



THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Learning Theory, Pedagogy, and Assessment in Engineering Education

ENGREDU 6200

Credit Hours:

3.00 - 3.00

Course Levels:

Graduate

Course Components:

Seminar

Course Description:

This course is designed to provide foundational understandings of educational learning theory, pedagogy and assessment methods within engineering education. The processes learned will inform research and instructional practice decisions, approaches and analysis.

Prerequisites and Co-requisites:

Prereq: Enrollment in EngrEdu Grad program, or permission of instructor.

Course Goals / Objectives:

- Engage critical issues in the field with attention to inclusion of multiple perspectives
 - Critique the quality of engineering education research studies of various types presented in different forms
 - Analyze how a broad array of research projects integrate into the field.
 - Design and implement evaluations/assessments of a variety of educational programming
 - Demonstrate a mindset that values curiosity and questioning, finds and leverages connections across a wide range of ideas, and creates positive societal value
 - Communicate effectively with a range of audiences using multiple modes and media
 - Demonstrate empathy and cultural competence across professional interactions
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Course Topics:

- Pedagogy, Epistemology, and Metacognition
 - Learning theories
 - Assessment and Evaluation
 - Accreditation and ABET
 - Learning Environments in Engineering Education
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Designation:

Required