

Program Change Request

Date Submitted: 10/29/18 5:14 pm

Viewing: **BS-CVEN-ENE : Civil Engineering - BS, Environmental Engineering Track**

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

Last edit: 12/10/18 10:34 am

Changes proposed by: mhueste

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

Contact(s)

Name	E-mail	Phone
Mary Beth Hueste Kelly Brumbelew	mhueste@tamu.edu kbrumbelew@tamu.edu	979-845-1940 979-862-7633
Luciana R Barroso	lbarroso@tamu.edu	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	Not Applicable
With a concentration in	Environmental Engineering-CVEN (ENE)

Catalog Program Title
Civil Engineering - BS, Environmental 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

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 2:47 pm
Robin Autenrieth (r-autenrieth): Approved for CVEN Department Head
- 10/19/18 9:09 am
Angel Mario Carrizales (carri1214): Rollback to Initiator
- 10/19/18 4:41 pm
Robin Autenrieth (r-autenrieth): Approved for CVEN Department Head
- 10/22/18 4:46 pm
Angel Mario Carrizales (carri1214): Rollback to Initiator
- 10/25/18 1:47 pm
Robin Autenrieth (r-autenrieth): Approved for CVEN Department Head
- 10/26/18 5:09 pm
Angel Mario Carrizales (carri1214): Rollback to Initiator
- 10/29/18 5:16 pm
Robin Autenrieth (r-autenrieth): Approved for CVEN Department Head
- 11/01/18 11:28 am
Angel Mario Carrizales (carri1214): Approved for Curricular Services Review
- 11/17/18 8:19 am
Eileen Hoy (ehoy):

Catalog Program Requirements

- Approved for EN
Committee Preparer UG
- 10. 11/18/18 11:34 am
Prasad Enjeti (enjeti):
Approved for EN
Committee Chair UG
- 11. 11/18/18 12:02 pm
Prasad Enjeti (enjeti):
Approved for EN
College Dean UG
- 12. 11/19/18 8:27 am
Sandra Williams
(sandra-williams):
Approved for UCC
Preparer
- 13. 12/10/18 2:47 pm
Sandra Williams
(sandra-williams):
Approved for UCC Chair

History

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

Plan of Study Grid

Second Year

Fall

	Semester Credit Hours
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	-
ECEN 215 Principles of Electrical Engineering	-
CVEN 315 Sensor Technology for the Built Environment	-
MEEN 315 Principles of Thermodynamics	-
Technical elective 6	12
University Core Curriculum 3	3
Semester Credit Hours	15

Fourth Year

Fall		
CVEN 424	Civil Engineering Professional Practice 7	2
Technical elective 6		11
University Core Curriculum 3		3
Semester Credit Hours		16
Spring		
ENGR 482/PHIL 482 Ethics and Engineering 7		3
PHIL 482/ENGR 482 Ethics and Engineering		3
Technical elective 6		9
University Core Curriculum 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

Environmental Engineering Track - Technical Electives

Technical electives for the BS in Civil Engineering, Environmental Engineering Track are composed of a SCIENCE course (3 semester credit hours), BREADTH courses (~~8-14 (7-12 semester credit hours)~~, FOCUS courses (**15-21 semester credit hours**), (~~15-20 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.

Course List		Semester Credit Hours
Code	Title	
SCIENCE Course (3 Semester Credit Hours Required)		
Choose 3 Semester Credit Hours From:		
ATMO 363	Introduction to Atmospheric Chemistry and Air Pollution	
BESC 201	Introduction to Bioenvironmental Sciences	
BIOL 113	Essentials in Biology	
GEOL 410	Hydrogeology	
GEOS 105	Introduction to Environmental Geoscience	
RENH 205	Fundamentals of Ecology	

Course List		Semester Credit Hours
Code	Title	
BREADTH Courses (8 to 14 Semester Credit Hours Required) 1		
CVEN 301/EVEN 301	Environmental Engineering	
CVEN 339	Water Resources Engineering	
EVEN 304/CVEN 304	Environmental and Water Resources Engineering Lab	
Choose 1-3 Semester Credit Hours From:		
CVEN 342	Materials of Construction	
or CVEN 343	or Portland Cement Concrete Materials for Civil Engineers	
CVEN 365	Introduction to Geotechnical Engineering	
OCEN 336	Fluid Dynamics Laboratory	
Choose 0-3 Semester Credit Hours From:		
CVEN 307	Transportation Engineering	
CVEN 349	Civil Engineering Project Management	
CVEN 403	Applied Civil Engineering Surveying	
CVEN 444	Structural Concrete Design	
CVEN 446	Structural Steel Design	

Course List		Semester Credit Hours
Code	Title	
FOCUS Courses (15 to 21 Semester Credit Hours Required) 1		
Choose 6-9 Semester Credit Hours From:		
CVEN 402	Engineered Environmental Systems	
CVEN 406	Environmental Protection and Public Health	
CVEN 413/EVEN 413	Natural Environmental Systems	
Choose 6-14 Semester Credit Hours From:		
BAEN 465	Design of Biological Waste Treatment Systems	
BAEN 469	Water Quality Engineering	
BAEN 477	Air Pollution Engineering	

Code	Title	Semester Credit Hours
CVEN 423	Geomatics for Civil Engineering	
CVEN 450	AutoCAD in Civil Engineering	
CVEN 451	Public Works Engineering	
CVEN 455	Urban Stormwater Management	
CVEN 458/EVEN 458	Hydraulic Engineering of Water Distribution Systems	
CVEN 462/EVEN 462	Engineering Hydrogeology	
CVEN 463/EVEN 463	Engineering Hydrology	
CVEN 485	Directed Studies 2	
CVEN 491	Research 2	

Course List

Code	Title	Semester Credit Hours
CAPSTONE DESIGN Course (3 Semester Credit Hours Required)		
CVEN 400	Design Problems in Civil Engineering	3

1 The sum of semester credit hours of Breadth and Focus courses must be at least 29.

2 Up to 2 hours of [CVEN 485](#) or [CVEN 491](#) may be used.

Additional information Edited degree evaluation is attached.

Required Proposal Forms [DegEvalTemp-BS-CVEN-ENE-141.pdf](#)
[012218PresidentApprovalMemo.pdf](#)
[BS CVEN Environmental 12-9-18.pdf](#)

Reviewer Comments

Angel Mario Carrizales (carri1214) (10/19/18 9:09 am): Rollback: The number of hours listed for the additional coursework area (35) does not match the sum of the proposed edits to the rules (40) please review the area.

Angel Mario Carrizales (carri1214) (10/22/18 4:46 pm): Rollback: Rule D of additional coursework area in the degree evaluation requires one credit hour; however, the majority of the courses listed under the rule are more than one hour each. Also, all of these courses listed in Rule D are also listed under proposed Rule I. Should these rules be combined? By combining the rules, we can capture the intent of the variability of the credit hours allowed for the Focus and Breadth electives.

Angel Mario Carrizales (carri1214) (10/26/18 5:09 pm): Rollback: The evaluation cannot be set up as laid out in the attached degree evaluation. To prevent clearance issues when awarding the degree proposed Rule E and Rule J for the Additional Coursework area need to be combined into one rule. Please submit an updated degree evaluation combining the requirements into one rule.

Angel Mario Carrizales (carri1214) (11/01/18 11:00 am): Initial concerns addressed.

Angel Mario Carrizales (carri1214) (11/01/18 11:28 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. Proposed RULE I "Technical Elective" of the additional coursework area, requires 7hrs; however, most of the courses listed with the exception for CVEN 403 2hr and OCEN 436 1hr, under the rule are 3hr courses. In essence, a student may have take up to 9 hours to meet this requirement. Which technically, looks like an increase to the overall program hours.

Angel Mario Carrizales (carri1214) (12/10/18 10:34 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 2:47 pm): Concerns addressed. Update received. UCC approved December 2018.

V4 V5
12-9-18

[Print](#)

Detail Requirements

Marybeth Hueste
Sep 24, 2018 03:18 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 - Environmental 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 :	48
Level :	Undergraduate	Results as of :	Sep 24, 2018
Majors :	Civil Engineering	Minors :	
Departments :	Civil Engineering	Concentrations :	

	Met	Credits	Required	Used	Courses	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

This is NOT an official evaluation.

Area : Major Coursework (39 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	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 Elect 3hrs Select from ENGR 300, CVEN 325, ECE 315, EREN 319
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 (³⁵ 30.000 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 400	3hrs											
No	AND	D.	Breadth Elect.	6hrs											
<p>← EVEN 304 / CVEN 304 1hr</p> <div style="border: 1px solid black; padding: 5px; display: inline-block;"> <p>1. Up to 3 hours to be selected from CVEN 307, 444, 446, 449, 492. Select from</p> <p>2. 3 hours selected from CVEN 342, 343, 365, 492, OREN 336 or CVEN 336.</p> </div> <p>more to I.</p>															
No	AND	E.	Focus Elect. I	6hrs											
<p>Select from CVEN 402, 406, 413, , EVEN 413</p>															
No	AND	F.	Focus Elect. II	6hrs											
<p>Select from BAEN 465, 469, 477; CVEN 423, 451, 455, 458, 462, 463. , EVEN 458, 462, 463</p>															
No	AND	G.	Focus Elect. III	3hrs											
<p>Select from BAEN 465, 469, 477; CVEN 402, 406, 413, 423, 451, 455, 458, 462, 463. , EVEN 413, 458, 462, 463</p>															
No	AND	H.	MATH/Science	3hrs											
<p>Select from ATMO 363; BESC 201; BIOL 113; GEOL 410; GEOS 105; RENR 205.</p>															

Total Credits and GPA 0.000 .00

I. Tech Electives 7hrs

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											
<p>Must have a grade of 'C' or better. Select from ENGL 103, 104.</p>															
No	AND	B.	Communication Rqmt	3hrs											

5. Up to 2 hrs CVEN 485 or 491

Select from ENGL 210; COMM 205.

Total Credits and GPA 0.000 .00

unofficial evaluation

Area : Mathematics (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.	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.	ENGL	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 Reqmt	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
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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 GPA 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
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No		A.	Courses not applied													
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Total Credits and GPA 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
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No		A.	Writing Requirement													

Two courses required.
Must make grade of 'C' or better. **CVEN 207**
Only sections of CVEN 424, ENGR 443, ENGR 443 with the Writing attribute [UWRT] may be used to satisfy this requirement.

Total Credits and GPA 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
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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 GPA 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
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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 GPA 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
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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
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No		A.	Major GPR	52+hrs											
								Select from BAEN 320, CVEN 100-499, ECEN 215, ENGR 102-103, MEEN 315, 363, PHYS 216, 217 .							

ENGR 102, 216, 217
PHYS 216, 217

Total Credits and GPA 0.000 .00

unofficial evaluation

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