery media
      - Collecting data
  - Analyze data for instructional design purposes
    - Demographic data
    - Preferences data
    - Evaluative data
- Explain the ethical standards of educational research
  - Value of research
  - Scientific validity
  - Fair subject selection
  - Informed consent
  - Confidentiality

## Lab Content

Not applicable.

## Special Facilities and/or Equipment

A. 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)

B. When taught online students must have current email accounts and/or ongoing access to computers with email and web browsing capability

## Method(s) of Evaluation

Designing and developing an evaluation plan and instrument for instructional technologies

Presenting the evaluation instrument 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

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

Cresswell, John W.. [Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research, 6th ed.](#). 2018.

Mertler, Craig. [Introduction to Educational Research, 2nd 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