CEES 4423 – CEES Professional Internships
School of Civil Engineering and Environmental Science
Fall/Spring/Summer

Catalog Description: Prerequisite: Completion of at least 19 hours of Civil Engineering/Environmental Science course work (for Civil Engineering and Electrical Engineering majors); or completion of at least 19 hours of Civil Engineering/Environmental Science and science coursework (for Environmental Science majors); or completion of at least 19 hours of Civil Engineering/Environmental Science and Architecture coursework (for Architecture Engineering majors). Provides three hours of professional elective credit for 400 hours of internship. Prior to starting the internship, students should select a Civil Engineering/Environmental Science faculty member as an advisor, write a proposal of planned activities, and secure the approval of the advisor. On completion of the internship, the students should enroll in this course, submit a report, and make an oral presentation for a three-member review committee that includes the faculty advisor. (F, Sp, Su)

Textbooks: None required

Faculty Coordinators: Any CEES faculty member

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Course Outline:

1. Project -- The student must first secure an internship, then consult with a CEES faculty member to determine if this internship meets the requirements for professional elective credits. To meet the requirements, the set of activities that the student expects to complete during his/her internship must contain higher-level engineering or science work such that the sum of the experiences for the internship is equivalent to what a student would learn in a three-credit, upper division CEES course. In addition, the internship supervisor must agree in writing to prepare a minimum of two intern evaluation/progress reports over the course of the internship. The reports can be in the form of an email or letter to the CEES faculty advisor.
2. Proposal – The student must complete a proposal prior to starting the internship, but after consultation with a faculty advisor and the potential employer. The proposal should identify the potential employer, the direct supervisor, and the duration of internship. The proposal must include the following sections: Introduction, Objectives, Internship Plan, and Schedule. The Introduction section should state the relevance of and need for the proposed internship work from the perspective of the student’s major field of study. The Objectives section should state the technical project objectives, as well as the student’s individual learning objectives. The Internship Plan section should provide a discussion of the specific project(s) that the student will work on and identify the student’s responsibilities for each project. The Schedule section should outline the timetable for completion of all internship projects. The proposal should be 1-3 pages long, typewritten using 12 point, Times New Roman font, and double-spaced with 1” margins. Important Note: The proposal must be evaluated and approved by the Undergraduate Studies Committee prior to the start of the internship. Following completion of the internship, if the actual work conducted differs significantly from the contents of the proposal, a revised proposal must be approved by the Undergraduate Studies Committee before the student enrolls in the class.

3. Internship - Students must complete 400 hours of internship, with satisfactory progress reports. This could be completed by working full-time over one summer semester or by working part-time over several regular semesters.

4. Course - After completing their internship, the student should enroll in CE 4423 under their advisor’s section number. At this time, students must identify a review committee of three members, of which at least two are CEES faculty. One external committee member with expertise in the area of the internship is allowed.

As a part of the course requirements, the student must complete:

i) Written Report: this report will typically be at least 25 pages long (not including the title page, executive summary, references or appendices), and must be typewritten using 12 point Times New Roman font, and double-spaced with 1” margins. The typewritten report should contain all the sections required for the proposal (i.e., Introduction, Objectives, Internship Plan, and Schedule), updated and expanded as appropriate. The report should provide detailed descriptions of all projects conducted and the student’s role. The report should also include sections titled “Results” and “Self Assessment”. The Results section should describe the student’s responsibilities during the internship and the scope of work completed. The Self Assessment section should include the student’s assessment of his/her internship accomplishments. The Self Assessment section should include answers to at least the following questions: Did you feel prepared for this internship? How did your “real-world” experience compare to your classroom
experience? In what area did you feel most deficient? What did you (or could you) do to address this deficiency? In what area did you feel most confident and why? How did your “people skills” change as a result of your internship? Would you describe your employer’s work environment as nurturing, rigid, creative, or other? Do you feel that you learn more in a 3-credit class or a 3-credit internship?

The final written report must be submitted and presented to the three member review committee no later than the last day of classes. The students must submit a draft report to their advisors 4 weeks before this date to allow for advisor review and student revisions. The revised report must then be submitted to the review committee 1 week prior to the oral presentation.

ii) Oral Presentation: The student should make a modern, computer-based, 20-25 minute oral presentation that highlights the same topics as the written report no later than the last day of classes. The student should also be prepared for a 15-20 minute question and answer period following the presentation.

Assessment: This course is graded on a Satisfactory/ Unsatisfactory (S/U) basis. To earn a grade of “S”, all the criteria in the following table must be met satisfactorily.

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<th>Assessment items</th>
<th>Criteria</th>
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<td>1. Proposal</td>
<td>Proposal is grammatically correct, includes all required sections, and clearly identifies internship work tasks and relevance to CEES curriculum.</td>
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<td>2. Supervisor’s Report</td>
<td>Lists dates worked, describes project(s) and student’s responsibilities, and evaluates student’s performance.</td>
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<td>3. Technical Performance</td>
<td>Project(s) is/are completed as assigned using good science and engineering principles.</td>
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<tr>
<td>3. Written Report</td>
<td>Report is well organized, clearly written, contains no typographical or grammatical errors, and includes all required sections. Report describes relationship of work to CEES curriculum. Report is submitted on time.</td>
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<td>4. Oral Presentation</td>
<td>Presentation is delivered in a professional manner (i.e., well practiced and with a minimum of technical difficulties) and student is able to respond effectively to committee’s questions.</td>
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