Engineering Faculty Document No. 43-02
February 25, 2003

TO: The Faculty of the Schools of Engineering
FROM: The Faculty of the School of Civil Engineering
DATE: February 25, 2003
SUBJECT: Change of Course Requirements for the Degree Bachelor of Science in Civil Engineering

The Faculty of the School of Civil Engineering has approved eight modifications to the curriculum for the Bachelor of Science in Civil Engineering resulting in no change in the total of 133 credit hours required for the degree. This action is now submitted to the Engineering Faculty with a recommendation for approval.

Current and proposed curricula are attached as well as current and proposed suggested plans of study. Detailed descriptions of proposed changes are provided along with reasons for these proposed changes.

APPROVED FOR THE FACULTY
OF THE SCHOOLS OF ENGINEERING
BY THE COMMITTEE ON
FACULTY RELATIONS

CFR Minutes #978

Date 11/13/03

Chairman CFR Robert Ellen Montgomery

Reasons for the proposed changes to the curriculum are explained in detail below:

Change 1: Delete CE 293 Computers and Computer Programming for Civil Engineers from the curriculum.

Reason: Students matriculating into Civil Engineering are now better prepared with regard to computer skills than previously as a result of life experiences and study in Freshman Engineering. They therefore require a reduced amount of formal study in this area. Some study of engineering problem solving software will be integrated into CE 203 as described below.

Change 2: Replace CE 200 Fundamentals of Surveying in the curriculum with CE 203 Principles and Practice of Geomatics.

Reason: Replacing CE 200 with 3 credit hours (2 lectures and 1 lab) with CE 203 with 4 credit hours (3 lectures and 1 lab) will allow needed expansion of coverage of surveying topics and inclusion of the introduction and application of engineering problem solving software.

Change 3: Replace CE 292 Oral and Written Communications for Civil Engineers with CE 399 Oral and Written Communications for Civil Engineers

Reason: The ability to communicate engineering ideas in an effective manner is critically important. This was a needed area of improvement identified through the recent Outcomes Assessment process. This will be accomplished by replacing CE 292 having 1 credit hour with CE 399 having 3 credit hours and placing it in the second semester of the junior year, thus better coupling it with CE 498, the senior design project, wherein significant additional presentation experience is mandated.

Change 4: Replace CE 394 Civil Engineering History, Ethics, Engineering Economic Analysis, and Case Studies with CE 398 Introduction to Civil Engineering System Design

Reason: The engineering economics portion of CE 394 will be moved intact to CE 398. The civil engineering case studies, history and ethics portions of CE 394 will be covered by inclusion as some of the subjects in CE 399. This will allow systems analysis and design with constraints to be brought into CE 398. The courses, CE 398 and CE 399, are viewed as directly supportive of CE 498.

Change 5: Replace CE 392 Stochastic Concepts and Methods in Civil Engineering in the curriculum with STAT 511 Statistical Methods

Reason: The content of STAT 511 is very similar to that of CE 392. The faculty feels that it would be beneficial for students to receive instruction in these concepts from faculty of the Department of Statistics.

Change 6: Convert the "unrestricted" elective into a regular technical elective.

Reason: The "unrestricted" elective has, in practice, been most commonly used as a regular technical elective. With the broadening of permissible general education electives, the need for the "unrestricted" elective has diminished.

Change 7: Add the following requirement: Four of the ten technical electives must be chosen from a prescribed list of courses.

Reason: This requirement mandates certain breadth in the curriculum.

Change 8: Add the following requirement: Three of the ten technical electives must be chosen from a prescribed list of design intensive courses. Design intensive courses are defined as courses certified by the faculty as having at least 2/3 design content. This list of courses will be developed by the faculty.

Reason: This requirement guarantees sufficient design content in the curriculum without the need to count design credits.

Fred L. Mannering, Head
School of Civil Engineering