UW EE Capstone Innovation Partnership Program

Do you have an engineering problem at your company? UW EE can help!

Summary

You give us a hardware or software (or joint) system design problem; our students will spend their senior year solving it.

- Deliver design projects to success from start to finish.
- Gain access to recruiting the best and the brightest students.
- Provide professional growth opportunities for your employees to mentor.
- Get your company known and your reputation recognized by the next generation.

The Capstone Innovation Partnership Program offers select companies an opportunity to benefit from the vibrant innovation culture at the University of Washington's Department of Electrical Engineering.

Goal

To engage business and technical leaders at companies through direct involvement in shaping the undergraduate student system design experience.

Benefits to Partners

Innovation Partners benefit from the outstanding variety and depth of research at UW EE. The UW has the highest level of federal funding of all public universities in the nation (over $1 billion annually). UW EE's annual research expenditures exceed $18M per year. Our programs provide substantial leverage for companies willing to invest in collaborative research projects with our students. Benefits include

- Priority access to the portfolio of new intellectual property as it is disclosed.
- Participation in annual research symposia where partner technical and business leaders interact with UW EE faculty and students to learn about late-breaking research results.
- Establishing a pipeline for recruitment of the best and the brightest EE students at the end of the Capstone project which coincides with graduation.
- Streamlined process for projects beyond the seed Capstone stage.

About Us

The University of Washington has been ranked twice in a row as the #1 public university in the world for innovation, and the Department of Electrical Engineering (EE) has one of the UW's largest concentrations of entrepreneurial faculty members. Since 2009, EE has led the entire campus in number of start-up companies generated from a single Department.

We are a diverse, international group of scholars and students seeking to nurture and develop tomorrow's engineering leaders in an environment of hands on discovery for the benefit of society.

Our Mission

- Provide world-class education in Electrical Engineering.
- Conduct high-impact research.
- Develop engineering solutions to address the most significant challenges facing humanity in health, energy, the environment and people-centric technologies and systems.

The Capstone Design Experience

UW EE currently has 550 undergraduate students enrolled. They are trained broadly across the sub-fields of electrical and computer engineering. Students will participate in a Capstone Design Experience in their senior year. It is a formal year-long course led by faculty in which teams of students work together to solve significant engineering problems. Projects focus on developing problem-solving skills, fostering positive team dynamics, and providing project management skills.

Student teams are responsible for organizing, scheduling, budgeting, designing, constructing, documenting and presenting their results. The Capstone Design Experience is a critical component of a student's education when theory is applied to practice. It is an opportunity to understand the entire engineering product development cycle and gain valuable project management experience. Final projects are presented to corporate partners, alumni, peers and faculty during the annual Capstone Innovation Day in June.

Partner Responsibilities

- Help with development, scope and requirements of a project.
- Provide technical guidance and company specific information to students.
- Allocate about 1 hour per week to meet with students in person or via teleconference.
- Be responsive to students via email and/or phone communications.

Fees

There is a fee of $10,000 per project to cover equipment, supplies, and management costs. The fee can be provided in-kind (typically via significant hardware donations). Students will not be paid in this program as they earn credits for performing the project. If very large/costly capital items are required for projects, these will have to be provided by industry partners, optionally as extended loan, beyond the standard fee.

Our Commitment

During the course of an academic year UW EE students will work approximately 1,300-1,500 hours per 3-4 person team on your project (see timeline on pg. 3 for details).

Contact Information

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Project Timeline			
Spring/Summer (8 weeks)	**Autumn (10 weeks)**	**Winter (10 weeks)**	**Spring (10 weeks)**
➢ Company submits project of appropriate scope for teams of 3-4 students. ➢ Required resources are identified. ➢ Industry mentor is selected.	➢ Company presents project to class. (2 credit seminar led by UW EE faculty). ➢ Teams are formed and projects are assigned with help from faculty. ➢ Teams define scope and vision of their projects and perform risk assessment and cost/benefit analysis. ➢ Teams produce a formal requirements document. ➢ Teams undergo a systems requirement review and a conceptual design review.	➢ Weekly contact of 1-2 hours required from company mentor during the quarter. ➢ Students begin working on projects; (4 credit course led by EE faculty) ➢ A preliminary design review will be held mid-quarter, followed by a more detailed design review at end of quarter.	➢ Students move to prototyping instance of their project (hardware/software) ➢ Critical Design Review will be held mid-quarter. ➢ Final presentations at end of quarter. ➢ Poster and presentation event at annual Capstone Innovation Day in June.

Join us in developing the next generation of engineering leaders!