May 3, 2007

**TO:** The Faculty of the College of Engineering

**FROM:** The Faculty of the School of Electrical and Computer Engineering

**RE:** Deletion of ECE 682

The faculty of the School of Electrical and Computer Engineering has approved the deletion of the following course. This action is now submitted to the Engineering Faculty with a recommendation for approval.

**ECE 682**      **Control of Robot Manipulators**
Sem. 2. Class 3, cr. 3. (Offered in alternate years.)
Prerequisite: ECE 569, ECE 602. Authorized equivalent courses or consent of instructor may be used in satisfying course pre- and co-requisites.

The dynamical models to design controllers for the manipulator motion are discussed in Lagrange's and Newton-Euler's formulations. To make the manipulator motion track a desired trajectory, the system will be designed using PID-controllers, eigenvalue assignment, and adaptive self-tuning control. The design of these controllers for compliant motion of the manipulators also is discussed in detail. The implementation of the foregoing controllers is outlined.

**Reason:**      Course has not been taught for an extended period of time. Course content has been deleted from the curriculum.

Mark J.T. Smith

Professor and Head