

# Computer Engineering, PhD (CSE)

## 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

Teaching is a fundamental responsibility for PhD graduates pursuing faculty positions in Computer Science & Engineering (CSE). CSE faculty at first-class research institutions are expected to teach at least one course per semester. In more teaching-focused schools, the teaching load may be three or four courses per semester. Even for graduates entering an industrial rather than a university career, there may be opportunities to teach workshops or courses internal to their organization. Beyond this fundamental requirement, graduates who remain active in CSE research will frequently present their research in highly competitive academic conferences, at invited colloquia (including job talks), and in other public forums. The mission of the CSE department in graduate teaching training is twofold. First, we will provide all doctoral students with sufficient teaching training and practicum to enable them to compete for and to succeed in CSE faculty positions at top research institutions. This training is also sufficient for students who choose to pursue careers in industry. Students interested in pursuing positions primarily as teaching faculty will have the opportunity for enhanced teaching training and practicum to support their ambitions. Second, we will train all doctoral students in the standards of scholarly oral communication needed to succeed in CSE research. This training will take place through individual mentoring by faculty and peers, through observation and critique of other speakers, and through students' presentations in internal and external scholarly forums.

### 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.

Three Preparatory Engagement activities are required:

1. McKelvey Teaching Orientation (Canvas course)
2. McKelvey Teaching Workshop (Canvas course)
3. Enrollment in CSE 7900 Research Seminar on Computer Pedagogy (This can be done in advance of the Mentored Teaching Experience [MTE] semester or concurrently with the MTE.)

## 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.

Students AI one course at 10 MER units by registering for EGS 8010 for the semester of assignment. Students could also AI two courses, with one course in each semester at 5 MER units each, by registering for EGS 8005 in the given semester. Students work with their graduate supervisor on the timing and content of those assignments. Students will need to register for CSE 8002, for graded credit during their MTE semester. Students will also need to complete their Doctoral Student Research Seminar requirement as well, although this portion can be completed before, during, or after the semester during which they complete their AI duties.

### Required Pathways for Completion

Students work with their faculty mentor and their Director of Graduate Studies to plan how and when they will complete their MERs. Students register during the normal registration period for courses in accordance with one of these approved pathways.

#### Pathway #1

Preparatory Engagement	
EGS 8005	Enroll two times (one enrollment during each semester of engagement)
CSE 8002	Enroll one time during the semester of engagement

## Pathway #2

Preparatory Engagement	
EGS 8010	Enroll one time during the semester of engagement
CSE 8002	Enroll one time during the semester of engagement

## Optional Activity: Teaching Intensive Pathway (TIP)

The TIP is an optional pathway for those students whose career interests lie in academia or another field that would benefit from extended teaching experiences. This immersive experience allows students to further explore the breadth and depth of teaching best practices and pedagogy related to their respective field. Students who are interested in participating in this elective experience must formally request to participate, which is subject to program approval. Due to this experience being an elective, unpaid experience, students who participate in the TIP will not receive compensation.

The TIP is outlined in our Doctoral Program Guide as follows: "Doctoral students interested in academic careers have the option to undertake additional training to better prepare them for the challenges of teaching. Specifically, in cooperation with the department's Associate Chair and with the approval of their advisor, students can opt to teach a one semester course in the CSE department. This option can be exercised only once during a student's PhD program and requires that the student enroll in EGS 8020 in the semester(s) during which she/he is teaching such a course. The student would additionally need to register for CSE 801 in the semester of engagement. Teaching a course does not translate into additional compensation and will result in a reduction in the amount of time the student is able to devote to research by 40% to 60% depending on the course. A student must, therefore, ensure that the approval of her/his advisor is officially conveyed to the Director of Graduate Studies before enrolling in EGS 8020. Selection of a suitable course will then be performed in collaboration with the Associate Chair, who will also coordinate supervision of the student's teaching during the semester."

This track will require the student to have completed their Preparatory Engagement and to have completed one semester as an AI before they then request to tack on this additional training. This teaching intensive track will count for 20 units of Mentored Independent Teaching. (Students register under EGS 8020 and will be listed in the course listing. They will still need to submit a commitment form to the department as well.)

## Optional TIP Pathway A

EGS 8010	Enroll one time during the semester of engagement
CSE 8002	Enroll one time during the semester of engagement

EGS 8020	Enroll one time during the semester of engagement
CSE 8001	Enroll one time during the semester of engagement

## Optional TIP Pathway B

EGS 8005	Enroll two times (one enrollment during each semester of engagement)
CSE 8002	Enroll one time during the semester of engagement
EGS 8020	Enroll one time during the semester of engagement
CSE 8001	Enroll one time during the semester of engagement