

# Program Change Request

Date Submitted: 10/23/18 4:41 pm

## Viewing: **BS-CVEN-STR : Civil Engineering - BS, Structural Engineering Track**

Last approved: 03/27/18 5:56 pm

Last edit: 12/10/18 10:40 am

Changes proposed by: mhueste

Catalog Pages Using this Program [Civil Engineering - BS, Structural Engineering Track](#)

### Contact(s)

Name	E-mail	Phone
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Luciana R Barroso	<a href="mailto:lbarroso@tamu.edu">lbarroso@tamu.edu</a>	979-845-0290

Academic level	Undergraduate
Effective Term	2019-2020
Department	Civil Engineering
College	Engineering
Program type	Degree w/Concentration
Degree designation	BS - Bachelor of Science
With a major in	Civil Engineering (CVEN)
Associated Program	<b>Not Applicable</b>
With a concentration in	Structural Engineering-CVEN (STR)

Catalog Program Title  
Civil Engineering - BS, Structural Engineering Track

CIP and Fund code 14080100

### Rationale for Proposal

**Changes made to include one more SCH of W instruction in the sophomore year.** ~~Changes made (1) to accommodate changes to engineering common first and second year courses, and (2) as part of regular curriculum review.~~

Program hours	128
Is this program eligible for financial aid?	Yes
Will program hours change (increase/decrease) due to the proposed curriculum changes?	No
Program delivery mode	On-campus

### In Workflow

- CVEN Department Head**
- Curricular Services Review**
- EN Committee Preparer UG**
- EN Committee Chair UG**
- EN College Dean UG**
- UCC Preparer**
- UCC Chair**
- Faculty Senate Preparer**
- Faculty Senate
- Provost II
- President
- Curricular Services

### Approval Path

- 10/13/18 2:48 pm  
Robin Autenrieth (r-autenrieth): Approved for CVEN Department Head
- 10/19/18 10:09 am  
Angel Mario Carrizales (carr1214): Approved for Curricular Services Review
- 10/22/18 5:29 pm  
Eileen Hoy (ehoy): Approved for EN Committee Preparer UG
- 10/22/18 8:58 pm  
Prasad Enjeti (enjeti): Rollback to Initiator
- 10/23/18 6:51 pm  
Robin Autenrieth (r-autenrieth): Approved for CVEN Department Head
- 10/24/18 5:33 pm  
Angel Mario Carrizales (carr1214): Approved for Curricular Services Review
- 11/17/18 8:19 am  
Eileen Hoy (ehoy): Approved for EN Committee Preparer UG
- 11/18/18 11:34 am  
Prasad Enjeti (enjeti): Approved for EN Committee Chair UG
- 11/18/18 12:02 pm  
Prasad Enjeti (enjeti): Approved for EN College Dean UG

10. 11/19/18 8:27 am  
Sandra Williams  
(sandra-williams):  
Approved for UCC  
Preparer  
11. 12/10/18 2:48 pm  
Sandra Williams  
(sandra-williams):  
Approved for UCC Chair

### History

1. Mar 27, 2018 by Kelly  
Brumbelow  
(kbrumbelow)

## Catalog Program Requirements

### Plan of Study Grid

Second Year		Semester Credit Hours
Fall		
<a href="#">CVEN 207</a>	Introduction to the Civil Engineering Profession	2
<a href="#">CVEN 221</a>	Engineering Mechanics: Statics	3
<a href="#">CVEN 250</a>	Introduction to Graphics and Visualization Applications in Civil Engineering Design	2
<a href="#">ENGR 217/PHYS 217</a>	Experimental Physics and Engineering Lab III - Electricity and Magnetism	2
<a href="#">MATH 251</a>	Engineering Mathematics III	3
<a href="#">PHYS 207</a>	Electricity and Magnetism for Engineering and Science	3
<a href="#">STAT 211</a>	Principles of Statistics I	3
	Semester Credit Hours	18
Spring		
<a href="#">CVEN 302</a>	Computer Applications in Engineering and Construction	3
<a href="#">CVEN 303</a>	Civil Engineering Measurement	3
<a href="#">CVEN 305</a>	Mechanics of Materials	3
<a href="#">CVEN 306</a>	Materials Engineering for Civil Engineers	3
<a href="#">ENGL 210</a>	Technical and Business Writing	3
or <a href="#">COMM 205</a>	or Communication for Technical Professions	
<a href="#">MATH 308</a>	Differential Equations	3
	Semester Credit Hours	18
Third Year		
Fall		
<a href="#">CVEN 311/EVEN 311</a>	Fluid Dynamics	3
<a href="#">CVEN 322</a>	Civil Engineering Systems	3
<a href="#">CVEN 345</a>	Theory of Structures	3
<a href="#">CVEN 363</a>	Engineering Mechanics: Dynamics	3
Technical elective 6		3
	Semester Credit Hours	15
Spring		
<a href="#">CVEN 399</a>	Mid-Curriculum Professional Development	0
<b>Select one of the following:</b>		<b>3</b>
<del><a href="#">BAEN 320</a></del>	<del>Engineering Thermodynamics</del>	<del>-</del>
<del><a href="#">CVEN 315</a></del>	<del>Sensor Technology for the Built Environment</del>	<del>-</del>
<del><a href="#">ECEN 215</a></del>	<del>Principles of Electrical Engineering</del>	<del>-</del>
<del><a href="#">MEEN 315</a></del>	<del>Principles of Thermodynamics</del>	<del>-</del>
Technical elective 6		12
<a href="#">University Core Curriculum</a> 3		3
	Semester Credit Hours	15
Fourth Year		
Fall		
<a href="#">CVEN 424</a>	Civil Engineering Professional Practice 7	2
Technical elective 6		11
<a href="#">University Core Curriculum</a> 3		3
	Semester Credit Hours	16
Spring		
<del><a href="#">ENGR 482/PHIL 482</a></del>	<del>Ethics and Engineering 7</del>	<del>3</del>
<a href="#">PHIL 482/ENGR 482</a>	Ethics and Engineering	3
Technical elective 6		9
<a href="#">University Core Curriculum</a> 3		3

Semester Credit Hours	15
Total Semester Credit Hours	97

6A total of 35 hours of technical electives is required. Technical electives are divided into four categories: science courses, breadth courses, focus courses, and capstone design courses. The choice of courses to be taken in each of the four categories depends on the track chosen and must be made in consultation with the student's advisor and/or the Civil Engineering Undergraduate Student Services Office to ensure pre- and co-requisites are satisfied. Capstone design courses must include more than one civil engineering context.

7All students must take at least two courses in their major that are designated as writing intensive (W). [CVEN 207](#) and [CVEN 424](#) taken at Texas A&M satisfy this requirement. Other CVEN courses may be approved as W courses at a later date. A grade of C or better is required in these courses.

A grade of C or better is required in all science, mathematics and engineering courses taken to satisfy degree requirements.

## Total Program Hours 128

### Structural Engineering Track - Technical Electives

Technical electives for the BS in Civil Engineering, Structural Engineering Track are composed of a SCIENCE course (3 semester credit hours), BREADTH courses (20 ~~14~~ semester credit hours), FOCUS courses (9 semester credit hours), and a CAPSTONE DESIGN course (3 semester credit hours), as delineated below, for a total of 35 ~~33~~ semester credit hours. A substitution for any course in the track must be approved in writing by the Civil Engineering Undergraduate Student Services Office.

Code	Title	Semester Credit Hours
SCIENCE Course (3 Semester Credit Hours Required)		
Choose 3 Semester Credit Hours From:		
<a href="#">ATMO 201</a>	Weather and Climate	
<a href="#">ATMO 363</a>	Introduction to Atmospheric Chemistry and Air Pollution	
<a href="#">BESC 201</a>	Introduction to Bioenvironmental Sciences	
<a href="#">BIOL 113</a>	Essentials in Biology	
<a href="#">GEOG 203</a>	Planet Earth	
<a href="#">GEOL 320</a>	Geology for Civil Engineers	
<a href="#">GEOL 410</a>	Hydrogeology	
<a href="#">GEOS 105</a>	Introduction to Environmental Geoscience	
<a href="#">OCNG 410</a>	Physical Oceanography	
<a href="#">RENR 205</a>	Fundamentals of Ecology	
<a href="#">RENR 375</a>	Conservation of Natural Resources	

Code	Title	Semester Credit Hours
BREADTH Courses (20 Semester Credit Hours Required)		
<a href="#">CVEN 342</a>	Materials of Construction	3
or <a href="#">CVEN 343</a>	or Portland Cement Concrete Materials for Civil Engineers	
<a href="#">CVEN 349</a>	Civil Engineering Project Management	3
<a href="#">CVEN 365</a>	Introduction to Geotechnical Engineering	3
Choose 6-9 Semester Credit Hours From:		
<a href="#">CVEN 301/EVEN 301</a>	Environmental Engineering	
<a href="#">CVEN 307</a>	Transportation Engineering	
<a href="#">CVEN 339</a>	Water Resources Engineering	

Choose 2-5 Semester Credit Hours From:		
<a href="#">CVEN 315</a>	Sensor Technology for the Built Environment	
<a href="#">CVEN 336</a>	<b>Fluid Dynamics Laboratory</b>	
<a href="#">CVEN 403</a>	Applied Civil Engineering Surveying 1	
<a href="#">CVEN 423</a>	Geomatics for Civil Engineering	
<a href="#">CVEN 435</a>	Geotechnical Engineering Design	
<a href="#">CVEN 436</a>	Case Histories in Geotechnical Engineering	
<a href="#">CVEN 450</a>	AutoCAD in Civil Engineering 2	
<a href="#">CVEN 451</a>	Public Works Engineering	
<a href="#">CVEN 473</a>	Engineering Project Estimating and Planning	
<a href="#">CVEN 485</a>	<b>Directed Studies 3</b>	
<a href="#">CVEN 491</a>	<b>Research 3</b>	
<a href="#">MATH 304</a>	Linear Algebra	
<a href="#">MATH 311</a>	Topics in Applied Mathematics I	
<a href="#">OCEN 400</a>	Basic Coastal Engineering	
<a href="#">STAT 212</a>	Principles of Statistics II	

Code	Title	Semester Credit Hours
FOCUS Courses (9 Semester Credit Hours Required)		
<a href="#">CVEN 444</a>	Structural Concrete Design	3
<a href="#">CVEN 445</a>	Matrix Methods of Structural Analysis	3
<a href="#">CVEN 446</a>	Structural Steel Design	3

Course List

Code	Title	Semester Credit Hours
CAPSTONE DESIGN Course (3 Semester Credit Hours Required)		
<a href="#">CVEN 483</a>	Analysis and Design of Structures	3
1	<a href="#">CVEN 403</a> is a 2 semester credit hour course.	
2	<a href="#">CVEN 450</a> is a 1 semester credit hour course.	
3	<b>Up to 2 hours of <a href="#">CVEN 485</a> or <a href="#">CVEN 491</a> may be used.</b>	

Additional information Edited degree evaluation is attached.

Required Proposal [DegEvalTemp-BS-CVEN-STR\\_141.pdf](#)  
Forms [012218PresidentApprovalMemo.pdf](#)  
[BS CVEN Structural 12-9-18.pdf](#)

Reviewer Comments **Angel Mario Carrizales (carri1214) (10/19/18 10:02 am):** We are moving the proposal forward; however, there are concerns regarding the Additional Coursework area in the degree evaluation. The change to CVEN 207 from 1 to 2 hours, has caused the department to reduce the number of elective hours. RULE J "Breadth Elect III" of the additional coursework area requires 5hrs; however, all courses except for two courses, CVEN 403 2hr, and CVEN 450 1hr, listed under the rule are 3-hour courses. In essence, a student may have to take 6 hours to meet this requirement. Which technically, looks like an increase to the overall program hours.

**Prasad Enjeti (enjeti) (10/22/18 8:58 pm):** Rollback: Please delete /ENGR 482

**Angel Mario Carrizales (carri1214) (12/10/18 10:40 am):** The department has added additional 1 SCH and 2 SCH course options to add flexibility for students and to address previous concerns. The proposal has been updated to include the course options, and an updated degree evaluation has been uploaded. Previous concerns have been addressed.

**Sandra Williams (sandra-williams) (12/10/18 2:48 pm):** Concerns addressed. Update received. UCC approved December 2018.

Key: 607

[Print](#)

# Detail Requirements

Marybeth Hueste  
Sep 24, 2018 03:20 pm

Viewing: Degree Evaluation (DEGEVAL, , Email)  
Change Student  
Return to Graduate Committee Student Selection

## Information for Degree Evaluation

 This is NOT an official evaluation.

## Print Instructions

### Program Evaluation

**Limitation** Correspondence: No more than 12 hours of correspondence earned through an accredited institution may be used for an undergraduate degree.

**Limitation** Combination: Maximum combination of 18 hours of 481, 482, 485 and/or 491 courses may be used for an undergraduate degree.

**Limitation** No more than 50% of courses required for the degree plan can be taken as Distance Education Courses for non-distance degree programs.

**Limitation** Only one of the following will satisfy the requirements for a degree: GENE 301, GENE 302, GENE 315, and GENE 320.

**Limitation** Only one of the following will satisfy the requirements for a degree: MATH 131, MATH 142, MATH 147, MATH 151, and MATH 171.

**Limitation** Only one of the following will satisfy the requirements for a degree: MATH 140, MATH 141, and MATH 166.

**Limitation** Only one of the following will satisfy the requirements for a degree: MATH 148, MATH 152, and MATH 172.

**Limitation** Only one of the following will satisfy the requirements for a degree: MATH 221, MATH 251, and MATH 253.

**Limitation** Only one of the following will satisfy the requirements for a degree: MATH 304, MATH 309, MATH 311, and MATH 323.

**Limitation** Only one of the following will satisfy the requirements for a degree: STAT 301, STAT 302, and STAT 303.

<b>Program :</b>	BS CVEN-Structural Engr	<b>Catalog Term :</b>	Fall 2018 - College Station
<b>Campus :</b>	College Station	<b>Evaluation Term :</b>	Fall 2018 - College Station
<b>College :</b>	Engineering	<b>Expected Graduation Date :</b>	
<b>Degree :</b>	Bachelor of Science	<b>Request Number :</b>	50
<b>Level :</b>	Undergraduate	<b>Results as of :</b>	Sep 24, 2018
<b>Majors :</b>	Civil Engineering	<b>Minors :</b>	
<b>Departments :</b>	Civil Engineering	<b>Concentrations :</b>	

	Met	Credits	Courses		
		Required	Used	Required	Used
<b>Total Required :</b>	No	128.000	0.000		0
<b>Program GPA :</b>	Yes	.00	.00		
<b>Overall GPA :</b>	No	2.00	.00		

### Other Course Information

<b>Transfer :</b>		0.000		0
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This is NOT an official evaluation.

**Area :** Major Coursework ( 1.000 credits ) - Not Met  
**Description :** Must have a grade of 'C' or better in all area coursework.

Met	Condition	Rule	Subject	Low	High	Required Credits	Required Courses	Subject	Course Title	Attribute	Credits	Grade	Source
No		A.	CVEN 207										
No	AND	B.	CVEN 221										
No	AND	C.	CVEN 302										
No	AND	D.	CVEN 303										
No	AND	E.	CVEN 305										
No	AND	F.	CVEN 306										
No	AND	G.	CVEN 311										
No	AND	H.	CVEN 322										
No	AND	I.	CVEN 345										
No	AND	J.	CVEN 363										
No	AND	K.	CVEN 424										

No	AND	L.	ENGR 102 2hrs
No	AND	M.	Exp Phys Engr Lab II 2hrs Select from ENGR 216; PHYS 216
No	AND	N.	CVEN 250 2hrs
No	AND	O.	Engineering Rqmt 3hrs <del>Select from BAEN 320; CVEN 315; EGEN 215; MEEN 313.</del>
No	AND	P.	CVEN 399 0hrs
No	AND	Q.	Exp Phys Engr Lab III 2hrs Select from ENGR 217; PHYS 217

Total Credits and GPA 0.000 .00

unofficial evaluation

Area : Supporting Coursework ( 9.000 credits ) - Not Met

Description Must have a grade of 'C' or better in all area coursework.

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No			A.	MATH 308	3hrs											
No	AND		B.	MATH 251	3hrs											
No	AND		C.	STAT 211	3hrs											

Total Credits and GPA 0.000 .00

unofficial evaluation

Area : Additional Coursework ( <sup>35</sup> 23.000 credits ) - Not Met

Description Must have a grade of 'C' or better in all area coursework.

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No			A.	CVEN 349	3hrs											
No	AND		B.	CVEN 365	3hrs											
No	AND		C.	CVEN 444	3hrs											
No	AND		D.	CVEN 445	3hrs											
No	AND		E.	CVEN 446	3hrs											
No	AND		F.	CVEN 483	3hrs											
No	AND		G.	Breadth Elect. I	3hrs											
No	AND		H.	Breadth Elect. II	6hrs											
No	AND		I.	Science Elect.	3hrs											
No	AND		J.	Bread Elect III	3hrs											

Total Credits and GPA 0.000 .00

*EVEN 30  
up to 2 hrs of CVEN 485 or 491*

unofficial evaluation

Area Communication ( 6.000 credits ) - Not Met

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No			A.	Composition Rqmt	3hrs											
No	AND		B.	Communication Rqmt	3hrs											

0.000 .00

unofficial evaluation

Area : **Mathematics ( 8.000 credits ) - Not Met**

Description **Must have a grade of 'C' or better in all area coursework.**

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No			A.	MATH 151												
No	AND		B.	MATH 152												

Total Credits and GPA 0.000 .00

unofficial evaluation

Area : **Life and Physical Sciences ( 10.000 credits ) - Not Met**

Description **Must have a grade of 'C' or better in all area coursework.**

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No			A.	CHEM 107 and 117	4hrs											
No	AND		B.	PHYS 206	3hrs											
No	AND		C.	PHYS 207	3hrs											

Total Credits and GPA 0.000 .00

unofficial evaluation

Area : **Language, Philosophy & Culture ( 3.000 credits ) - Not Met**

Description **Must have a grade of 'C' or better in all area coursework.**

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No			A.	<del>ENGR 417</del> PHIL 482												

Total Credits and GPA 0.000 .00

unofficial evaluation

Area **Creative Arts ( 3.000 credits ) - Not Met**

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No			A.	Creative Arts Requirement	3hrs											
				Select three hours from any course with the Creative Arts attribute [KCRA].												

Total Credits and GPA 0.000 .00

unofficial evaluation

Area **Social and Behavioral Sciences ( 3.000 credits ) - Not Met**

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No			A.	Social Science Rqmt	3hrs											
				Select from courses with the Social and Behavioral Science attribute [KSOC].												

Total Credits and GPA 0.000 .00

unofficial evaluation

**Area :** Citizenship ( 12.000 credits ) - Not Met

**Description :** Completion of 4 semesters of Upper-Level ROTC may be substituted for 3 hours of American History and 3 hours of Political Science.

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No		A.	American History	Rqmt 6hrs				Select from any course with the [KHIS] attribute.								
No	AND	B.	Political Science	Rqmt 6hrs				Take POLS 206 and POLS 207.								
														Total Credits and <u>GPA</u>	0.000	.00

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**Area :** Work Not Applied - Met

**Description :** See advisor for acceptable substitutions.

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No		A.	Courses	not applied												
														Total Credits and <u>GPA</u>	0.000	.00

unofficial evaluation

**Area** University Writing Requirement - Not Met

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No		A.	Writing Requirement					Two courses required. Must make grade of 'C' or better. <b>CVEN 207</b> Only sections of CVEN 424; <del>ENGR 487; ENIL 485</del> with the Writing attribute [UWRT] may be used to satisfy this requirement.								
														Total Credits and <u>GPA</u>	0.000	.00

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**Area** Int'l & Cult Diversity - Not Met

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No		A.	Int'l & Cultural Diversity	6hr				Select from courses with the International and Cultural Diversity attribute [UICD] (except sections of BUSN 289 with the UWRT attribute).								
														Total Credits and <u>GPA</u>	0.000	.00

unofficial evaluation

**Area** Foreign Language - Not Met

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No		A.	Foreign Language	Rqmt				Complete one of the following: 1. Two years of the same foreign language in High School. 2. A two semester sequence of the same foreign language for University credit.								
														Total Credits and <u>GPA</u>	0.000	.00

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Area : Residence Requirement - Not Met

Description A minimum of 36 hours of 300-400 level coursework must be completed at Texas A&M University. 12 hours must be in the major field.

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course Title	Attribute	Credits	Grade	Source
No		A.		Residence-Major			12hrs	Select from CVEN 300-499.							
No	AND	B.		Residence 300-499			24hrs	Select any courses level 300-499.							
Total Credits and <u>GPA</u>													0.000	.00	

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Area GPR-Major - Not Met

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course Title	Attribute	Credits	Grade	Source
No		A.		Major GPR			58+hrs	Select from BAEN 320; CVEN 100-499; ECEN 215; <del>ENGR 111-112, 482; MEEN 315, 363; PHIL 482</del>							
Total Credits and <u>GPA</u>													0.000	.00	

ENGR 102, 216, 217  
PHYS 216, 217

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