TO: The Faculty of the College of Engineering

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

RE: Change to Requisites for ECE 19000, Introduction to Electrical and Computer Engineering.

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

From: ECE 19000 Introduction to Electrical and Computer Engineering
Sem. Spring; Cr. 1; Lecture 1.
Prerequisites:
Restrictions: Must be enrolled in one of the following: First Year Engineering
Description: This course is intended to provide an introduction to electrical and computer engineering for students in their freshman year. A goal is to provide some historical background of the respective sub-areas within ECE, a description of analytical tools that will be developed throughout their curriculum, the motivation for the tools, and to inform students of elective courses in ECE.

To: ECE 19000 Introduction to Electrical and Computer Engineering
Sem. Spring; Cr. 1; Lecture 1.
Prerequisites: Undergraduate Level MA 16200 minimum grade D- [may be taken concurrently] or Undergraduate Level MA 16600 Minimum Grade of D- [may be taken concurrently] or Undergraduate Level MA 17300 Minimum Grade of D- [may be taken concurrently] or Undergraduate Level MA 18100 Minimum Grade of D- [may be taken concurrently]
Restrictions: Must be enrolled in one of the following: First Year Engineering
Description: This course is intended to provide an introduction to electrical and computer engineering for students in their freshman year. A goal is to provide some historical background of the respective sub-areas within ECE, a description of analytical tools that will be developed throughout their curriculum, the motivation for the tools, and to inform students of elective courses in ECE.
Reason: This course was approved by the ECE Curriculum Committee on September 13, 2007. The EFD 20-06 subsequently failed to include the requisites, and this EFD is to correct the oversight. Concurrent registration in Calculus II is necessary for understanding the course material.

[Signature]
J. L. Dang
on behalf of V. Balakrishnan, Head
School of Electrical and Computer Engineering

APPROVED FOR THE FACULTY
OF THE SCHOOLS OF ENGINEERING
BY THE ENGINEERING CURRICULUM COMMITTEE

ECC Minutes 10/10/14
Date 10/10/14
Chairman ECC [Signature]
School of Electrical and Computer Engineering

Course Requisites

Undergraduate Level MA 16200 minimum grade D- [may be taken concurrently] or
Undergraduate Level MA 16600 Minimum grade of D- [may be taken concurrently]
Or Undergraduate Level MA 17300 Minimum grade of D- [may be taken concurrently] or
Undergraduate Level MA 18100 Minimum grade of D- [may be taken concurrently]

Course Learning Outcomes:

i. Knowledge of respective areas of electrical and computer engineering.

ii. Knowledge of the historical milestones in electrical and computer engineering.

iii. Knowledge of several key concepts, including charge and balance moving charge create
force, and the basics of electric fields, magnetic fields, energy, efficiency.

iv. Knowledge of the development and use of traveling electromagnetic waves for
communication. Consideration of system using frequency domain.

v. Knowledge of semiconductor devices (diodes and transistors).

vi. Knowledge of digital systems, including logic devices and microprocessors.

vii. Knowledge of purpose of control systems, feedback, and linearity.