

**Department of Electrical and Computer Engineering
Doctoral Degree Program Assessment Plan**

A. Program title: Electrical and Computer Engineering

B. Program degree: MS

C. Program objectives:

Core knowledge and area of concentration:

The objective of the first year is that students master the core subject areas within electrical and computer engineering consisting of signal processing, communications, linear systems, electronics, computer systems and physical electronics. Students must also master one area of concentration. The areas of concentration are: Signal/Image Processing, Biomedical/Ultrasound, Superconducting Electronics, Solid-State Electronics, Optoelectronics, VLSI/IC Microelectronics Design, Computer Design, Fields and Waves, and the new MSEE with a Concentration in Musical Acoustics and Signal Processing.

Research skills in specialized areas, Plan A MS:

Students develop the ability to conduct independent research through supervised reading and research courses in their second year. The students' prospective MS advisor serves as the mentor in these courses.

Oral communication:

Ability to communicate orally is a critical component of students' engineering training.

Written communication:

Ability to present research results or convey technical ideas in writing is essential to professional practice in ECE. Students Master's thesis (Plan A) or master's essay (Plan B) is essential to development of this skill.

D. Program assessment direct methods

The following methods will be implemented annually and for each doctoral degree candidate. Test results and faculty review forms for each method will be gathered in student file:

1. Grades in ECE classes must be B- or better.
2. Master's exam or thesis is reviewed by faculty committee.

E. Program assessment indirect methods

The following indirect methods will be implemented as noted:

1. Graduating Student Survey will be a web based survey distributed annually (2012,2013) and then every other year by the UR College Director of Assessment. The survey will ask students to rate program quality. The survey will also include questions that ask students to rate program quality and factors related to learning for communication, leadership, research and teaching.
2. Post-graduation career data from Graduate Student Survey and department data collection.

F. Program assessment data review

1. Data gathered will be reviewed by the faculty committee annually.
2. Data gathered on academic warning, qualifying exam results, and degrees conferred will be tabulated by the Graduate Studies Office and reviewed annually by the DGS.
2. Data gathered in Graduating Student Survey will be reported annually to the faculty committee and DGS by the College Director of Assessment.