Each year, the Purdue Polytechnic Institute launches a two semester Senior Capstone Project for our soon-to-be graduating engineering technology students. Capstone projects should allow them to integrate as much of their education as possible. Student teams tackle open-ended real problems in a realistic setting. A "stage/gate" program management process is followed progressing from project proposal, conceptual design, preliminary design, critical design review, fabrication and test. In addition to the course instructor, each team is provided a faculty mentor to help guide the project. To satisfy the academic goals of the course, projects must have the following characteristics:

Required:

- **Be open ended** requiring evaluation of multiple solutions
- **Be complex and challenging** requiring innovation, out of the box thinking
- Be on subjects just beyond their present courses, requiring **self-directed learning**
- **Have sufficient scope** that would require **a team approach**

Desirable but not essential:

- Be **multi-disciplinary**—requiring students from more than one discipline for successful completion. For the Purdue Polytechnic Institute, all degree disciplines in technology are possible resources for project. These disciplines include mechanical engineering technology, electrical and computer engineering technology, computer graphics and visualization, computer and information technology, aviation, aeronautical, manufacturing, industrial, operations and quality assurance to list only a few.

If the idea of sponsoring a team with a project in the Purdue Polytechnic Institute interests you, contact Dr. Phillip Sanger at psanger@purdue.edu, (765) 494-7497 or Dr. Fred Berry at berryf@purdue.edu, (765) 494-8294.

What is in it for your company

Tackling important problems that, for a lack of resources, are NOT being addressed: Most companies have more projects on their development list than they have resources to pursue. Some of the topics, with lower priority but remaining important, make excellent and challenging senior projects. You, as a regional industry partner and supporter of our programs, are invited to examine your development needs and nominate topics that would stimulate our students' learning while providing your company assistance.

A football analogy seems to work here: we don't often score a touchdown but we advance the knowledge in the project area. Sometimes we get inside the 20 or Red Zone where your staff or even a highly qualified team of Purdue faculty and staff can be hired to carry the ball in for a touchdown. In any case, knowledge about an issue important to you is being matured and explored instead of languishing waiting for resources. In all cases, the team will provide a project document containing the results of two semesters of work, which is made available to the sponsor.

Identifying and attracting new hires to your company: In the course of the project, you will be able to evaluate and attract students for positions in your company. Project sponsorship provides the opportunity for students to get to know what you do and what exciting challenges a job with your company might entail.

Supporting the enhancement of an innovative and highly trained workforce for the state of Indiana and our country: We are all part of the solution. Building and strengthening the quality and capability of the regional and national workforce requires commitment from our faculty and you, our stakeholders.

Sponsored Senior Capstone Projects

Purdue Polytechnic Institute

Requirements from you

The requirements from a company sponsor are as follows:

- A team sponsorship contribution (**$6,000** typical) plus any extraordinary materials (basic essential materials are not extra but costly materials specifically for your technology might be required and *will be agreed upon before any items are procured*)
- A willingness to provide an active Company mentor to the team, and
- Accept to be part of the assessment events during the year.

An effective process to identifying appropriate capstone projects is for you to gather several candidate topics prior to your facility being visited. During a visit, you will be able to show the context for the projects. For those of you who have participated in the program in prior years, emailing the topics and a conference call may be sufficient. For projects that qualify, you will be asked to prepare no more than a one-page project description. This one-page description will be presented to the students. You are selling the students on your projects---why is it important to you, why should they spend hundreds of hours putting their best efforts forward. Why should they pick your project? In the first few weeks of the semester, students select their top three choices in priority of interest from which teams will be formed and aggressively pursue the project for 28 weeks.

Please note that Purdue University is a public institution of higher education and classrooms are open forums for discussion and presentation. Project results are typically presented to the class during and at the end of the class. For this reason, Purdue discourages sponsors from providing confidential or restricted inputs or restricting publication of outputs of student class projects. Unless otherwise agreed in writing by Purdue, we assume that all information submitted by the sponsor is unrestricted.

Timeline - Optimal/Desired Schedule

- Jan-March: Identify corporate sponsors and begin to identify potential projects
- Apr 15: **Target** to have projects identified and commitments made for upcoming Fall Semester Project Catalog
- May 30 – **Deadline** to have projects identified and commitments made for upcoming Fall Semester Project Catalog
- Aug 1: Deadline for receipt of team sponsorship contributions for student class projects
- Mid-August: Projects will be chosen / assigned in the first 2 weeks of class and sponsors notified
- Sept 1: notifications of selected projects will be sent out
- Dec: 1st semester project reviews occur during dead-week prior to finals
- Apr: Final project reviews occur during dead-week prior to finals
- Apr 30: **Final invoices** for any additional project costs will be sent

As a **prospective** sponsor, we would need a one-page project description and the list of materials your company will provide (if any). We would send your one-page project description and materials list to Purdue's Legal Counsel and they would complete a Student Class Project Sponsorship Acknowledgement Letter for you. This letter would be sent to you, a prospective sponsor, for your review.

Your support impacts the future of Purdue students in so many ways. Because of your support, we are able to enhance the student experience and equip the next generation of technical leaders with the resources needed to move our world forward.