Engineering Faculty Document No. 10-05

March 3, 2006

TO: The Faculty of the College of Engineering

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

RE: Title Changes to Graduate-Level Course

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

From: ECE 573 - Compilers And Translator Writing Systems

To: ECE 573 Optimizing Compilers

ECE 573 Optimizing Compilers
Class 3, Lab 0, Credit 3
Offered every fall
Prerequisites: none

Course Description: This course presents the concepts and techniques to design and implement an optimizing compiler. The course includes topics in the use of tools for parsing and lexical analysis, semantic routines, program parallelization and scalar optimizations.

Reason: The title of this course was changed to better reflect the evolving course content.

Course History: The course has been and continues to be offered every fall.

Mark J.T. Smith

Professor and Head

Text: Fischer and LeBlanc, Crafting a Compiler with C, Benjamin/Cummings, 1991, ISBN 0-8053-2166-7. Course notes and research papers will be used. Background texts: the instructor will supply papers.

Course Outcomes:

A student who successfully fulfills the course requirements will have demonstrated an ability to understand and use

i. An understanding of how to use parser generator tools and lexical analysis tools to parse a program source;
ii. An understanding of the terminology and techniques of semantic processing, code generation, and optimization;
iii. Third outcome an ability to design and implement a compiler, translator or interpreter for a small language based on their knowledge of (i) and (ii).

Assessment Methods:

There will be at least one midterm and a final exam. 50% of the final grade will reflect the performance on a class project that each student will propose and conduct.