FRESNO STATE

What is the Solutions Center – Embedded Project Program?
Embedded Projects are one-semester (3.5-month), one-course experiential-learning activities offered by the Bachelor of Science in Mechanical Engineering (BSME) degree program by the Department of Mechanical Engineering in the Lyles College of Engineering at California State University Fresno.

Embedded Projects integrate leadership breadth with technical depth in the innovative engineering curriculum. These types of projects address present-day industry challenges that have solid engineering content but with quick turnaround time (typically weeks and months). There are two types of Embedded Projects: 1) Partner-led/sponsored projects and 2) Experience-projects.

How do I propose a project for the Embedded Project Program?
Complete and submit a project proposal form for the Embedded Project Program.

What is a Partner-led project in the Embedded Project Program?
Partner-led/sponsored projects as Embedded Projects happen when a project uses exclusively (or almost entirely) corporate resources and intellectual property versus university resources and intellectual property. This project model has a faculty instructor and an industry liaison who is the industry point person. Because of the quick turn around, students typically work at the university campus with the industry point person communicating with the team on a regular basis. In this type of project, the entire project is pitched, organized, conducted and completed within the 15-week semester.

What is an Experience-project in the Embedded Project Program?
Experience-projects as Embedded Projects are internally-funded and a project uses exclusively (or almost entirely) university resources and intellectual property This project model has a faculty instructor and an university liaison who is the point person. At the discretion of the internal sponsor, students may work from a designated university location with the point person communicating with the team on a regular basis. n this type of project, the entire project is pitched, organized, conducted and completed within the 15 week semester.

Which courses are eligible for Embedded Project Program?

Only certain 3-unit senior-level courses lend themselves to Embedded Project Program:

ME 122. Dynamic Systems and Controls
ME 137. Turbomachinery
ME 142. Mechanical Vibration
ME 144. Advanced Mechanics of Materials
ME 146. Air Conditioning
ME 162. Computer-Aided Design
ME 164. Mechanical Systems Engineering Design
ME 166. Energy Systems Design

What are the intellectual property (IP) considerations?

See our Intellectual Property (IP) Guidelines. In addition, at the company's request, students may sign a Non Disclosure Agreement (NDA).

How much work can be expected from the students over the course of the academic year?

Each student on the team for a University or Partner-led capstone is expected to spend approximately 3 hours per week on the project.

What are the roles of the industry point person and faculty advisor?

In a Partner-led project, the industry point person takes the lead in driving project direction. At a minimum, industry point person provides students with a real-world business and technical challenge to help them apply what they are learning in the classroom: technology, communication, business and leadership skills.

Specific commitments will be established and agreed upon among students, faculty, and industry point person(s) at the beginning of each project.

What is the composition of the student team that will work on a project in the Senior Design Capstone Program?

Team size can range from 3 to 7 students per team with an average of 4 students, chosen from various programs.

Who will pay for the laboratory equipment and the software that students need in order to work on the projects in the Senior Design Capstone Program?

In a Partner-led projects, industry sponsors should expect to provide all of the necessary resources (laboratory equipment and software) required for the students to work on the project.

What are the important dates and deadlines associated with the Embedded Project Program?

We are take proposals for during academic year as follows.
- Project concept – deadline first week of April prior to the next academic year
- Full capstone project information form (PIF)
  with budget and invoicing form - deadline first week of June.
- Full payment – deadline first week of August
    (failure to pay results in cancellation of project)
- Project start – early September
- Project end – early May of following calendar year.

Prior Semester ▶ Project Semester ▶

Project concept – first three weeks	Full project information form (PIF) with budget and invoicing form- second three weeks	Full payment – before last week (failure to pay results in cancellation of project)	Project start – second week of semester	Project end – last week of semester

Whom do I contact for more information?

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