

***Student Learning Outcomes Assessment Plan for PhD in Engineering***

Date: December 1, 2010

Certificate or Degree Program: PhD in Engineering

<b>INTENDED OUTCOMES</b>	<b>ASSESSMENT TOOLS</b>	<b>IMPLEMENTATION PROCEDURES</b>
1) Students completing the Ph.D. in Engineering will have sufficient professional education to protect the public health and safety.	Require the completion of an M.S. in engineering before the Ph.D. Provide instruction and assessment regarding ethical issues.	The Engineering Ph.D. Committee, appointed by the CSEM dean, will assure that all Ph.D. candidates possess an engineering B.S. or M.S before admission. The candidates' Ph.D. Advisory Committee will assure that students who do not possess an M.S. in engineering complete the departmental M.S. program.
2) Students compare favorably in skill and knowledge with students completing similar courses of study at other institutions.	The student's comprehensive examination will assess skill and knowledge.	The comprehensive examination has been in place for the Interdisciplinary Ph.D. degree, and will continue. The Ph.D. Advisory Committee, which is approved by the department chair, CSEM dean and the Dean of the Graduate School, will administer the examination.
3) Students should demonstrate the capacity for independent research.	The thesis will demonstrate this objective.	The thesis review process by the Ph.D. Advisory Committee and the Thesis presentation and defense by the college and Graduate School guidelines will assess the thesis.
4) Students will be competitive in post-graduate careers in research, industry, government, or academia	All the graduates should have engineering Ph.D.-level jobs three and six years after graduation.	Each spring the Engineering Ph.D. Committee will send a survey questionnaire to the graduates of three years and six years prior. The survey will ask them to assess the program in terms of their post-graduate career opportunities and successes.
5) Graduates should have a strong publication record.	The student's dissertation research should result in peer-reviewed publication.	The three-year survey will assess journal articles from the students' dissertation research. The quality and quantity of graduates' subsequent journal articles will be evaluated by the six-year survey. The Engineering Ph.D. Committee will provide oversight of this assessment.