ECS Senior Design, Research & Collegiate Design Projects Competition: 2017

The ECS College Leadership Council (CLC) is pleased to sponsor an ECS Student Projects Showcase & Awards for undergraduate engineering and computer science students at Cal State Fullerton. This showcase and competition assembles the outstanding capstone, senior design and collegiate competition projects from across each of ECS's departments of Civil Engineering, Computer Engineering, Computer Science, Electrical Engineering and Mechanical Engineering.

Prior to the ECS Student Projects Showcase & Awards, each of these capstone and design teams is invited to present a draft Project Final Report on their project to a panel of reviewers who collectively represent a diverse set of technology disciplines. **Only projects who submit a draft Project Final Report to the reviewers by the deadline are eligible for award recognition.** The deadline for the draft Project Final Report is **April 26,** less than two weeks prior to the scheduled ECS Student Projects Showcase & Awards day.

Reviewers are recruited from the College Leadership Council, Industry Advisory Boards, and volunteers. Project Teams must face the challenge of succinctly describing their design project's objective, strategy and results to a diverse audience. As such, of chief importance in this competition is the ability to clearly communicate complex subject matter to those who may not be experts in that subject matter. **Reviewers will schedule presentations by teams who have submitted draft Project Final Reports on the morning of the May 8th ECS Student Projects Showcase & Awards day.**

Awards and Recognition Categories:

- **Best in College / Engineering**: Cash award and Team photo in the spring ECS e-newsletter.
- **Best in College / Computer Science**: Cash award and Team photo in the spring ECS e-newsletter.
- **Best in College / Civil & Environmental**: Cash award and Team photo in the spring ECS e-newsletter.
- **Best Multidisciplinary Project / Ed Huizinga Innovative Idea Award**: Cash award and Team photo in the spring ECS e-newsletter.

Eligible projects:
- Only those projects that have submitted a draft **Project Final Report** are eligible to be considered for cash awards.
- Projects undertaken by an individual undergraduate student or a team of undergraduate students. Teams may include underclassmen. Projects may have graduate student, alumni, and/or industry mentors but must demonstrate execution by undergraduate students.
- Projects for which students received compensation are not eligible for entry into the competition but may participate in the Showcase event.
- Any project completed under faculty supervision during the current academic year is eligible to participate in the Showcase & Awards event whether or not they are being reviewed for awards.

All projects (senior design, research or collegiate competition) are eligible for participation in the Student Projects Showcase. Only those projects that have submitted **Project Final Report** drafts are eligible to be considered for cash awards.

Project Final Report Format

Draft Project Final Reports should be submitted to jpiacenza@fullerton.edu by 5:00 PM, Wednesday, April 26, 2017. Each project report should be written in third person. Reports should include an Extended Abstract and a PowerPoint slide set. The Extended Abstract is limited to 2-pages. The Power Point report should be **a maximum of ten (10) slides.**

<u>**Extended Abstract (2 page maximum)**</u>

1. Project title, the names of the team members and the faculty, the department, and the term in which the project was initiated: This is the first page of the report and it should provide the title of the project. The title of the project should be brief and technically valid (font size 12). The name of the team members, the supervising faculty, the course, and the name of the department is also provided on this page.
2. Project abstract.
3. Executive Summary including Outcome/Results.

<u>**Report Body (up to 10 PowerPoint Slides)**</u>

4. Introduction and statement of the design problem:

5. List of Requirements, Specifications and Design Goals for the Project

6. Schedule:

7. Analysis and design: This is a key element in the report. In this Section, the design is to be described, including, as relevant:

- Methods used to achieve the design objectives
- Details of the design process
- Experimentation and design alternatives
- Final specifications of the design

8. Results and Discussion: Provide major results together with verification, validation and testing. Details on any prototype developed may be included in this section.

9. Cost Analysis

10. Conclusion: Brief conclusions of the project results.

Competition Judging Criteria

Members of the ECS College Leadership Council and industry experts will review the competition submissions. **Award recipients will be announced at the ECS Student Projects Showcase & Awards event, Monday, May 8, 2017, 3:00-5:00 PM in the TSU.**

The eligible projects will be judged using the following **four** criteria:

1. Project Overview / Project Report (20%): Each project team (student or students) is required to submit by e-mail to jpiacenza@fullerton.edu a word document containing a project overview using the Project Final Report format described above. Project overviews will be used to inform the reviewers of the important aspects of the project by providing a brief background, a statement of the problem, methods used with results, and conclusions.

2. Presentation (30%): The Project Team's ability to effectively convey to the reviewers the project's objective, approach and conclusions is weighted the highest in this competition.

4. Design Concept (25%): Scoring in this category is based on a team's design concept. Specifically, how well did a team achieve its stated design objectives through implementation of a sound technical strategy.

5. Results and Support (25%): Scoring in this category is based on several criteria. First, how well do the technical data and, if provided, cost analyses support the outcome. Second, how successfully does the design outcome achieve the original design goals and objectives of the project. A team's ability to succinctly and clearly articulate what was accomplished is crucial.