

# Program Change Request

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Date Submitted: 02/02/17 3:47 pm

Viewing: **CVEGBS : Civil Engineering, Bachelor of Science in Civil Engineering**

Last approved: 07/27/16 2:26 pm

Last edit: 02/03/17 11:27 am

**Changes proposed by: kdhall**

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## In Workflow

1. ENGR Dean Initial
2. Director of Program Assessment and Review
3. Registrar Initial
4. CVEG Chair
5. ENGR Curriculum Committee
6. ENGR Faculty
7. ARSC Dean
8. ENGR Dean
9. Global Campus
10. Provost Review
11. University Course and Program Committee
12. Faculty Senate
13. Provost Final
14. Provost's Office-- Notification of Approval
15. Registrar Final
16. Catalog Editor Final

## Approval Path

1. 02/02/17 5:01 pm  
ndennis: Approved for ENGR Dean Initial
2. 02/03/17 11:28 am  
agriffin: Approved for Director of Program Assessment and Review
3. 02/06/17 1:55 pm  
lkulcza: Approved for Registrar Initial
4. 02/06/17 2:00 pm  
micah: Approved for CVEG Chair
5. 02/07/17 2:04 pm  
rossetti: Approved for ENGR Curriculum Committee

- 6. 02/07/17 3:41 pm  
ndennis: Approved for ENGR Faculty
- 7. 02/07/17 7:30 pm  
jdurdik: Approved for ARSC Dean
- 8. 02/08/17 9:28 am  
ndennis: Approved for ENGR Dean
- 9. 02/10/17 3:20 pm  
kbible: Approved for Global Campus
- 10. 02/10/17 3:46 pm  
tmartin: Approved for Provost Review

### History

- 1. Aug 15, 2014 by crsleaf1
- 2. Mar 23, 2015 by calison
- 3. Aug 18, 2015 by lkulcza
- 4. May 9, 2016 by kdhall
- 5. Jul 27, 2016 by calison

Catalog Pages Using this Program [Civil Engineering B.S.C.E.](#)  
[Civil Engineering \(CVEG\)](#)

Submitter: User ID: crsleaf1  
Phone: 575-6731

Academic Level Undergraduate

Select a reason for the proposed change: Making Minor Changes to an Existing Degree (e.g. changing 15 or fewer hours, changing admission/graduation requirements, adding Focused Study)

Program Status Active

Academic Unit Major/Field of Study

Are you adding, changing or deleting a concentration? No

Action	Proposed Code	Proposed Name

Are you adding, changing or deleting a track? No

Action	Proposed Code	Proposed Name

Are you adding, changing or deleting a focused study? No

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Action	Proposed Code	Proposed Name
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Effective Catalog Year	Fall <b>2017</b> <del>2016</del>
College, School, Division	College of Engineering (ENGR)
Department Code	Department of Civil Engineering (CVEG)
Program Code	CVEGBS
Degree	Bachelor of Science in Civil Engineering
CIP Code	14.0801 - Civil Engineering, General.
Program Title	Civil Engineering, Bachelor of Science in Civil Engineering
Method of Delivery	On Campus
Is this program interdisciplinary or use courses from another College?	Yes Select all that apply: ARSC
Does this change the total hours needed to complete the program?	No

## Program Requirements, Description and 8-Semester Plan

### Elective Courses

Students must select three 3-hour civil engineering elective courses in conference with their adviser. Normally, the civil engineering courses are selected from among the 4000-level elective CVEG courses. Exceptional students may be allowed to choose from the 5000 (graduate-level) course series.

Students must also choose one elective course in science, engineering, technology, or math (STEM) field.

Humanities and social science electives are selected from courses approved by the university which satisfy the University Core general education requirement. Lists of approved electives are on file in the department office.

### Civil Engineering Design Electives

Students must complete two of the following four CVEG design project electives: [CVEG 4812](#) Environmental Design Project (Sp), [CVEG 4822](#) Geotechnical Design Project (Fa), [CVEG 4832](#) Structural Design Project (Sp), and [CVEG 4842 Transportation Design Project \(Fa\)](#). ~~[CVEG 4842 Transportation Design Project \(Fa\)](#)~~. Each design project elective is

associated with a specific design-oriented course. The associated course must be taken at the same time as the design project elective. The associated courses may be taken alone but the design electives cannot.

## Civil Engineering B.S.C.E. Eight-Semester Degree Program

The Civil Engineering B.S.C.E. program is eligible for freshman students who want to participate in an Eight-Semester Degree Program. See the [Eight-Semester Degree Policy](#) for details of the program.

The following section contains the list of courses required for the Bachelor of Science in Civil Engineering degree and a suggested sequence. Not all courses are offered every semester, so students who deviate from the suggested sequence must pay careful attention to course scheduling and course prerequisites.

See the list of [university core courses](#) available for engineering students.

<b>First Year</b>	<b>Units</b>	
	<b>Fall</b>	<b>Spring</b>
<a href="#">MATH 2554</a> Calculus I (ACTS Equivalency = MATH 2405) (Sp, Su, Fa)	4	
<a href="#">PHYS 2054</a> University Physics I (ACTS Equivalency = PHYS 2034) (Sp, Su, Fa)	4	
<a href="#">GNEG 1111</a> Introduction to Engineering I (Sp, Fa)	1	
<a href="#">CHEM 1103</a> University Chemistry I (ACTS Equivalency = CHEM 1414 Lecture) (Su, Fa)	3	
<a href="#">ENGL 1013</a> Composition I (ACTS Equivalency = ENGL 1013) (Sp, Su, Fa)	3	
<a href="#">MATH 2564</a> Calculus II (ACTS Equivalency = MATH 2505) (Sp, Su, Fa)		4
<a href="#">GNEG 1121</a> Introduction to Engineering II (Sp, Fa)		1
Freshman Science Elective		4
Freshman Science Elective Lab		0
<a href="#">ENGL 1023</a> Composition II (ACTS Equivalency = ENGL 1023) (Sp, Su, Fa)		3
Select one of the following:		3
<a href="#">PLSC 2003</a> American National Government (ACTS Equivalency = PLSC 2003) (Sp, Su, Fa)		
<a href="#">HIST 2003</a> History of the American People to 1877 (ACTS Equivalency = HIST 2113) (Sp, Su, Fa)		
<a href="#">HIST 2013</a> History of the American People, 1877 to Present (ACTS Equivalency = HIST 2123) (Sp, Su, Fa)		
Year Total:	15	15

<b>Second Year</b>	<b>Units</b>	
	<b>Fall</b>	<b>Spring</b>
<a href="#">MATH 2574</a> Calculus III (ACTS Equivalency = MATH 2603) (Sp, Su, Fa)	4	
<a href="#">CVEG 2015</a> Fundamentals of Mechanics for Civil Engineers (Sp, Fa)	5	
<a href="#">CVEG 2053</a> Surveying Systems (Sp, Fa)		4
& <a href="#">CVEG 2051L</a> Surveying Systems Laboratory (Sp, Fa)		4
Fine Arts Elective (from University/State Core list)		3
<a href="#">MATH 2584</a> Elementary Differential Equations (Sp, Su, Fa)		4
<a href="#">CVEG 2002</a> Introduction to Civil Engineering Plans and CADD (Sp, Su, Fa)		2
<a href="#">CVEG 2113</a> Structural Materials (Sp, Fa)		3
<a href="#">INEG 2313</a> Applied Probability and Statistics for Engineers I (Sp, Fa)		3
<a href="#">GEOS 1113</a> General Geology (ACTS Equivalency = GEOL 1114 Lecture) (Sp, Su, Fa)		4
& <a href="#">GEOS 1111L</a> General Geology Laboratory (ACTS Equivalency = GEOL 1114 Lab) (Sp, Su, Fa)		4

<a href="#">CVEG 2851</a> Engineering Professional Practice Issues (Sp, Fa)	1
Year Total:	16 17

**Third Year****Units**  
**Fall Spring**

<a href="#">CVEG 3303</a> Structural Analysis (Sp, Fa)	3
<a href="#">CVEG 3213</a> Hydraulics (Sp, Fa)	3
<a href="#">CVEG 3413</a> Transportation Engineering (Fa)	3
<a href="#">INEG 2413</a> Engineering Economic Analysis (Sp, Fa)	3
STEM Elective	3
<a href="#">CVEG 4303</a> Reinforced Concrete Design I (Sp, Fa)	3
<a href="#">CVEG 3243</a> Environmental Engineering (Sp, Fa)	3
<a href="#">CVEG 3223</a> Hydrology (Sp, Fa)	3
<a href="#">CVEG 3133</a> Soil Mechanics (Sp, Fa)	3
<a href="#">CVEG 3131L</a> Soil Mechanics Laboratory (Sp, Fa)	1
Social Science Elective (from University/State Core list)	3
Year Total:	15 16

**Fourth Year****Units**  
**Fall Spring**

<a href="#">CVEG 4143</a> Foundation Engineering (Sp, Fa)	3
<a href="#">CVEG 4423</a> Geometric Design (Sp, Fa)	3
Civil Engineering Elective*	3
Civil Engineering Design Elective	2
Humanities Elective (from University/State Core List)	3
Social Science Elective (from University/State Core list)	3
<a href="#">CVEG 4890 FE Seminar</a> <a href="#">Course CVEG 4890 FE Seminar Not Found</a>	
<a href="#">CVEG 4513</a> Construction Management (Sp, Fa)	3
<a href="#">CVEG 4243</a> Environmental Engineering Design (Sp, Fa)	3
Civil Engineering Design Elective	2
Civil Engineering Electives*	6
Social Science Elective (from University/State Core List)	3
Year Total:	17 17

Total Units in Sequence:	128
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\* [See Elective list](#)

Are Similar Programs available in the area?	No
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Estimated Student Demand for Program:	260
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Scheduled Program Review Date:	2021
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Program Goals and Objectives:

The objective of the civil engineering program is to produce graduates who are prepared to pursue: (a) careers in the broad field of civil engineering; (b) licensure as a Professional Engineer; (c) advanced education.

Learning Outcomes:

- a) Apply knowledge of mathematics and science to solve engineering problems.
- b) Design and conduct experiments, and analyze and evaluate the resulting data.
- c) Design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and constructability.
- d) Function effectively as a member of a multidisciplinary team.
- e) Identify, formulate, and solve engineering problems.
- f) Identify key elements of professional ethics; discuss the importance of professional licensure.
- g) Organize and deliver effective communications.
- h) Explain possible impacts of engineering solutions on the economy, environment, political landscape, and society.
- i) Discuss the need for life-long learning, and demonstrate the ability to learn through independent study.
- j) Explain the impact of contemporary issues on the identification, formulation, and solution of engineering problems.
- k) Apply relevant knowledge, techniques, skills, and modern engineering tools to address engineering problems.

Description and justification of the request:

Adding CVEG 4890 to requirements in the 8 semester plan. All CVEGBS students are required to take the Fundamentals of Engineering (FE) examination administered by the National Council of Examiners for Engineering and Surveying (NCEES). This serves two primary purposes: (1) it is a required step in the process for obtaining a license to practice as a Professional Engineer (PE); being a nationally-normed exam, it provides a rich source of student academic performance data -- which the program uses as a major element in its process for assessing and evaluating Student Outcomes required by its national-accrediting body, ABET, Inc. It is in both the program's and the student's best interest to perform well on the FE exam. The proposed seminar will feature required, targeted review sessions specifically for the FE exam, will allow the program to better track student performance, and will enable a more efficient process to ensure all students meet the degree-program requirement of taking the FE exam prior to graduation. As a zero-credit-hour seminar, it increases neither the current credit-hour requirements of the program nor tuition/fee charges to the student.

Program reviewer comments

**agriffin (02/03/17 11:27 am):** Removed comment from course catalog copy: CVEG 4890 - FE Seminar is in the process of being created/approved in CIM. (Verified new course proposal has been submitted into the campus approval process.) Added a sentence to the description and justification to explain the action the program is taking to accompany the justification.

Uploaded attachments: