

Mechanical Engineering, PhD (MEMS)

Mentored Experience Implementation Plan

As part of their degree requirements, PhD students must complete a program-defined Mentored Experience Requirement (MER) as per these guidelines. The Mentored Experience Implementation Plan (MEIP) is the written articulation of a program-defined degree requirement for PhD students to engage in mentored teaching activities and/or mentored professional activities, collectively referred to as *MERs*.

Mentored Experience Requirements (MERs)

Philosophy of Teaching

Over the course of their PhD program, doctoral students in MEMS are expected to make novel advances in an area or topic in mechanical engineering through innovative and impactful research. Simultaneously, our goal is to prepare MEMS PhD graduates to thrive in various careers in academia, industry, government, or other research-oriented sectors. To maximize their impact in such careers, our students must also learn to communicate both fundamental concepts and novel research findings to a variety of audiences: co-workers, clients and trainees of divergent backgrounds. These careers also require the ability to assess the accuracy and value of others' technical work. Our MTE program seeks to instill these skills through the MTE program requirements described below.

Preparatory Engagement

Preparatory Engagement activities are those that represent an introduction to the foundational skills associated with teaching or communication. Pedagogical preparation engagement activities are normally completed before students are permitted to engage in assisting or teaching in a classroom.

Two McKelvey instructional trainings are required:

1. McKelvey Teaching Orientation
2. McKelvey Teaching Workshop

Mentored Teaching Experiences (MTEs)

Assistant in Instruction (AI)

An Assistant in Instruction (AI) is a PhD student who is directly engaged in the organization, instruction, and/or support of a semester-long course *primarily taught by a faculty member*. An AI receives mentorship from a faculty member related to best practices in classroom engagement, instruction in the field, interpersonal engagement, and other relevant skills. Students and mentors complete a mentorship plan prior to the start of each AI experience. To complete each AI assignment and to ensure that it applies toward their degree requirements, students must register for the appropriate course number for each semester of engagement. Refer to the "Required Pathways for Completion" section below for course numbers and details.

MEMS requires two AI assignments at 10 MER units each. Students work with their graduate supervisor on the timing and content of those assignments.

Required Pathways for Completion

- Preparatory Engagement

EGS 8010	Take two times
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