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OFFICE OF THE
SENATE COUNCIL

REQUEST FOR CHANGE IN UNDERGRADUATE PROGRAM

Program: Bachelor of Science in Civil Engineering (B.S.C.E.)

Formal Option : (if applicable) or Specialty Field (if applicable)

Department (if applicable): Civil Engineering

College (if applicable): Engineering

Degree title: B.S.C.E. Bulletin pp.: 184-185 (2005-06 Edition)

CIP Code: UK ID No.: HEGIS CODE:

Accrediting Agency (if applicable): Engineering Accreditation Commission of ABET, Inc. (EAC/ABET)

I. PROPOSED CHANGE(S) IN PROGRAM REQUIREMENTS

1. Particular University Studies Requirements or Recommendations for this program

	<u>Current</u>	<u>Proposed</u>
I. Mathematics	MA 113	Same
II. Foreign Language	2 years in high school	Same
III. Inference-Logic	MA 113	Same
IV. Written Communication	ENG 104 or Honors	Same
V. Oral Communications	COM 252 or COM 281	Same
VI. Natural Sciences	CHE 105 and CHE 107	Same
VII. Social Sciences	ECO 201 plus one other USP Course	Same
VIII. Humanities	HIS 107 plus one other USP Course	Same
IX. Cross-Cultural	USP	Same
X. USP Electives (3 must be outside the student's major)	ME 220 or EM 313 plus CE Technical Elective	Same

2. University Graduation Writing Requirement Select from approved courses – CE recommends satisfaction of this requirement via the humanities approved courses or the cross-cultural approved course

3. College Depth and Breadth of Study Requirements (if applicable) (including particular courses required or recommended for this program) NOTE: To the extent that proposed changes in 2. through 6. involve additional courses offered in another program, please submit correspondence with the program(s) pertaining to the availability of such courses to your students.

	<u>Current</u>	<u>Proposed</u>
4. Premajor or Preprofessional Course Requirements (if applicable)	CE 106, 120, 211 CHE 105, 107 MA 113, 114, 213 PHY 231, 241	Same plus EM 221

5. Credit Hours Required	<u>Current</u>		<u>Proposed</u>
a. Total Required for Graduation:	132		133
b. Required by level:			
	100 = 22	200 = 33	300 = 27
	400-500 = 18		
	Plus 15 hours of university studies electives and 18 hours of electives.		
c. Premajor or Preprofessional (if applicable) = 38			f. Hours Needed for a Particular Option or Specialization (if applicable)
d. Field of Concentration (if applicable)			g. Technical or Professional Support Electives (if applicable) = 21
e. Division of Hours Between Major Subject and Related Field (if applicable)			h. Minimum Hours of Free or Supportive Electives (Required) = 3

6. Major or Professional Course Requirements

<u>Current</u>	<u>Proposed</u>
GLY 220; MA 214; CS 221; EM 221, 302; MNG 303; PHY 232, 242; CE 221 or STA 381; CE 303, 321, 331, 341, 351, 381, 382, 401, 429, 461G, 471G	GLY 220; MA 214; CS 221; PHY 232, 242; STA 381; EM 302; MNG 303; CE 303, 331, 341, 351, 381, 382, 401, 429, 461G, 471G

7. Minor Requirements (if applicable)

<u>Current</u>	<u>Proposed</u>
None	None

Total Hours: 133

8. Rationale for Change(s): (If rationale involves accreditation requirements, please include specific references to those requirements.)

Better meet the requirements of our accrediting agency EAC/ABET as well as meet the desires of the faculty and students. Revised curriculum also reflects changes in the faculty composition.

9. List below the typical semester by semester program for a major.

Current
See Attached Sheet

Proposed
See Attached Sheet

Signatures of Approval:

April 28, 2006



Reported by Department Chair

Date of Approval by Department Faculty

12-14-06

Reported by College Dean

Date of Approval by College Faculty

3-20-07

Reported by Undergraduate Council Chair

*Date of Approval by Undergraduate Council

*Date of Approval by Graduate Council

Reported by Graduate Council Chair

*Date of Approval by Health Care Colleges Council (HCCC)

Reported by HCCC Chair

*Date of Approval by Senate Council

Reported by Senate Council Office

*Date of Approval by University Senate

Reported by Senate Council Office

*If applicable, as provided by the Rules of the University Senate

CIVIL ENGINEERING UNDERGRADUATE PROGRAM (Current)

FRESHMAN YEAR

<u>First Semester</u>	Credit Hours	<u>Second Semester</u>	Credit Hours
CE 120 - Intro to Civil Engrg	1	CE 106 - Computer Graphics/Comm	3
CHE 105 - Gen Coll Chem I	3	CHE 107 - Gen Coll Chem II	3
ENG 104 - Acc Writing Composition	4	GLY 220 - Physical Geology	4
MA 113 - Calculus I	4	MA 114 - Calculus II	4
US: Social Science Elective	3	US: ECO 201 (R - Social Science)	3
Semester Hours	15	Semester Hours	17

SOPHOMORE YEAR

<u>First Semester</u>	Credit Hours	<u>Second Semester</u>	Credit Hours
CE 211 - Surveying	4	Statistics Course Elective (1)	3
CE 303 - Intro to Constr Engrg**	4	COM - Communications Elective (2)	3
MA 213 - Calculus III	4	EM 221 - Statics	3
PHY 231 - Gen Univ Physics	4	MA 214 - Calculus IV	3
PHY 241 - Gen Univ Physics Lab	1	PHY 232 - Gen Univ Physics	4
		PHY 242 - Gen Univ Physics Lab	1
Semester Hours	17	Semester Hours	17

JUNIOR YEAR

<u>First Semester</u>	Credit Hours	<u>Second Semester</u>	Credit Hours
CE 331 - Transportation Engrg**	3	CE 321 - CE Systems Analysis	2
CE 341 - Fluid Mechanics I	4	CE 351 - Intro Envr Engrg	3
CE 381 - CE Materials**	3	CE 382 - Structural Mechanics	3
EM 302 - Mech of Deform Solids	3	CE 471G - Soil Mechanics**	4
MNG 303 - Deformable Solids Lab	1	CS 221 - 1st Crse CS for Engrs	2
US: Humanities Elective (3)	3	US: HIS 107 (R - Humanities)	3
Semester Hours	17	Semester Hours	17

SENIOR YEAR

<u>First Semester</u>	Credit Hours	<u>Second Semester</u>	Credit Hours
CE 401 - Seminar**	1	CE 429 - CE Systems Design**	4
CE 461G - Hydrology**	3	CE Tech Design Elective (6)	3
Structures Elective (4)	3	Supportive Elective (7)	3
Tech Elective 1***	3	Tech Elective 3***	3
Tech Elective 2***	3	US: Cross Cultural Elective (3)	3
Engr Science Elective (5)	3		
Semester Hours	16	Semester Hours	16

TOTAL SEMESTER HOURS

132

R = Recommended University Studies Course

** CE communication throughout the curriculum component

*** Technical Electives are to be chosen from any of the courses at the 300-level or above that carry a CE prefix and in which a student is qualified to enroll, exclusive of required courses. CHE 230 or CHE 236 and EM 531 are acceptable. **Engineering elective courses are typically taught once per year.**

- (1) CE 221 - CE Uncertainty Analysis and Risk Assessment or STA 381 - Statistics for Engineers.
NOTE: A C or better must be earned in the statistics elective.
- (2) COM 252 - Interpersonal Communication or COM 281 - Communication in Small Groups
- (3) The second-tier University Writing requirement for a reading and writing intensive course can be used to simultaneously satisfy either the Humanities Elective by choosing from the ENG 200-level humanities or the Cross Cultural requirement by choosing ENG 264.
- (4) CE 482 (non-structural option) or CE 486G and CE 487G (technical elective)
- (5) ME 220 - Thermodynamics or EM 313 - Dynamics
- (6) CE 403, 451, 505, 533, 539, 549, 579 or 589 (**NOTE: CE 579 is a co-requisite for CE 589**)
- (7) Supportive elective is to be chosen from any university course excluding more elementary versions of required courses such as pre-calculus mathematics or PHY 211. However, each CE area has at least one recommendation for the supportive elective. Please review the Optional Specialization in the Civil Engineering Undergraduate Handbook. The supportive elective can be taken P/F.

CIVIL ENGINEERING UNDERGRADUATE PROGRAM (Proposed)

FRESHMAN YEAR

<u>First Semester</u>	Credit Hours	<u>Second Semester</u>	Credit Hours
CE 120 - Intro to Civil Engrg	1	CE 106 - Computer Graphics/Comm	3
ENG 104 - Writing: An Accelerated Foundational Crse	4	CHE 105 - Gen Coll Chem I	3
MA 113 - Calculus I	4	MA 114 - Calculus II	4
US: Social Science Elective	3	PHY 231 - Gen Univ Physics	4
US: ECO 201 (R - Social Science)	3	PHY 241 - Gen Univ Physics Lab	1
Semester Hours	15	Semester Hours	15

SOPHOMORE YEAR

<u>First Semester</u>	Credit Hours	<u>Second Semester</u>	Credit Hours
CE 211 - Surveying	4	COM - Communications Elective (1)	3
CHE 107 - Gen Coll Chem II	3	EM 302 - Mech of Deform Solids	3
EM 221 - Statics	3	MNG 303 - Deformable Solids Lab	1
GLY 220 - Physical Geology	4	MA 214 - Calculus IV	3
MA 213 - Calculus III	4	PHY 232 - Gen Univ Physics	4
		PHY 242 - Gen Univ Physics Lab	1
		STA 381 - Statistics for Engrs	3
Semester Hours	18	Semester Hours	18

JUNIOR YEAR

<u>First Semester</u>	Credit Hours	<u>Second Semester</u>	Credit Hours
CE 303 - Intro to Constr Engrg**	4	CE 351 - Intro Envr Engrg	3
CE 331 - Transportation Engrg**	3	CE 382 - Structural Mechanics	3
CE 341 - Fluid Mechanics I	4	CE 471G - Soil Mechanics**	4
CE 381 - CE Materials**	3	CS 221 - 1st Crse CS for Engrs	2
Engr Science Elective (2)	3	US: HIS 107 (R - Humanities)	3
		Math Elective or Science Elective (3)	3
Semester Hours	17	Semester Hours	18

SENIOR YEAR

<u>First Semester</u>	Credit Hours	<u>Second Semester</u>	Credit Hours
CE 401 - Seminar**	1	CE 429 - CE Systems Design**	4
CE 461G - Hydrology**	3	CE Tech Design Elective (6)	3
Structures Elective (4)	3	Supportive Elective (7)	3
Tech Elective***	3	Tech Elective***	3
Tech Elective***	3	US: Cross Cultural Elective (5)	3
US: Humanities Elective (5)	3		
Semester Hours	16	Semester Hours	16

TOTAL SEMESTER HOURS

133

R = Recommended University Studies Course

** CE communication throughout the curriculum component

*** Technical Electives are to be chosen from any of the courses at the 300-level or above that carry a CE prefix and in which a student is qualified to enroll, exclusive of required courses. **Engineering elective courses are typically taught once a year.**

- (1) COM 252 - Interpersonal Communication or COM 281 - Communication in Small Groups
- (2) ME 220 - Thermodynamics or EM 313 - Dynamics
- (3) Math or Science Elective Options: MA 321, MA 322, MA 416G, MA 432G, BIO 208, CHE 230, CHE 236, EE 305, GEO 409G, GLY 430, GLY 560, MNG 551 or the other half of the Engineering Science Elective in (2)
- (4) CE 482 (non-structural option) or CE 486G and CE 487G (technical elective)
- (5) Either the Humanities or Cross-Cultural Elective can be used to simultaneously satisfy the second-tier University Writing requirement. In the Humanities area, choosing from the ENG 200-level humanities courses satisfies both. In the Cross Cultural area ENG 264 satisfies both. Only one second-tier writing course is required to meet the graduation writing requirements. Completion of the second-tier course must be in the sophomore year or later and after ENG 104.
- (6) CE 403, 451, 505, 533, 539, 549, 579 or 589 (NOTE: CE 579 is a co-requisite for CE 589)
- (7) Supportive elective is to be chosen from any university course excluding more elementary versions of required courses such as pre-calculus mathematics or PHY 211. However, each CE area has at least one recommendation for the supportive elective. Please review the Optional Specialization section in the Civil Engineering Undergraduate Handbook. The supportive elective can be taken P/F.