

Capstone Check List

Information Needed:

Title of Project:

Instructor of record:

What semesters

How many credits

Max number of students allowed

Any special pre-requisites you want to have for the capstone (besides the CORE)

Items that should be in a Capstone	Check
Significant design	
Knowledge of at least 3 areas of ECE	
Level worthy of 6 hours	
Creativity and deductive reasoning	
Realistic Constraints: economic	
Environmental, sustainability	
Manufacturability, ethical	
Health & safety, social, political	
Appropriate computer aided tools	
Teamwork: at least 3	
Description of product - deliverable	
Budget and where the money is coming from	
Time line	
Schedule of milestone reports	
Design review board (2 from ECE, ideally industry)	
Written & oral reports. The project should contain at least 2 reviews (if a 6 credit capstone) or at least 3 (if a two semester capstone). These reviews would include a Project concept review (people agree on what the project is), Preliminary Design Review (what are the major components and how they should be realized), and a critical design review (where the selected specs are reviewed and selected). Written and oral reports should be appropriate format (see dept. web page). The written reviews (copies) should be turned in to the Undergraduate studies committee (USC) at the end of the semester).	
Final Review: Written and oral report using appropriate format (see dept. web site). This should include the product specs, summary of the project, and a working product. An USC member should be present and will collect materials at the end of the presentation.	

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Capstone proposal due dates: Capstones need to be approved/reviewed before students can take them. Proposals should be submitted to the Undergraduate Studies Committee by:

Fall projects: April 1;

Spring projects: November 1 (of the previous year)

Capstone presentation to prospective students:

First Friday of classes Fall and Spring semesters.

All capstones will use the written report and oral presentation report templates and evaluations to keep consistency across the capstones. These documents will be reviewed in the summer. All students will sign up for one capstone, and then meet together for the first few weeks to give students a basis in what is required for the capstones, and give the capstones a common time for presentations. Group presentations will continue for the first semester to aid the students in understanding what is required in their capstone.

Requirements needed to be a capstone

The Department uses the capstone class to satisfy outcomes from ABET, IEEE and the Department. We have allocated some outcomes to the capstone class. In order to be a capstone, we need to know that the outcomes will be addressed. Describe how you will directly assess the following outcomes in the context of your capstone class.

- Ability to design a system, component or process to meet desired needs (ABET e)
- Ability to function on multi-disciplinary teams (ABET f)
- Ability to identify, formulate and solve engineering problems (ABET g)
- Ability to communicate effectively (ABET i)
- Ability to use the techniques, skills and modern engineering tools necessary to engineering practice. (ABET k)
- Apply critical thinking skills to solve problems in EE (Dept. a)
- Knowledge of engineering science (IEEE f)
- Ability to analyze and design complex electrical and electronic devices and systems that contain hardware and software components. (IEEE g)

Some suggestions for evaluations:

1. Technical notes that the students write
2. Homework assigned as part of the capstone
3. Calculation for a part of the project relative to the design, or science used
4. Organization chart showing the interaction of the individuals
5. Individual reports
6. Test plans and results
7. Final presentation and report.

The materials used for the evaluation would need to be recorded to verify that the above criteria are being met.