

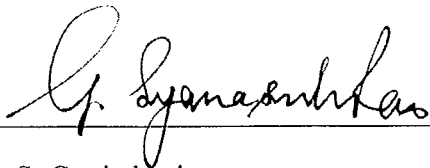
TO: The Faculty of the College of Engineering
FROM: The Lyles School of Civil Engineering of the College of Engineering
RE: Curriculum change for the B.S. Degree in Civil Engineering

The faculty of the Lyles School of Civil Engineering has approved the following change in the curriculum for the B.S. degree in Civil Engineering effective for students entering the School in the Fall Semester 2014. This action is now submitted to the Engineering Faculty with a recommendation for approval.

New Requirements: The sophomore Contemporary Issues in Civil Engineering CE 29201 (1 cr.) has been replaced by CE 29202 (2 cr.). In addition, a new course for juniors CE 39201 (2 cr.) Technical Communication in Civil Engineering has been added. The combination of these two CE communication courses [CE 29202 (1cr. of 2 cr.) and CE 39201 (2 cr.)] will count as 3 cr. of the 18cr. hours of General Education electives required by the College of Engineering. The minimum total number of credit hours required for the degree remains the same at 132 cr. hrs. Students will choose an additional 15 cr. hours of General Education electives in accordance with the general education requirements required by the College of Engineering.

Reason: A revised sophomore course, CE 29202 (2 cr.) Contemporary Issues in Civil Engineering has been created to apply fundamental aspects of written communication in professional settings. Students will compile a professional portfolio of communication assignments, including lab reports prepared in other CE courses. This way technical communications is emphasized at an early stage in the Civil Engineering undergraduate curriculum.

CE 39201 will build upon the technical communication components of CE 29202, adding instruction in oral communication, projects, and working in teams. The Civil Engineering faculty has decided that there must be a course that is specifically designed to instruct undergraduates in technical communications, providing activities, feedback, and evaluation. CE 39201 will act as a "bridge" in the civil engineering curriculum between CE 29202 Contemporary Issues in Civil Engineering and CE 49800 Senior Design, while integrating technical communication instruction into other CE courses, as appropriate.



Rao S. Govindaraju
Bowen Engineering Head and Christopher B. and Susan S. Bowen
Lyles School of Civil Engineering

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

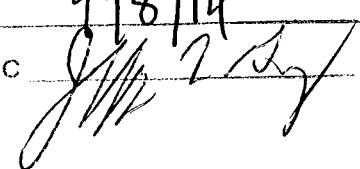
ECC Professor

Date

Chairman ECC

4/8/14

4/8/14



Current		Proposed	
Minimum Degree Requirements for Civil Engineering		Minimum Degree Requirements for Civil Engineering	
Credit Hours Required for Graduation: 132		Accredited by the Engineering Accreditation Commission of ABET, www.abet.org.	
Credit Hours Required for Graduation: 132		Credit Hours Required for Graduation: 132	
Courses	Credit Hours	Courses	Credit Hours
Mathematics and Physical Science		Mathematics and Physical Science	
Calculus: MA 16500, 16600, 26100, 26500, 26600	18	Calculus: MA 16500, 16600, 26100, 26500, 26600	18
Statistics: STAT 51100	3	Statistics: STAT 51100	3
Chemistry: CHM 11500	4	Chemistry: CHM 11500	4
Physics: PHYS 17200, 24100	7	Physics: PHYS 17200, 24100	7
Science Selective CHM 11600 or CS 15900	3	Science Selective: CHM 11600 or CS 15900	3
Engineering Design		Engineering Design	
ENGR 13100, 13200, CGT 16400	6	ENGR 13100, 13200, CGT 16400	6
First-Year (or other) Electives		First-Year (or other) Electives	
Communication and General Education		Communication and General Education	
English Composition: ENGL 10600 or 108	4	English Composition: ENGL 10600 or 10800	3
Speech: COM 11400	3	Speech: COM 11400	3
Basic Science Requirement†	3	Basic Science Requirement†	3
Humanities and Social Sciences*:	18	Humanities and Social Sciences*:	15
Courses must be chosen in accordance with the School of Civil Engineering's general education policies and with the help of a faculty advisor		Courses must be chosen in accordance with the School of Civil Engineering's general education policies and with the help of a faculty advisor	
Core Engineering Courses		Core Engineering Courses	
Geomatics: CE 20300	4	Geomatics: CE 20300	4
Basic Mechanics/Materials: CE 23100, 27000, 29700, 29800, 33100, 34000, 34300	20	Basic Mechanics/Materials: CE 23100, 27000, 29700, 29800, 33100, 34000, 34300	20
Contemporary Issues in CE: CE 29201	1	Contemporary Issues in CE: CE 29202	2
		Technical Communication in Civil Engineering: CE 39201	2
Thermodynamics: ME 20000	3	Thermodynamics: ME 20000	3
Systems Design: CE 39800	3	Systems Design: CE 39800	3
Final Design Project: CE 49800	3	Final Design Project: CE 49800	3
This course must be taken during the student's final semester.		This course must be taken during the student's final semester.	
Technical Electives†	30	Technical Electives†	30
Courses selected with the help of a Faculty advisor to accommodate the student's Professional goals and to provide the student with sufficient design background. At least 21 of these credits must be CE-designated courses.		Courses selected with the help of a Faculty advisor to accommodate the student's Professional goals and to provide the student with sufficient design background. At least 21 of these credits must be CE-designated courses.	

Current

Proposed

GPA Requirement

A graduation index of 2.0 or better is required for graduation with a B.S.CE degree. In addition, a minimum grade point average (GPA) of 2.0 is required in the core civil engineering (CE) (sophomore level or higher) to qualify for graduation.

‡The Basic Science Requirement courses are chosen from an approved list. Examples include: BIOL 11000, 12100 & 28600, 14600, 23000 or EAS 10000, 10400, 11100, 12000, 22100. See advisor for current approved list.

‡The Basic Science Requirement courses are chosen from an approved list. Examples include BIOL 11000, 12100 & 28600, 14600, 23000 or EAS 10000, 10400, 11100, 12000, 22100. See advisor for current approved list.

*Eighteen credit hours of general electives are chosen in accordance with the general education requirements of the College of Engineering and the following departmental requirements:

1. The program must contain at least 6 credit hours in the humanities.
2. The program must contain at least 6 credit hours in social sciences. It is strongly recommended that ECON 25100 be included in the program in social sciences.
3. All general education courses must be taken for a grade.

***Fifteen of eighteen** credit hours of general electives are chosen in accordance with the general education requirements of the College of Engineering and the following departmental requirements:

1. The program must contain at least 6 credit hours in the humanities.
2. The program must contain at least 6 credit hours in social sciences. It is strongly recommended that ECON 25100 be included in the program in social sciences.
3. **CE Communication courses [CE 29202 (1cr. of 2 cr.) and CE 39201 (2 cr.)] will be counted towards 3 cr. hrs. of the 18 credit hours of required general education electives.**
4. All general education courses must be taken for a grade.

†Thirty credit hours of Technical electives are chosen in accordance with the following requirements:

1. The elective course program shall be consistent with career objectives. For instance, one can elect to concentrate on a major in a specialized area with an integrated sequence of courses or can choose a general program in civil engineering by taking courses in several areas.
2. At least 12 credit hours must be chosen from an approved list of introductory civil engineering courses to provide breadth of study.
3. At least 9 credit hours must be chosen from an approved list of design-intensive civil

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Current

engineering courses.

4. At least 21 credit hours must be CE designated courses that must include two integrated sequences with a minimum of six credit hours in each.
5. The remaining credit hours required must be selected in support of the career objectives of the student. See an advisor for current policies.

Proposed

4. At least 21 credit hours must be CE designated courses that must include two integrated sequences with a minimum of six credit hours in each.
5. The remaining credit hours required must be selected in support of the career objectives of the student. See an advisor for current policies.

Core Course Policy and Grades

Students in the School of Civil Engineering

Must satisfy a core course policy to graduate.

A core course is defined as any course required for graduation with a Bachelor of Science in Civil Engineering degree that is not required by the First-Year Engineering (FYE) program.

The policy is as follows:

1. A student must earn a grade of "C-" or better in all core courses.
2. A student must earn a grade of "C-" or better in a core course in order to use the course as a prerequisite.
3. A student shall be dismissed from the School of Civil Engineering after three attempts to complete a core course where each attempt resulted in a grade of "D+", "D", "D-", "E", "F", or "WF". A grade of "W" does not count toward the three attempts. Re-Entry will be solely at the discretion of the Civil Engineering Undergraduate Committee and will be reviewed on a case-by-case basis. The Undergraduate Committee has the prerogative to set the requirements, if any, for re-entry.
4. Technical electives and general education electives are not subject to this policy. Also the Science Selective from the FYE program is not subject to this policy.

English Requirement

Students in the School of Civil Engineering must receive a grade of "C-" or better in a first course in English composition to graduate.

Current

Plan of Study for Civil Engineering:
Credit Hours Required for Graduation: 132

Freshman Year, see First -Year Engineering: 31

Communications. COM 11400 is a required course in the civil engineering curriculum and should be taken in the freshman year.

Graphics. CGT 16400 is a required course in the civil engineering curriculum and should be taken in the freshman year.

Science Selective. CHM 11600 is the recommended course and should be taken in the freshman year.

Proposed

Plan of Study for Civil Engineering:
Credit Hours Required for Graduation: 132

Freshman Year, see First-Year Engineering: 31

Communications. COM 11400 is a required course in the civil engineering curriculum and should be taken in the freshman year.

General Education Elective I*. A total of 18 credit hours of General Education electives are required by Civil Engineering and a 3 cr. hr. course should be taken in the freshman year.

Science Selective. CHM 11600 is the recommended course and should be taken in the freshman year.

Sophomore Year

Third Semester

- | | | | |
|------|-------------------------------|-------|-------------------------------------|
| (4) | CE | 20300 | Principles & Practices of Geomatics |
| (1) | CE | 29201 | Contemporary Issues in CE |
| (3) | CE | 29700 | Basic Mechanics I: Statics |
| (4) | MA | 26100 | Multivariate Calculus |
| (3) | PHYS | 24100 | Electricity and Optics |
| (3) | General Education Elective I* | | |
| (18) | TOTAL | | |

Sophomore Year

Third Semester

- | | | | |
|------|-------|-------|-------------------------------------|
| (4) | CE | 20300 | Principles & Practices of Geomatics |
| (2) | CE | 29202 | Contemporary Issues in CE |
| (3) | CE | 29700 | Basic Mechanics I: Statics |
| (4) | MA | 26100 | Multivariate Calculus |
| (3) | PHYS | 24100 | Electricity and Optics |
| (2) | CGT | 16400 | Computer Graphics |
| (18) | TOTAL | | |

Fourth Semester

- | | | | |
|------|--------------------------------|-------|------------------------------|
| (3) | CE | 23100 | Engineering Materials I |
| (4) | CE | 27000 | Intro Structural Mechanics |
| (3) | CE | 29800 | Basic Mechanics II: Dynamics |
| (3) | MA | 26500 | Linear Algebra |
| (3) | General Education Elective II* | | |
| (16) | TOTAL | | |

Fourth Semester

- | | | | |
|------|--------------------------------|-------|------------------------------|
| (3) | CE | 23100 | Engineering Materials I |
| (4) | CE | 27000 | Intro Structural Mechanics |
| (3) | CE | 29800 | Basic Mechanics II: Dynamics |
| (3) | MA | 26500 | Linear Algebra |
| (3) | General Education Elective II* | | |
| (16) | TOTAL | | |

<i>Current</i>			<i>Proposed</i>		
Civil Engineering			Civil Engineering		
Junior Year			Junior Year		
Fifth Semester			Fifth Semester		
(3)	CE 33100	Engineering Materials II	(3)	CE 33100	Engineering Materials II
(3)	CE 34000	Hydraulics	(3)	CE 34000	Hydraulics
(1)	CE 34300	Elementary Hydraulics Laboratory	(1)	CE 34300	Elementary Hydraulics Laboratory
(3)	MA 26600	Ordinary Differential Equations	(3)	MA 26600	Ordinary Differential Equations
(3)	General Education Elective III*		(3)	General Education Elective III*	
(3)	Technical Elective I†		(3)	Technical Elective I†	
(16)	TOTAL		(16)	TOTAL	

Civil Engineering			Civil Engineering		
Junior Year			Junior Year		
Sixth Semester			Sixth Semester		
(3)	STAT 51100	Statistical Methods	(3)	STAT 51100	Statistical Methods
(3)	CE 39800	Intro to Civil Eng System Design	(3)	CE 39800	Intro to Civil Engineering System Design
(3)	Basic Science Requirement‡		(3)	Basic Science Requirement‡	
(3)	General Education Elective IV*		(2)	CE 39201 Technical Communication in Civil Engr	
(3)	Technical Elective II†		(3)	Technical Elective II†	
(3)	Technical Elective III†		(3)	Technical Elective III†	
(18)	TOTAL		(17)	TOTAL	

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