

## **Program Performance Review: Culmination Meeting Memo Software Engineering, MS**

The 2018-2019 Program Performance Review (PPR) process for Software Engineering MS program concluded with a culmination meeting on November 1, 2019.

The following people attended the meeting: Pamela Oliver (Provost), Mark Filowitz (AVPAP), Susamma Barua (Dean, ECS), Sang June Oh (Associate Dean, ECS), Christopher Ryu (Chair, Computer Science), Chang-Hyun Jo (Program Coordinator), and Su Swarat (Asst. VP for Institutional Effectiveness).

The Provost commended the program for doing an excellent job, as reflected in its national recognition as the No.1 ranked Software Engineering program among non-PhD granting universities in the 2019 US News and World Report. The Provost commented that the high quality of the program and the faculty is widely recognized by the students, which is particularly impressive given this is an online program.

The Provost commended the program on several additional accomplishments including:

- The program is very successful in achieving its mission and goals to prepare students for industry and advanced study.
- The program contributes highly to the department, the college, the university, and the wider community.
- The program curriculum structure addresses the needs of students who are working professionals.
- The full-time faculty who teach the majority of courses are a coherent, dedicated group.
- Students describe faculty as very responsive, providing timely, pertinent, and adequate guidance on coursework and career development.

Major recommendations and concerns raised through the PPR process were discussed as follows:

1. Curriculum review, calibration, and possible expansion:
  - The External Reviewers recommended a review and calibration of current curriculum offerings to ensure it is up to date, and meet current and future student needs. The program agrees that the curriculum needs to be upgraded from the 2004 to the 2020 version, which may require expanding the faculty pool to allow for the introduction of new materials.
  - The Dean recommended the program to do a benchmark study in the area, particularly focusing on competitor institutions (e.g. UCI, USC). This would allow the program to maintain its competitive edge.
  - The External Reviewers recommended the program to consider offering additional courses covering trending technologies such as Artificial Intelligence/Machine Learning. The program feels this would be difficult and inappropriate. The Chair stated that the program targets process-oriented Software Engineering, and thus all courses are oriented to cover this focus, not *all* areas of software engineering. Adding these suggested topic

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areas would distract the program from its focus. Additionally, the MS Computer Science program covers these trending technologies, thus it would be redundant to add.

- The Associate Dean commented that the college is planning a MS program in Applied Computer Science, which will provide additional coverage of the topic areas suggested by the External Reviewers.
- The Program Coordinator shared the same view, stating that the program should stay focused as opposed to becoming another Computer Science program. The program, however, could consider adding extra standalone courses to address additional topics of interest to the students. These short courses could be available to both current students and alumni. The Provost expressed support for this consideration, and suggested the program to explore offering these courses as self-support.

#### 2. Program budget and growth:

- The AVPAP asked about the program's plan for growth. The Dean reported that the program targets to enroll a minimum of 30 students per new cohort, with 2 overlapping cohorts at any given time. However, due to student demand, the program has been enrolling 50 to 65 students per cohort over the last several years.
- There is no difficulty maintaining the current cohort size, but there is also no plan for expansion. The Associate Dean stated that space is also another limiting factor that would make expansion challenging.
- The Chair commented that the ideal students for the program are working professionals with at least 5 years of experience. This was the primary student population when the program first started, but now the program also attracts students with little experience.
- Budget wise, the Dean stated that it costs \$45,000 per year to run the program. The program is recommended to provide a "spending plan" annually to the college to collaboratively determine areas for strategic investment (e.g. outreach, student recruitment, faculty development). The Dean stated that, while the current budget meets program operation needs, additional resources would be useful. One way to do so is to consider an increase of online fees. The same comment was made by the External Reviewers, suggesting the program to adjust course fees from a 2004 to a 2020 level.

#### 3. Faculty sustainability and support:

- The AVPAP asked about the sustainability of the current faculty group. The program currently has a small group of 5 faculty who are all from Computer Science.
- The Dean stated that it is a concern that there is currently no succession plan for the program faculty. Course offerings would become an issue if one of the faculty is unable to teach. The program is recommended to intentionally develop a cohort of faculty from its alumni base.
- The Program Coordinator reported that professional staffing support is needed, particularly in terms of supporting faculty efforts in building short video courses or other similar technological needs.

#### 4. Industry partnership:

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- The AVPAP commended the program for having excellent partnership with industries, and asked the program to consider fundraising efforts there.
- The Dean confirmed that the program has good relationship with local companies, which helps attract employees from these companies. She also recommended the program to consider developing projects through corporate partnership that engage companies as sponsors.

The Dean commended the program for having a good relationship with the college, and confirmed that the Dean's office would provide support to the program as much as possible. The Provost thanked the Chair and Program Coordinator for their leadership, and once again commended the program for its excellent work.