Expected Outcomes: Broad Software Engineering Knowledge

Our students will have an understanding of software lifecycles and the various activities associated with them.

Assessment methods

Method: Breadth of Courses

As part of the 33 credit-hour program, MSwE students are required to take courses in the following topics: software process, software quality assurance, advanced software engineering, advanced algorithms, advanced operating systems, and advanced computer organization. These courses ensure that students have a breadth of knowledge across software engineering areas.

Findings:

Previous to Fall 2012, courses available to MSwE students were categorized into seven disciplines. Students were required to take one course out of five of the seven disciplines. Offering such a wide array of courses placed a drain on faculty resources. More importantly, student feedback indicated that the courses within each discipline only presented a narrow slice of exposure to the discipline as a whole. Beginning Fall 2012, we replaced the one-in-five-of-seven scheme with a fixed set of courses that included advanced study in what the faculty felt were three main areas: operating systems, algorithms, and computer organization. As we started this approach this academic year, we haven’t had sufficient feedback to assess the approach. Our plans are to 1) survey students for comments and 2) review student performance across the courses to determine what further actions to take. We will perform this review at the end of the Spring 2013 semester.

How did you use findings for improvement?

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Additional comments:

None

Expected Outcomes: Practical Expertise

Our graduates will demonstrate their mastery of the basic areas of software engineering.

Assessment methods

Method: Project Evaluation

All students in the MSwE must write a report describing the software they built during the capstone project experience. The report, together with an oral presentation of the project effort, is assessed by a committee of three faculty members. The student is provided feedback in real time as well as after the presentation. Students must get a positive vote from all members of the committee.
in order to complete the degree.

Findings:

Project reports don’t follow a common format and, consequently, are difficult to assess for quality. The project presentation is often perceived as pro forma.

How did you use findings for improvement?

We are developing common criteria for project scope, a common format, and a project assessment survey.

Additional comments:

None