Computing and Information Science MS

Technical Competence - To Develop And Demonstrate Knowledge Of Theoretical Materials, And Computational And Technical Skills

Goal Description:

Graduates with a master degree in Computing and Informatoin Science will have a strong technical foundation, that is, to develop and demonstrate knowledge of theoretical materials, and computational and technical skills in the areas of Computing and Information Science.

RELATED ITEMS/ELEMENTS -

RELATED ITEM LEVEL 1

Understand The Body Of Knowledge Of Computer Science And Information Technologies
Learning Objective Description:

Students will develop and demonstrate knowledge of theoretical materials, technical skills and project management relevant to computer information systems.

RELATED ITEM LEVEL 2

Written Comprehensive Examination
Indicator Description:

Each student is required to take and pass the written comprehensive examination (WCE) in the graduating semester. Passing grade is defined as scoring 70 or above out of 100, and high pass grade is defined as scoring 85 or above out of 100. Graduate faculty who teach the current 5 core courses of computing and information science are responsible to design exam questions. Each student is given one hour on each of the 5 subjects:

1. Database Systems
2. Programming Languages
3. Data Structures
4. Operating Systems
5. Software Engineering

Faculty who gave the exam questions are responsible to grade and report grades of these exams.

Criterion Description:

Graduate faculty who gave the exam questions are responsible for grading and reporting the grades to graduate advisor. Each exam score should be numeric number between 0 and 100, so that a fail (69 or below), pass (70-84), or high pass (85-100) can be determined.

Findings Description:

Six students took comprehensive examinations in the 2015/16 academic cycle. The pass rate was 100% with 2 students (33%) receiving a high pass.

RELATED ITEM LEVEL 3

Assessment Planning
Action Description:

Graduate programs in the department of Computer Science do not have formal assessment procedures comparable with those in undergraduate programs. The Graduate Curriculum Committee has concentrated on improving curriculum. It's attention now needs to be turned to developing quantitative rather than qualitative assessment tools.

RELATED ITEM LEVEL 1

Apply Knowledge And Skills In Projects And Real Work Environments
Performance Objective Description:

Students will practice and demonstrate their capabilities and skills relevant to computer information systems in projects similating real world tasks.

RELATED ITEM LEVEL 2

Final Capstone Project Assessment
KPI Description:

The final project in this degree program is a software engineering project that involves the students identifying a significant application development need for a selected client and the design and implementation of an appropriate software solution to that need.

Each student is assigned to a member of the graduate faculty in computer science as project advisor together with two additional graduate faculty forming the student's committee.

The department has established procedures for managing projects including

1. The presentation of project proposals within the first two weeks of the semester. The graduate faculty review and approve or disapprove each proposal.

2. Weekly progress meetings with the project advisor.

3. The evaluation by the complete graduate faculty of each student's progress at midterm.

4. The distribution of project activity to the remaining members of each committee.

At the end of the project each student prepares and runs a formal presentation including a description of the project, detailed explanation of the solution used and a demonstration of the completed application.

Results Description:

The Graduate Advisor manages and monitors the administrative aspects of project management including:

1. Scheduling proposal presentations
2. Receiving reports from committee chairs
3. Scheduling project defenses

Thirteen students successfully defended their capstone projects. There were no unsuccessful defenses.

Attached Files

📄 Copy of Project Defense Assessment Data

RELATED ITEM LEVEL 3

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RELATED ITEM LEVEL 3

Professional Performance

Action Description:

Graduate programs in the department of Computer Science do not currently have systems in place to tack alumni professional performance. The Graduate Curriculum Committee needs to develop procedures for tracking employment data on alumni to measure the effectiveness of the Computing and information Science program in providing the skills necessary for professional employment and development.

Update to Previous Cycle's Plan for Continuous Improvement

Previous Cycle's Plan For Continuous Improvement (Do Not Modify):

The department has only one year's worth of data reflecting the changes to the comprehensive examinations and the capstone project assessment. The department takes the position that multiple years of data are required to determine the effectiveness of the changes.

Update of Progress to the Previous Cycle's PCI:

Currently, assessment of the graduate program is conducted within the graduate curriculum committee and the project/thesis committees.

The graduate curriculum committee will plan additional assessment mechanisms to include exit interviews with graduating students and third party program and performance assessment.

To enhance the research capability of student the graduate curriculum committee will explore the benefits associated with non-credit mandatory rotation based research studies for every student in their second semester of the program.

Program Assessment Planning

Closing Summary:

Graduate programs in the department of Computer Science do not currently have systems in place to track alumni professional performance. This is an issue that needs to be addressed in all three existing graduate programs. The Graduate Curriculum Committee will develop the following in the 2016/17 cycle:

1. A rubric to provide a quantitative measure of student performance on comprehensive examinations.
2. A rubric to provide quantitative and qualitative data on student performance in final projects/theses.
3. Tools to provide comparisons of performance on comprehensive examinations, final projects/theses, and course grades.
4. Tools to track alumni career growth over the long term.