April 8, 2019

Response to the PPR External Review Report

The Computer Engineering Program (CpE) would like to thank the Program Performance Review (PPR) Committee members for making a full day visit on March 22, 2019 to gather information about the MS degree program in Computer Engineering via interviews with the Computer Engineering faculty, graduate students, the Associate Dean and Dean of the College of Engineering and Computer Science (ECS), followed by providing valuable written feedback highlighting program's existing strengths and areas of improvement.

The PPR Committee commended CpE for its efforts in creating a high-quality graduate program that provides students with a solid foundation of core computer engineering concepts that are desired by employers. The department's faculty was also commended on their commitment to student success. The committee listed the following strengths of the degree program:

1. The curriculum is well structured and offers considerable flexibility

2. Faculty make teaching a priority

3. Faculty is diverse and research-active

4. The Dean's Office support for the program

The PPR committee provided 4 recommendations to further enhance of the program; the recommendations are numbered and in bold-font, CpE responses follow the recommendations in italics-font.

1. Encourage more students to complete a project or thesis

Despite the benefits of pursuing a thesis/project, approximately 90% of students in the MS program choose the comprehensive exam option as their culminating experience. In order to encourage more students to enroll in a project/thesis, CpE plans to:

- *Discuss potential career benefits of enrolling in project/thesis, including the value the project/thesis options offer in terms of helping them master important concepts in computer engineering and making them more desirable to employers, at the Graduate New Student Orientations in both thFall and Spring semesters.*

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- *Email graduate students and post fliers to inform them about upcoming project presentations or thesis defenses; this opportunity not only provides them with the first-hand experience of witnessing a presentation or thesis defense by their peer(s) but also serves as a strong motivating factor.*
- *Encourage graduate students to attend Speaker Series organized by the Center for Academic Support in Engineering and Computer Science (CASECS) with the goal of exposing them to cutting edge research pursued by ECS students while motivating and inspiring them to enroll in project/thesis.*

2. Make projects in current courses more rigorous and relevant

The program will encourage faculty members to include projects in core classes that will allow students to work on real-world challenges using industry standard Electronic Design Automation (EDA) tools from Cadence, Synopsys, Xilinx and Mentor Graphics. CpE has active licenses for these tools and will continue to offer them to all CpE students.

3. Expand course options to move beyond IC design

The technical electives constitute a coherent body of study consistent with the student's professional and educational objectives. The program offers its students a variety of electives options in several subject areas including courses from Computer Science and Electrical Engineering. The program plans to discuss the possibility of reducing the number of core courses to allow students to take more electives based on their area of interest and career goals.

4. Seek ways to strengthen ties with industry

Currently, graduate students in Computer Engineering are working on several industry sponsored projects as part of their project/thesis. In addition, the program plans to provide more opportunities to graduate students to work on research projects from industry partners while receiving academic credit. The program will leverage the Center for Collaborative Research and Prototype Development (CCRPD), an academic center of the College of ECS established to create and sustain a mutually beneficial research platform between the college and local industry, to achieve this goal.

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