

Program Change Request

Date Submitted: 10/23/18 4:40 pm

Viewing: **BS-CVEN-GEO : Civil Engineering - BS, Geotechnical Engineering Track**

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

Last edit: 12/10/18 10:38 am

Changes proposed by: mhueste

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

In Workflow

1. **CVEN Department Head**
2. **Curricular Services Review**
3. **EN Committee Preparer UG**
4. **EN Committee Chair UG**
5. **EN College Dean UG**
6. **UCC Preparer**
7. **UCC Chair**
8. **Faculty Senate Preparer**
9. Faculty Senate
10. Provost II
11. President
12. Curricular Services

Contact(s)

Name	E-mail	Phone
Mary Beth D Hueste Kelly Brumbelow	mhueste@tamu.edu kbrumbelow@tamu.edu	979-845-1940 979-862-7633
Luciana R Barroso	lbarroso@tamu.edu	979-845-0290

Approval Path

1. 10/13/18 2:47 pm
Robin Autenrieth (r-autenrieth): Approved for CVEN Department Head
2. 10/19/18 10:09 am
Angel Mario Carrizales (carr1214): Approved for Curricular Services Review
3. 10/22/18 5:29 pm
Eileen Hoy (ehoy): Approved for EN Committee Preparer UG
4. 10/22/18 8:57 pm
Prasad Enjeti (enjeti): Rollback to Initiator
5. 10/23/18 6:51 pm
Robin Autenrieth (r-autenrieth): Approved for CVEN Department Head
6. 10/24/18 5:33 pm
Angel Mario Carrizales (carr1214): Approved for Curricular Services Review
7. 11/17/18 8:19 am
Eileen Hoy (ehoy): Approved for EN Committee Preparer UG
8. 11/18/18 11:34 am
Prasad Enjeti (enjeti): Approved for EN Committee Chair UG
9. 11/18/18 12:02 pm
Prasad Enjeti (enjeti): Approved for EN College Dean UG

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	Not Applicable
With a concentration in	Geotechnical Engineering-CVEN (GEO)

Catalog Program Title
Civil Engineering - BS, Geotechnical 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 to accommodate changes to engineering common first and second year courses.~~

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

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

Catalog Program Requirements

History

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

Plan of Study Grid

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

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

Geotechnical Engineering Track - Technical Electives

Technical electives for the BS in Civil Engineering, Geotechnical Engineering Track are composed of a SCIENCE course (3 semester credit hours), BREADTH courses (18 semester credit hours), FOCUS courses (**11 semester credit hours**), ~~(9 semester credit hours)~~, and a CAPSTONE DESIGN course (3 ~~semester credit hours~~), ~~as delineated below, for a total of 33 semester credit hours~~, **as delineated below, for a total of 35 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	Course List	Semester Credit Hours
SCIENCE Course (3 Semester Credit Hours Required)			
GEOL 320	Geology for Civil Engineers		3
Code	Title	Course List	Semester Credit Hours
BREADTH Courses (18 Semester Credit Hours Required; All Courses in this List Should Be Taken)			
CVEN 301/EVEN 301	Environmental Engineering		3
CVEN 339	Water Resources Engineering		3
CVEN 342	Materials of Construction		3
or CVEN 343	or Portland Cement Concrete Materials for Civil Engineers		
CVEN 349	Civil Engineering Project Management		3
CVEN 365	Introduction to Geotechnical Engineering		3
CVEN 444	Structural Concrete Design		3
Code	Title	Course List	Semester Credit Hours
FOCUS Courses (11 Semester Credit Hours Required)			
CVEN 435	Geotechnical Engineering Design		3
Choose 8 Semester Credit Hours From:			
CVEN 307	Transportation Engineering		
CVEN 336	Fluid Dynamics Laboratory		
CVEN 403	Applied Civil Engineering Surveying 1		
CVEN 405	Construction Management of Field Operations		
CVEN 417	Bituminous Materials		
CVEN 418	Highway Materials and Pavement Design		
CVEN 436	Case Histories in Geotechnical Engineering		
CVEN 450	AutoCAD in Civil Engineering		
CVEN 446	Structural Steel Design		
CVEN 463/EVEN 463	Engineering Hydrology		
CVEN 485	Directed Studies 2		
CVEN 491	Research 2		
OCEN 400	Basic Coastal Engineering		
GEOL 410	Hydrogeology		
GEOL 440	Engineering Geology		
Code	Title	Course List	Semester Credit Hours
CAPSTONE DESIGN Course (3 Semester Credit Hours Required)			
CVEN 400	Design Problems in Civil Engineering		3
or CVEN 483	or Analysis and Design of Structures		

- [CVEN 403](#) is a 2 semester credit hour course.
- Up to 2 hours of [CVEN 485](#) or [CVEN 491](#) may be used.**

Additional information Edited degree evaluation is attached.

Required Proposal [DegEvalTemp-BS-CVEN-GEO_141.pdf](#)
Forms [012218PresidentApprovalMemo.pdf](#)
[BS CVEN Geotechnical 12-9-18.pdf](#)

Reviewer Comments

Angel Mario Carrizales (carri1214) (10/19/18 10:01 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 1 "Focus elect" of the additional coursework area requires 8hrs; however, all courses except one, CVEN 403 2hr, listed under the rule are 3-hour courses. In essence, a student may have to take 9 hours to meet this requirement. Which technically, looks like an increase to the overall program hours.

Prasad Enjeti (enjeti) (10/22/18 8:57 pm): Rollback: Please delete /ENGR 482

Angel Mario Carrizales (carri1214) (12/10/18 10:38 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: 606

[Print](#)

Detail Requirements

Marybeth Hueste
Sep 24, 2018 03:19 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.

Program :	BS CVEN-Geotechnical Engr	Catalog Term :	Fall 2018 - College Station
Campus :	College Station	Evaluation Term :	Fall 2018 - College Station
College :	Engineering	Expected Graduation Date :	
Degree :	Bachelor of Science	Request Number :	49
Level :	Undergraduate	Results as of :	Sep 24, 2018
Majors :	Civil Engineering	Minors :	
Departments :	Civil Engineering	Concentrations :	

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

Other Course Information

Transfer :		0.000		0
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This is NOT an official evaluation.

Area : Major Coursework (41.000 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 207	(hr)				2 hrs							
No	AND	B.	CVEN 221					3hrs							
No	AND	C.	CVEN 302					3hrs							
No	AND	D.	CVEN 303					3hrs							
No	AND	E.	CVEN 305					3hrs							
No	AND	F.	CVEN 306					3hrs							
No	AND	G.	CVEN 311					3hrs							
No	AND	H.	CVEN 322					3hrs							
No	AND	I.	CVEN 345					3hrs							
No	AND	J.	CVEN 363					3hrs							
No	AND	K.	CVEN 424					2hrs							

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 Select from BAEN 320; CVEN 313; ECEN 215; MEEN 315.
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 (³⁵33.000 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 301	3hrs											
No	AND	B.	CVEN 339	3hrs											
No	AND	C.	CVEN 349	3hrs											
No	AND	D.	CVEN 365	3hrs											
No	AND	E.	CVEN 435	3hrs											
No	AND	F.	CVEN 444	3hrs											
No	AND	G.	GEOL 320	3hrs											
No	AND	H.	Breadth Elect.	3hrs											
			Select from CVEN 342-343.												
No	AND	I.	Focus Elect.	⁸ 6hrs											
			Select from CVEN 307, 403, 405, 417-418, 436, 446, 463; 336; 450 GEOL 410, 440; OCEN 400.												
No	AND	J.	Capstone Design	3hrs											
			Select from CVEN 400, 483. up to 2 hours of CVEN 485 or 491												

Total Credits and GPA 0.000 .00

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											
			Must have a grade of 'C' or better. Select from ENGL 103, 104.												
No	AND	B.	Communication Rqmt	3hrs											
			Select from ENGL 210; COMM 205.												

Total Credits and GPA 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.	ENGR	482												
			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	

unofficial evaluation

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. <i>CVEN 207</i> Only sections of CVEN 424; ENGR 482; ENGL 482 with the Writing attribute [UWRT] may be used to satisfy this requirement.													
													Total Credits and <u>GPA</u>	0.000	.00	

unofficial evaluation

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	

unofficial evaluation

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 GPA 0.000 .00

unofficial evaluation

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	61+hrs												
								Includes: BAEN 320; CVEN 100-499; ECEN 215; ENGR 102, 482; MEEN 315, 363; PHIL 482.								

Total Credits and GPA 0.000 .00

unofficial evaluation

ENGR 102, 216, 217
PHYS 216, 217

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