

Senior Design Project

Why?

It is the mutual interest of both academia and industry to prepare engineering students for careers in their respective fields. Industrial-based senior design projects provide the students with a valuable learning experience that integrates their university education with the many important lessons inherent in the industrial sector.

By sponsoring a senior design project you are participating in a relationship that will unite your organization, our university, and a student team around your project. Like any relationship there are obligations between the parties involved in order for it to flourish. It is the goal of this brochure to outline the responsibilities.

Should you have any further please contact a representative from the associated department.

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Sponsor's Guide to Senior Design Project

www.pserie.psu.edu/academic/engineering/Fasenmyer/Fasenmyerindex.htm

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Senior Design Project Roles

The University's Role

Student Team - Two to four students who are interested in the industrial project will be assembled in a project team.

Faculty Advisor - Each project will have a faculty advisor. Generally the advisor has a special interest in the project and often some experience in the subject matter.

University Resources - University resources that are used throughout the project include, faculty, testing laboratories, manufacturing equipment, library resources, computer facilities, industrial contacts, and work spaces.

Credits - The University dedicates part of a 3-credit course during the fall semester, and all of a 3-credit course in the spring for this "capstone" experience.

The Sponsor's Role

Project Identification – The sponsor should have a clear vision of the projects goals. These need to be communicated to the course instructor prior to the start of the fall semester.

Time Commitment – You must be ready to commit upwards of 3 hours a week to the project.

Expertise – You must have a technically competent personal resource who can quickly respond to inquiries by students or faculty.

Special resources – If needed, the students must be able to have reasonable access to specialized equipment on the company's premises.

Gift – The donation requested for each project is considered a gift to the University with no indirect costs included. It will help subsidize student FE exams fees, student travel to conferences, and other senior design project.

Verify Results – You need to aide in the verification of the design objectives.

Assessment – You will be asked to assess your team's performance. This is critical to our CQI process.

The Project's Role

Final Report - Expectations of what constitutes the final deliverable are established by the individual department. Some have a formal report, while others are satisfied with a design notebook and the final design presentation.

Confidentiality - Prior to the start of any project the sponsor shall indicate to the University any nondisclosure issues.

Intellectual property - If patents, copyrights, trade secrets or other intellectual property is involved in the project, students will be asked to assign IP rights to the sponsor.

The Student's Role

Project specification – During the months leading up to the fall semester the sponsor should work with the faculty to determine a project of reasonable scope.

Team formation – Late summer or Early in the fall semester students self select projects and teams under the guidance of the faculty.

Specifications – Early in the fall semester teams works on the engineering specifications for the project.

Research and preliminary design – During the fall semester teams will work to design a solution to meet their specifications.

Design review – At the end of the fall semester students present a written or oral report of their progress.

Detailed design – During the spring term student's work with their faculty advisors, and industrial sponsor to realize the design.

Senior Day - Students give a presentation of their work to the faculty, industrial sponsors, and Erie community.