

ENG 572 - Practicum

ENG 572 (Electrical and Computer Engineering *Practicum* or *Internship*)

Graduate Program Director: Prof. Michael Oelze

Faculty Advisor/Instructor: Prof. Wei He

Academic Advisor: Stacy Walker

ENG 572 (*Engineering Practicum* or *Internship*) is selected to carry out an internship at a location away from campus. It is characterized by the supervision of a non-faculty site-supervisor (Mentor), and a faculty advisor/instructor.

Each student participant must have a mentor at the site of the practicum. Once a practicum, corresponding site, and site-supervisor have been identified, an ECE faculty advisor for the practicum must be identified. The course instructor may be the default faculty advisor. Next, a plan needs to be developed for the scope of the practicum and agreed upon by the site-supervisor, faculty advisor, and the student. In addition to normal reporting of the work carried out at the internship, the ECE Practicum should include how experience in an internship relates to pertinent course work.

ENG 572 Practicum involves component or system-level conceptual design studies, design and build activities, feasibility studies, experimental work, detailed numerical simulations, or detailed theoretical analyses of physical phenomena, related to any aspect of the broad field of electrical and/or computer engineering. We expect students to develop good project management and communication skills. This involves an initial plan/proposal, intermediate progress reports, and occasional oral presentations. Team work is also emphasized (e.g., team work at internship site). The main output of the practicum will be a final report that describes in detail what was done, why it was done, what avenues were not pursued and why, and makes appropriate recommendations, and as appropriate, suggestions for further work.

Steps for ENG 572:

- Select an ECE-related internship
- Identify an appropriate non-faculty site-supervisor, and create a proposal for approval by the Faculty Advisor/Instructor
- Survey associated literature and state-of-the-art research
- Conduct, as appropriate, system-level or conceptual design studies, design and build activities, feasibility studies, experimental work, detailed numerical simulations, or detailed theoretical analyses of physical phenomena
- Meet the requirements as laid out in the step-by-step checklist (below)
- Always discuss with the program director and coordinator

Checklist for ENG 572:

- A 2-3 page proposal that outlines the scope of the internship/project. This should be submitted as soon as the student, faculty advisor / instructor, and non-faculty site-supervisor identify and agree on the scope of the internship. When appropriate, the few most pertinent references or reports should be cited.
- A 10-12 page interim progress report. This progress report should further focus the scope beyond what was in the original proposal, followed by a review of current understanding including a discussion of relevant literature. It should then describe the progress made, and summarize the remaining work.

- A 25-30 page comprehensive final report. This should include an ABSTRACT, Introduction, Literature Review, Work done (in appropriate number of chapters), Summary and Conclusions, and suggestions for Future Work. A Bibliography is also an essential part of the final report.
- A 10-minute oral presentation summarizing practicum work. Presentation is given the semester practicum is complete (2-3 weeks before end of semester). Presentation includes Powerpoint, 8-minute presentation, and 2-minute Q/A. If the student is unable to be on campus for the presentation, a Skype presentation date will be offered. Peer evaluations of presentations will be used to assist in the evaluation.

Note that the Proposal, Progress Report, and the Final Report may go through a few revisions before they are finalized.

Reports should be submitted by email as both pdf and MS Word file. **Email must be cc-ed to the graduate program director, faculty advisor/instructor, and off-site internship supervisor.**

Time Line:

Fall and Spring semester timeline for the submission of the three required reports:

- Proposal: 1st Friday of the semester
- Interim Progress Report: 10th Wednesday of the semester
- Comprehensive Final Report: 15th Wednesday of the semester

Summer semester timeline for the submission of the three required reports:

- Proposal: 1st Friday of the semester
- Interim Progress Report: 8th Wednesday of the semester
- Comprehensive Final Report: 11th Wednesday of the semester

Practicums may span more than one semester on occasion. In these circumstances, a grade of DFR (deferred) is given until the course is completed the following semester. Student must first receive approval from the program director.

Rubric for Presentation:

Following rubric is used to evaluate class presentations:

Grading Rubric for ENG 572 Presentation	
Technical quality of the project	/25
Depth of work carried out	/25
Quality of presentation	/15
Quality of visual aid	/10
Appropriate duration	/10
Quality of Q/A	/15
Total	/100