Engineering Research Entry Apprenticeships (EREA)

The Engineering Research Entry Apprenticeship supports undergraduate students to undertake a mentored research experience <mark>for the first time</mark>. Students are expected to have a project that is distinctly theirs while also possibly contributing to the faculty mentor's scholarly activity. Students are not to be technicians to only run repetitive tasks; students should be generating new results and have the possibility of taking ownership of a piece of the project.

General Guidelines

- Proposals will necessarily be collaborative between the faculty mentor and the student. The proposal must explain clearly what the student's expected contributions will be and how their work is differentiated from others, i.e., what meaningful work is this student contributing to the project.
- Proposals are due the semester prior to the work, 2nd Monday in March for Summer, 2nd Monday in April for Fall, and 2nd Monday in November for Spring.
- Maximum budget is $3,000 per semester per student. Requests or awards may be made for a smaller amount.
    - Student and mentor should decide on the budget together.
    - At least $2,600 of the budget must be the student's stipend.
    - Up to $400 may be requested via the budget for expendable research materials or supplies. Computing technologies, permanent lab equipment, etc. are not eligible for funding.
        - These funds will be transferred to the faculty member's discretionary account.
    - **Note that the stipend amount is a minimum**, the entire award can be budgeted to stipend.
- Stipends will be paid sometime between week 6 and 8 of a 16-week term and between weeks 3 & 4 of an 8-week term. This is to ensure student is enrolled and progressing on the project. Stipends will be deposited as a scholarship into the student's bursar account, so will be applied to any outstanding balance with excess refunded to the student.
- Students are expected to commit at least 10 hours per week to the research in Fall and Spring and 20 hours per week in Summer. Summer appointments are for eight weeks generally aligning with summer academic terms.
- Students should enroll in either XXXX 3440 or a departmental research course. 3440 is letter-graded and will count as an elective in most programs if taken for 3-credit hours; however, it may be taken for 0-credit hours to avoid tuition and fees.
    - Fellowships are not for support of Honors Research so enrollment in 3980 or 3960 is not allowed.
- Because these are **Research Entry** Apprenticeships, they are not renewable. Recipients may apply for Engineering Research Fellowships in a following term, but must not be proposing the same work. The new proposal should extend or build on the Entry project, or may be different.
- A faculty member may have no more than two students supported by GCoE UR fellowships in a term. Faculty are encouraged to support undergraduate research assistants with their sponsored project funds.

- Projects from all GCoE disciplines are eligible as long as they meet the following definition of undergraduate research.
    - *Mentored intellectual engagement*
    - Use of *established scholarly processes*
    - Making a *meaningful contribution* to a project, question, or problem
    - The *outcomes are publicly disseminated or performed* with *review, critique or judgment*
    - And both the process and product are *based upon disciplinary standards*
    - Projects might include (but are not limited to):
        - Hypothesis driven experimental research
        - Engineering design projects associated with a research group
        - Research question focused analyses of original or existing data
        - Comparative analysis of literature (a systematic literature review)

Proposal Contents

- ✓ Student information
- ✓ General description of student's specific portion of the larger faculty research program (Maximum 300 words)
- ✓ How the student's piece contributes to the bigger goals; how is this work different from other ongoing work; (Maximum 150 words)
- ✓ Statement of motivation for the project – rationale and significance of the project and how it fits into the student's personal and professional interests or goals (Maximum 250 words)
- ✓ A full, completed Undergraduate Research Mentoring Agreement with expected benchmarks and outcomes
- ✓ Itemized budget and a short budget justification explaining why these items are necessary
- ✓ Letter of support from faculty member acknowledging commitment to mentor the student in the work and that the budget is reasonable for the work and funds received will be used to support undergraduate research. <u>This letter should be attached to the Undergraduate Research Mentoring Agreement.</u>

Student obligations and opportunities

- Enroll in XXXX 3440 (can be for 0 credit) or departmental undergraduate research course if one exists.
- Devote approximately 10 or 20 hours per week to the project depending on the term
- Present work at an upcoming GCoE Undergraduate Research Showcase
    - Showcase announcements will be sent to Fellowship recipients.
- Students may also present work in other venues.
- Engineering Research Entry Apprenticeships are not intended to support students doing honors research, nor may they be stacked with other research support opportunities (such as FYRE or HRAP).