TO: The Faculty of the College of Engineering

FROM: The Faculty of the School of Civil Engineering

RE: Curriculum Change for the B.S. degree in Civil Engineering

The faculty of the School Civil Engineering has approved the addition of a basic science requirement to the core curriculum effective for students entering the School of Civil Engineering in the fall semester 2011. This action is now submitted to the Engineering Faculty with a recommendation for approval.

The program must demonstrate that students can apply knowledge of at least one additional area of science, other than math and chemistry, consistent with the program educational objectives. The following courses may be used to meet this criterion:

BIOL 11000, BIOL 12100 & BIOL 286, BIOL 14600, BIOL 23000
EAS 10000, EAS 10400, EAS 11100, EAS 12000, EAS 22100

This course will replace CE 399 which was deleted. Total credits to degree are not affected by adding this requirement.

Reason: This addition is required by ABET.

M. Katherine Banks
Bowen Engineering Head
Jack and Kay Hockema Professor of Civil Engineering

Current CE Curriculum
No Basic Science Requirement

First Year

First Semester	Second Semester
(4) MA 16500 (Calculus I)	(4) MA 16600 (Calculus II)
(4) CHM 11500 (General Chemistry I)	(3 or 4) Science Selective
(2) ENGR 13100 (Transform Ideas to Innov I)	(4) PHYS 17200 (Modern Physics)
(2) ENGR 13200 (Transform Ideas to Innov II)	(2) CGT 16400 (Computer Graphics)
(3 or 4) ENGL 10600 or ENGL 10800 (Engl Comp)	(3) COM 11400 (Fund of Speech Com)
(15 or 16) Total Credits	(16 or 17) Total Credits

Sophomore Year

Third Semester	Fourth Semester
(4) CE 20300 (Principles and Practices of Geomatics)	(3) CE 23100 (Engineering Materials I)
(0) CE 29000 (Civil Engineering Seminar)	(4) CE 27000 (Introductory Structural Mechanics)
(3) CE 29700 (Basic Mechanics I: Statics)	(3) CE 29800 (Basic Mechanics II: Dynamics)
(4) MA 26100 (Multivariate Calculus)	(3) MA 26500 (Linear Algebra)
(3) PHYS 24100 (Electricity and Optics)	(3) General Education elective
(3) General Education elective	
(17) Total Semester Credits	(16) Total Semester Credits

Junior Year

Fifth Semester	Sixth Semester
(3) CE 33100 (Engineering Materials II)	(3) STAT 51100 (Statistical Methods)
(3) CE 34000 (Hydraulics)	(3) CE 39800 (Introduction to Civil Engineering System Design)
(1) CE 34300 (Elementary Hydraulics Laboratory)	(3) CE 39900 (Oral and Written Communications)
(3) MA 26600 (Ordinary Differential Equations)	(3) General Education elective
(3) General Education elective	(6) Technical Electives
(3) Technical Elective	
(16) Total Semester Credits	(18) Total Semester Credits

Senior Year

Seventh Semester	Eighth Semester
(3) ME 20000 (Thermodynamics I)	(3) CE 49800 (Civil Engineering Design Project)
(3) General Education electives	(3) General Education elective
(12) Technical Electives	(9) Technical Electives
(18) Total Semester Credits	(15) Total Semester Credits

Revised CE Curriculum
Includes Basic Science Requirement

First Year
First Semester

(4) MA 16500 (Calculus I)

(4) CHM 11500(General Chemistry I)

(2) ENGR 13100(Transform Ideas to Innov I)

(2) ENGR 13200 (Transform Ideas to Innov II)

(3 or 4) ENGL 10600 (Engl Comp)

(15 or 16) Total Credits

Second Semester

(4) MA 16600(Calculus II)

(3 or 4) **Science Selective**

(4) PHYS 17200 (Modern Physics)

(2) CGT 16400 (Computer Graphics)

(3) COM 114 (Fund of Speech Com)

(16 or 17) Total Credits

Sophomore Year
Third Semester

(4) CE 20300 (Principles and Practices of Geomatics)

(0) CE 29000 (Civil Engineering Seminar)

(3) CE 29700 (Basic Mechanics I: Statics)

(4) MA 26100 (Multivariate Calculus)

(3) PHYS 24100 (Electricity and Optics)

(3) General Education elective

(17) Total Semester Credits

Fourth Semester

(3) CE 23100 (Engineering Materials I)

(4) CE 27000 (Introductory Structural Mechanics)

(3) CE 29800 (Basic Mechanics II: Dynamics)

(3) MA 26500 (Linear Algebra)

(3) General Education elective

(16) Total Semester Credits

Junior Year
Fifth Semester

(3) CE 33100 (Engineering Materials II)

(3) CE 34000 (Hydraulics)

(1) CE 34300 (Elementary Hydraulics Laboratory)

(3) MA 26600 (Ordinary Differential Equations)

(3) General Education elective

(3) Technical Elective

(16) Total Semester Credits

Sixth Semester

(3) STAT 51100 (Statistical Methods)

(3) CE 39800 (Introduction to Civil Engineering System Design)

(3) **Basic Science Requirement**
     BIOL 11000, 12100& 28600, 14600, 23000
     EAS 10000, 10400, 11100, 12000, 22100

(3) General Education elective

(6) Technical Electives

(18) Total Semester Credits

Senior Year
Seventh Semester

(3) ME 20000 (Thermodynamics I)

(3) General Education electives

(12) Technical Electives

(18) Total Semester Credits

Eighth Semester

(3) CE 49800 (Civil Engineering Design Project)

(3) General Education elective

(9) Technical Electives

(15) Total Semester Credits