College of Engineering NSF Research Experiences for Undergraduates (REU) Experiential Program

Program Overview:
“The Research Experiences for Undergraduates (REU) program supports active research participation by undergraduate students in any of the areas of research funded by the National Science Foundation. REU projects involve students in meaningful ways in ongoing research programs or in research projects specifically designed for the REU program.” (https://www.nsf.gov/crssprgm/reu/). REU programs provide students in the College of Engineering with practical and applied experiences in their area of study and introduce them to the world or professional and academic research. Along with our industry and academic partners, we are committed to providing our students with opportunities to become successful and enhance their lives both before and after graduation. This non-credit Experiential Learning activity will provide students the opportunity to apply and enhance their knowledge in one of the majors in the College of Engineering. This program enables students to customize their engineering education to meet their academic and professional goals. To be eligible for this research experience students must be in good academic standing. Students will explore available NSF REU opportunities and secure position in an REU program on their own and then apply to this program. This must be done prior to the semester in which the student is participating in the experience and approved by the College of Engineering. Successful completion of this experience will meet the EL requirement for the College of Engineering.

Eligibility:
In order to be eligible for the College of Engineering NSF REU Experiential Program, students must:

- Be in good academic standing (current and cumulative GPA above 2.0)
- Have independently secured an NSF REU experience that:
  - Is related to their engineering major and/or career goals
  - Involves a minimum of 45 contact/work hours
  - Lasts at least 8 weeks (shorter, intensive activities may be considered on a case-by-case basis)
  - Involves weekly engagement with a research supervisor (faculty member or graduate student at the host institution) for direction, feedback, and mentorship.

Application Process:
In order to be considered for the program, students must apply by submitting the following items to the College of Engineering Director of Experiential Learning & Outreach prior to the semester of the research experience:

- A 2-page paper describing:
  - How the REU aligns with their major and career aspirations
  - How they will use information from courses taken in the research setting
  - The desired goals and anticipated outcomes of the experience, including new knowledge and skills that will be offered by the REU program
- A program description or descriptive summary of the REU program at the host institution including tasks, responsibilities, and experiences associated with the REU experience
- The point of contact with the host institution i.e. who will serve as the research supervisor during the REU
- A current résumé or CV

Applications will be reviewed by the Director of Experiential Learning and the appropriate School Chair, and if questions or need for clarification arises, students will be interviewed by prior to judgement on the application submission.

Interested students should contact the Office of Student Success (engr-success@uga.edu) with questions and/or to submit application materials.
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To be approved to participate in this EL activity the REU must move beyond just a short term research opportunity. It will immerse the student in a project or laboratory that aligns with the student’s field of study. They will work on projects and tasks with professionals in that field which enables the student to build skills and professional competencies in their area of study. They will be challenged regularly to apply academic knowledge to research project objectives and in turn bring what they have learned back to their studies in the classroom.

**Program Requirements & Deliverables:**

Once a student has been admitted to the NSF REU Experiential Program, they will be required to complete and submit the following assignments before the end of the semester of their REU experience in order to successfully complete the Experiential Learning activity:

- **Reflective Journal:** Students will be required to keep a reflective journal (minimum of twice-weekly entries) throughout the course of the internship. Example journal contents include:
  - Summary of their role within the organization and documentation of independent work activities, decisions, and projects
  - Documentation of progress towards established research team goals
  - Reflection on how skills gained, experiences fit with student’s academic and professional goals.
  - Description of and results from weekly research supervisor meetings, including the final exit interview

- **Research Report:** Students will also be required to prepare a five-page maximum (double-spaced, 1-inch margin 12-pt font) research report summarizing the experience and summarizing the self-assessment of professional growth acquired during the REU.

All assignments must be submitted via email to both the Director of Experiential Learning & Outreach and the appropriate School Chair for their major:

- School of Chemical, Materials, and Biomedical Engineering: Dr. James Warnock (james.warnock@uga.edu)
- School of Electrical and Computer Engineering: Dr. Fred Beyette (fred.beyette@uga.edu)
- School of Environmental, Civil, Agricultural, and Mechanical Engineering: Dr. Bjorn Birgisson (bjorn.birgisson@uga.edu)