### Program - Computer Science MS

**Program Description or Mission:** The Master of Science in Engineering Science with an Emphasis in Computer Science is offered through the School of Engineering.  

**Faculty Involvement (2008-2010 or 2009-2011):** The graduate committee of the department (Drs. Chen, Maginnis, Rhodes, Wilkins, and Cunningham) met several times to discuss changes in the assessment mechanism. All changes were approved by the full faculty.  

**Faculty Involvement (2010-2012 or 2011-2013):** The graduate committee of the department (Drs. Chen, Maginnis, Rhodes, and Cunningham) met several times to discuss changes in the assessment mechanism. All changes were approved by the full faculty.

#### Outcome: Oral Communication

The Master of Science program graduate will be able to effectively communicate computer science concepts orally.

**Outcome Type and Period:**
- Learning 9/1/2006 - 8/31/2008
- Learning 9/1/2008 - 8/31/2010
- Learning 9/1/2010 - 8/31/2012

**Start Date:** 09/01/2006

**Current Outcome Status:** Currently Assessing

#### Means of Assessment

<table>
<thead>
<tr>
<th>Assessment Method</th>
<th>Criterion</th>
<th>Schedule</th>
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<tbody>
<tr>
<td>Every M.S. student in the department must complete a Masters Project or Thesis, typically in the final semester before graduation. Each student must present his or her work in an open forum. The presentations are attended by a faculty committee of at least three members and by other interested faculty members and students. Every presentation is evaluated by all attendees on a range of categories related to oral communication. The hard copy evaluation form contains 12 statements and attendees are asked to provide a score of 1 (strongly disagree) to 5 (strongly agree). The statements are:</td>
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<td>The student's appearance and bearing was professional.</td>
<td>The criteria for success is for 90% of the students to attain at least an average of 4.0 (agree) on each category.</td>
<td>Yes</td>
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<tr>
<td>Presentation has an Introduction, Background/Related Work, Body, and Conclusion. The introduction clearly states the objectives of the work. The introduction explains why this work is useful and interesting. Related Work/Background clearly presents the context of the work. The work itself is clearly described. Conclusions and Results are clearly described. Audio/Visual Aids are used appropriately. Grammar and Pronunciation are correct. Computing Concepts and Terminology are used appropriately. Responses to Questions were helpful. Student demonstrates a mastery of the subject matter.</td>
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<tr>
<td>Each M.S. student will be asked to fill out a Master's Exit Survey. This survey will be provided to each student after their Oral Exam. The Survey has five questions on it, one pertaining to oral communication: &quot;I am able to present computing concepts orally in an effective manner&quot;. The student is asked whether they Strongly Agree (SA), Agree (A), Disagree (D) or Strongly Disagree (SD) with each statement.</td>
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<tr>
<td>The outcome will be met if 100% of the students Agree or Strongly Agree with the statement.</td>
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**Assessment Method Category:** Seminar Presentation or Paper

**Assessment Method Category:** Survey

The department has approximately 6-8 Master's graduates each semester. Most schedule their Oral Exam in the last few weeks of the semester. The Exit Survey will be conducted soon after the Oral Exam.

February 15, 2011

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Outcome: Written Communication

The Master of Science program graduate will be able to effectively communicate computer science concepts in writing.

**Outcome Type and Period:**
- Learning 9/1/2006 - 8/31/2008
- Learning 9/1/2008 - 8/31/2010
- Learning 9/1/2010 - 8/31/2012

**Start Date:**
09/01/2006

**Current Outcome Status:**
Currently Assessing

### Means of Assessment

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<td>Each M.S. student is required to write a technical paper describing his or her Masters project or to write a Thesis. Each student is assigned a committee consisting of at least three faculty members who read and evaluate the paper. The department has recently revised the standard evaluation form which is filled out by each committee member. The form has two sections, one related to the Structure and Content of the document and the other related to Formatting and Layout. Each section contains eight statements. Committee members rate each statement on a scale of 1 (strongly disagree) to 5 (strongly agree). So the total for each section is between 8 and 40.</td>
<td>The graduate committee has set the criteria for success as 90% of the students achieving 80% (32 out of 40) on each section.</td>
<td>Yes</td>
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**Assessment Method Category:**
Research Paper or Presentation

**Related Documents:**
csci070.pdf

Each M.S. student will be asked to fill out a Master's Exit Survey. This survey will be provided to each student after their Oral Exam. The Survey has five questions on it, one pertaining to written communication: "I am able to communicate computing concepts effectively in writing". The student is asked whether they Strongly Agree (SA), Agree (A), Disagree (D) or Strongly Disagree (SD) with each statement.

**Assessment Method Category:**
Survey

Outcome: Solve complex computing-related problem

The Master of Science program graduate will be able to construct a technically appropriate solution for a complex computing-related problem.

**Outcome Type and Period:**
- Learning 9/1/2006 - 8/31/2008
- Learning 9/1/2008 - 8/31/2010
- Learning 9/1/2010 - 8/31/2012

**Start Date:**
09/01/2006

**Current Outcome Status:**
Currently Assessing

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<td>The faculty members on each student's Masters Project or Thesis committee read the student's technical paper, attend the open defense, engage the student in a question and answer session, and view a demonstration of the program developed, when applicable. The committee consists of at least three faculty members, generally from the Computer and Information Science department. Each committee member will fill out a newly created evaluation form about the project design and implementation. The form contains six Likert-style questions and has a place for additional comments. The Likert-style questions, listed below, are scored on a scale of 1 to 5, where 1 is low or strongly disagree, and 5 is high or strongly agree:</td>
<td>The first five questions are used to evaluate this outcome. The total score for each student as determined by each committee member for questions 1-5 is between 5 and 25. The criterion for success is raised to 85% of the students score an average of 18 or higher.</td>
<td>9/1/2010 -- 8/31/2012</td>
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<tr>
<td>1. Rate the technical difficulty of this work relative to other work of the same type (i.e. project, thesis, or dissertation).</td>
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<td>2. Rate the usefulness of this work.</td>
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<td>3. Rate the amount of implementation that this work represents relative to other work of the same type (i.e. project, thesis, or dissertation).</td>
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<tr>
<td>4. Rate the theoretical or conceptual contribution of this work relative to other work of the same type (i.e. project, thesis, or dissertation).</td>
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<td>5. The work is technically sound.</td>
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<tr>
<td>6. The student has demonstrated the ability to use current computing tools and techniques in the design and implementation of a computing system.</td>
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**Assessment Method Category:**
Capstone Assignment/Project

Each M.S. student must complete a Masters Project or Thesis, typically in the final semester before graduation. The student makes a presentation (his or her Oral Exam) that is evaluated by a faculty committee of at least three members of the faculty. After the presentation, the faculty members conduct an Oral Examination to evaluate the abilities and knowledge of the student. Each faculty member then completes an evaluation form (see First means of Assessment for Outcome #3). One question on that evaluation form is "The student has demonstrated the ability to use current computing tools and techniques in the design and implementation of a computing system". Each committee member evaluates the student by indicating Strongly Agree (SA), Agree (A), Disagree (D) or Strongly Disagree (SD) with each statement.

The outcome will be met if 100% of the committee members Agree or Strongly Agree with the statement.

The department has approximately 6-8 Master's graduates each semester. Most schedule their Oral Exam in the last few weeks of the semester. The Exit Survey will be conducted soon after the Oral Exam.

Yes

**Assessment Method Category:**
Survey

**Outcome: Tool and technique use**

The Master of Science program graduate will be able to use current computing tools and techniques.

**Outcome Type and Period:** Learning 9/1/2008 - 8/31/2010
Learning 9/1/2010 - 8/31/2012

**Start Date:** 03/02/2009

**Current Outcome Status:** Currently Assessing

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<td>Each M.S. student must complete a Masters Project or Thesis, typically in the final semester before graduation. The student makes a presentation (his or her Oral Exam) that is evaluated by a faculty committee of at least three members of the faculty. After the presentation, the faculty members conduct an Oral Examination to evaluate the abilities and knowledge of the student. Each faculty member then completes an evaluation form (see First means of Assessment for Outcome #3). One question on that evaluation form is &quot;The student has demonstrated the ability to use current computing tools and techniques in the design and implementation of a computing system&quot;. Each committee member evaluates the student by indicating Strongly Agree (SA), Agree (A), Disagree (D) or Strongly Disagree (SD).</td>
<td>The outcome will be met if 100% of the committee members Agree or Strongly Agree with the statement.</td>
<td>The department has approximately 6-8 Master's graduates each semester. Most schedule their Oral Exam in the last few weeks of the semester.</td>
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**Assessment Method Category:**
Capstone Assignment/Project

Each M.S. student will be asked to fill out a Master's Exit Survey. This survey will be provided to each student after their Oral Exam. The Survey has five questions on it, one pertaining to the student's ability to use current computing tools and techniques.

The outcome will be met if 100% of the students Agree or Strongly Agree with the statement.

The department has approximately 6-8 Master's graduates each semester. Most

Yes
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<td>to use of tools and techniques: “I am able to use current computing tools and techniques in the design and implementation of a computing system”. The student is asked whether they Strongly Agree (SA), Agree (A), Disagree (D) or Strongly Disagree (SD) with each statement.</td>
<td>schedule their Oral Exam in the last few weeks of the semester. The Exit Survey will be conducted soon after the Oral Exam.</td>
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**Assessment Method Category:**
Survey