



CALIFORNIA STATE UNIVERSITY, FULLERTON

College of Engineering & Computer Science

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Date: March 17, 2022

To: Dr. Susamma Barua, Dean
College of Engineering and Computer Science (ECS)

From: Chang-Hyun Jo, Chair *Chang-Hyun Jo*
Computer Science, MS-CS Program

Subject: MS in Computer Science (MS-CS) Program's Response to the Review Team's Report

This report is in response to the review team's report. It includes our responses to the reviewer's comments regarding the program strength, program quality improvement areas, and overall recommendations and observations.

Program Strengths

The reviewers have commended several strengths in the MS-CS program as follows:

- Restructured curriculum
- Cybersecurity
- Updating of courses and addition of new courses
- The hiring of new faculty
- Personalized attention for students
- Study plan requirements
- The rapid increase in demand and high enrollment
- Plans to address rising enrollment
- High research and grant activity
- The strong culture of assessment
- Pathway for non-CS undergraduate
- Dedicated data center and staff support
- Support from the Dean and Associate Dean

We will continue putting our effort into maintaining and increasing the strengths of the program.

Program Quality Improvement Areas

Here we address the actions to improve our program quality based on the reviewer's suggestions.

Encourage the Thesis Option

Suggestion from Review Team

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| <ul style="list-style-type: none">• Encourage the thesis option by adding an additional semester to the thesis sequence. |
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Program's Response

As the reviewers pointed out, most student groups are bound for industry rather than higher degrees. Since we are surrounded by many Ph.D. schools, it is not a bad idea to carve out a niche market to educate professionals for the California industry. Therefore, it is valuable to practice with their projects for graduation. However, we have many research-oriented faculty members as well. Therefore, we can encourage the thesis option. Meanwhile, our project has several options, such as the develop-type projects and the research-type projects. Students can choose the research-type option to cultivate their work to the thesis level. Besides thesis publications, even with the project reports, there are many other ways to publish their work through journals or conference proceedings which are more popularly read by academia and professionals. We also provide an independent study course by which students can prolong their research work if they want.

Strengthen Student Connections to Industry**Suggestion from Review Team**

- Current industry tools and practices to introduce as part of the curriculum.
- Strengthen the MS-CS program's connection to industry practices.
 - Professional practice course
 - Industry-advised thesis and project options

Program's Response

As the reviewers mentioned, the college is running well the undergraduate student project showcase annually. There has been limited participation from graduate students. One of the reasons could be we have a large population of international students in the graduate program. We may need to advocate industry participation.

Remap Student Outcomes and Performance Indicators**Suggestion from Review Team**

- SO-PI mapping for more required elective courses.

Program's Response

Since almost all students take CPSC 589 and CPSC 597, it is still good to perform assessments in those courses. It is good to include new courses in the required electives. The MS-CS program plans to expand assessment for the graduate program.

Balance the Required Elective Categories**Suggestion from Review Team**

- For required electives, while the software engineering category has 8 possible courses to choose from, other categories have limited numbers of electives.

Program's Response

It is due to the nature of the courses we have in the graduate program. Since we develop many new courses in the graduate program by new faculty members, we can include those new courses in their associated categories more.

Overall Recommendations and Observations

Here we plan actions to accommodate the reviewer's recommendations and observations.

Suggestion from Review Team

- The review team agrees with the long-term plans of the MS-CS program.
- Since the continuing increase in MS-CS is expected, necessary resources are needed to support it.
- CS has only two small research rooms shared by 19 FT faculty members and their students.
- Currently, CS has two administrative support staff and two IT staff dispatched by the IT Department.

Program's Response

The reviewer's observations are the factual situation of the CS department running the MS-CS program. As long as we have the necessary resources (human, space, monetary resources), the MS-CS program can grow much more. Currently, we must limit the number of students due to the limited resources.

The MS-CS program in the CS department needs:

- Adequate spaces for classrooms
- More research spaces
- More FT members (to take care of graduate courses)
- More staff (to support 19 FT and 60 PT and 200 graduate students (plus 1800 UG))

Ending Remarks

The MS in Computer Science program will continue improving quality, enhancing prominence, and increasing effects on California IT areas.