

# CS 495/EE495 - Senior Project Phase I

## Fall 2019 - Syllabus

### Instructors

Dr. Deborah Hwang

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Home page: <http://csserver.evansville.edu/~hwang>

Dr. Wei Wu

KC-263, 812-488-2330, [ww75@evansville.edu](mailto:ww75@evansville.edu)

**Office Hours:** See schedules posted outside instructors' office doors or on home pages.

**Class meetings:** MWF 12 in KC-267

### Class Home Page

Handouts and assignments will be available only at the class home page

(<http://csserver.evansville.edu/~hwang/f19-courses/cs495.html>). Although announcements regarding handouts and assignments will be made in class, it is your responsibility to consult the course home page on a regular basis.

### CS 495 Catalog Description

Plan the computer science project and formulate the preliminary design under the guidance of faculty and industrial advisors. Discussion of the relationship of computer science as a discipline to the humanities and social sciences. Preparation of a written formal proposal and an oral presentation of the proposal. Seminar session addresses ethical, environmental, economic, safety, and ergonomic aspects of computer science. Written reaction to seminar topics. Prerequisites: CS 494; GPA of at least 2.0.

### EE 495 Catalog Description

Plan the engineering project and formulate the preliminary design under the guidance of faculty and industrial advisors. Seminar sessions address professional ethics and the social and political contexts of engineering. The economic, environmental, health, and safety aspects of the project are addressed in a written engineering proposal, as are the issues of manufacturability and sustainability. An oral presentation of the proposal is required. Students submit written reaction to seminar topics. Prerequisites: EE 380, 494; GPA of at least 2.0.

### Objectives and Outcomes

As the first phase of the Engineering Design Project, this course focuses on planning the project and formulating the preliminary design. Selection of an appropriate topic is finalized, requirements and constraints of the project are identified, specifications for the project as a whole are developed, and the preliminary design is completed. Research to determine applicable standards is conducted and the results included in the proposal.

The objectives of this course are to complete a written proposal and oral presentation for the senior design project. Acceptance of the proposal is a necessary condition for initiation of Phase II of the project. In developing the preliminary design, some evidence must be supplied to support the choice of concepts. As a senior capstone seminar, this course also focuses on what it means to be a computing or engineering professional, particularly definition of the ethics on the job and in the profession, and the relationship of computer science and engineering as disciplines to the humanities and social sciences. During the course of the semester, students will have several opportunities to practice oral and written communication skills.

Specific outcomes for this course include:

- Students will complete the preliminary design for the senior project and validate it in some appropriate way.
- Students will submit a satisfactory written proposal.
- Students will give a satisfactory oral presentation.
- Students will review the videotape of his or her practice oral presentation and the written critiques of the presentation by the audience.
- Students will submit his or her own written summary of the practice presentation, and an evaluation of the videotaped talk and the audience's critiques.
- Students will be able to identify ethical situations related to computing and/or engineering and apply a professional code of ethics to determine an ethical course of action.

**Required Textbook:** No textbook required

### Requirements

To complete the course successfully, each student must:

1. Complete written and oral work as assigned and participate in group discussions and assignments.
2. Complete a written senior project design proposal. Also, maintain an engineering logbook that will be evaluated periodically. See the appropriate handout for each major.
3. Give an oral presentation of the senior project design proposal

### Grading

The grade for this course will be determined by the following items and weights.

Item	Weight
Assignments	20%
Final Oral Presentation	20%
Final Design Proposal	30%
Project Faculty Advisor Grade	30%

**Note: Each project advisor will determine the project faculty advisor's grade in the manner he or she chooses for each individual student.** Students should discuss expectations with the advisor at the beginning of this course. Typically it is based on the suitability of design, feasibility of implementation plan, and division of work in group projects.

### Attendance and Submission of Work

Attendance is mandatory. Each unexcused absence will result in a deduction of up to 10% from the final grade. The attendance at individual conferences, as well as the student's promptness in submitting work according to the schedule outlined below, will be factors considered in determining the final grade from the course instructor. In particular, failure to meet the required schedule for submitting drafts, scheduling conferences, making the oral presentations, and submitting the final copy of the written proposal will be sufficient cause for lowering the grade the student would receive if the same work were completed on time.

**All work must be typed and submitted electronically to the course instructor in PDF format.** Some work will be designated for submission to the LiveText system for the purposes of assessment and this submission is required. Proposal work will be forwarded to the project faculty advisor by the instructors.

## General Education

This course meets the General Education requirements for Outcome 11: Capstone and Overlay E: Writing Across the Curriculum.

## Credit Hour Policy

This course meets the federal requirements of 45-75 total hours of student work (combined classroom plus other academic activities such as laboratory, clinical, or design work) per credit hour.

## Disability Policy

It is the policy and practice of the University of Evansville to make reasonable accommodations for students with properly documented disabilities. Students should contact the Office of Counseling and Health Education at 812-488-2663 to seek services or accommodations for disabilities. Written notification to the instructor from the Office of Counseling and Health Education is required for academic accommodations.

## Honor Code

All students at the University of Evansville agree to adhere to the University Honor Code: *I will neither give nor receive unauthorized aid, nor will I tolerate an environment that condones the use of unauthorized aid.*

## Course Schedule

Here is a tentative schedule. Please note that additional topics may be announced at a later time as needed. Bold items are assignments that are due that date. Other assignments may be posted.

<i>Week of</i>	<i>Monday</i>	<i>Wednesday</i>	<i>Friday</i>
08/19		Introduction Project Notebook	Technical Writing Proposal Overview, Problem Statement and Background
08/26	Elevator pitches	Resumes	<b>Elevator pitch presentations</b> <b>Project description due</b> <b>CS notebooks must be installed</b>
09/02	<b>Labor Day – No class</b>	Resume critiques <b>Resumes due by 9am</b>	Requirements and Specifications <b>Introduction, problem statement and background due</b>
09/09	Individual/Group Conferences	Individual/Group Conferences	Graduate School
09/16	Ethics	Ethics	No class
09/23	Ethics discussion <b>Bring ethics essay draft to class</b> <b>Ethics quiz on Blackboard due</b>	UE Connect <b>Ethics essay due</b>	No class <b>Project requirements and specifications due</b>
09/30	Presentations	Design and Implementation, Statement of Work, Budget	No class
10/07	<b>Fall Break - No class</b>	<b>Practice Presentations</b>	No class

<i>Week of</i>	<i>Monday</i>	<i>Wednesday</i>	<i>Friday</i>
10/14	<b>Practice Presentations</b>	<b>Practice Presentations</b>	No class <b>Design, Statement of Work, and Budget due</b>
10/21	Individual/Group Conferences	Individual/Group Conferences	No class
10/28	Posters <b>Presentation critiques due</b>	TBA	No class
11/04	Posters Critiques <b>Posters due by 9am</b>	Poster Critiques	No class
11/11	TBA <b>Complete proposal draft due</b>	TBA	No class
11/18	Individual/Group Conferences	Individual/Group Conferences	<b>Final Presentations</b>
11/25	<b>Final Presentations</b>	<b>Thanksgiving Break - No class</b>	
12/02	<b>Final Presentations</b>	<b>Final Presentations</b>	

**There is no final exam for this class.  
Final proposals are due on Reading/Study Day, Thursday, December 5, 2019**