GRADUATE CERTIFICATE IN ADVANCED CONTROL SYSTEMS

OFFERED BY: Department of Electrical and Computer Engineering
Programs: M.S. in Electrical Engineering

ADMISSION:

This graduate certificate program is open to all persons holding a B.S. degree in any field of engineering from an ABET accredited undergraduate program or a degree in a closely related technical field such as physics or mathematics. The minimum overall GPA in the B.S. degree program should be at least 2.5.

Once admitted to the program, the student must take four designated courses as given below. In order to receive a graduate certificate, the student must have an average graduate grade point average of 3.0 or better in the certificate courses taken.

Students admitted to the certificate program will have non-degree graduate status. If the four-course sequence is completed with a grade of B or better in each of the courses taken, the student, upon application, will be admitted to the M.S. program in electrical engineering, provided that all other program prerequisites and admission requirements are met. The certificate courses taken by students admitted to the M.S. program will count towards their master's degrees. Students who do not have all of the prerequisite courses necessary to take the courses in the certificate program will be allowed to take "bridge" courses at either the graduate or undergraduate level to prepare for the formal certificate courses.

Once admitted to the program, a student will be given three years to complete the program so long as he/she maintains a B average in the courses taken.

CURRICULUM:

Students enrolled in this graduate certificate program will take two required courses and two elective courses. Alternative courses may be substituted with the departmental approval dependent on the availability of the courses listed below:

Required courses:

- Elec Eng 5300 – Digital Control
- Elec Eng 6300 – Linear Control Systems

Choose two of the following:

- Elec Eng 5320 – Neural Networks Control and Applications
- Elec Eng 5330 – Fuzzy Logic Control
- Elec Eng 5350 – Plantwide Process Control
- Elec Eng 5360 – System Simulation and Identification
- Elec Eng 5380 – Autonomous Mobile Robots
- Elec Eng 6310 – Optimal Control and Estimation
- Elec Eng 6330 – Robust Control Systems
- Elec Eng 6390 – Current Topics in Control Theory
- Elec Eng 6335 – Discrete-Time Neural Network Control
  or Elec Eng 6350 – Neural Network Control of Nonlinear Continuous-time Systems
- Elec Eng 5325 – Applied Nonlinear Control (CC form submitted, not yet approved)

or Elec Eng 6320 – Nonlinear Control Systems