

Civil Engineering B.S.C.E.

131 credits, 2024/2025 Catalog

First Year

Fall Semester	Spring Semester
3 ENC 1101 Composition I	3 ENC 1102 Composition II
4 MAC 2281 or MAC 2311 Calculus I	4 MAC 2282 or MAC 2312 Calculus II
3 CHS 2440 or CHM 2045 Chemistry I	3 PHY 2048 General Physics I
1 CHS 2440L or CHM 2045L Chemistry I Lab	1 PHY 2048L General Physics I Lab
R EGN 3000 Foundations of Engineering	3 EGN 1113 Intro. to Design Graphics
3 EGN 3000L Foundations of Eng. Lab (TGEC)	3 * General Education Core Social Science
14 <i>Total Credits</i>	17 <i>Total Credits</i>

Second Year

Fall Semester	Spring Semester	Summer
4 MAC 2283 or MAC 2313 Calculus III	3 MAP 2302 Differential Eq. or EGN 3433 Modeling & Analysis of Eng Systems	3 EGN 3615 Engineering Economics (TGED)
3 PHY 2049 General Physics II	3 EGN 3321 Dynamics	3 General Ed. Core Humanities Elective
1 PHY 2049L General Physics II Lab	3 EGN 3353 Basic Fluid Mechanics	3 ENC 3246 Comm. for Engineers
3 ** EGN 3311 Statics	3 EGN 3331 Mechanics of Materials	
3 EGN 4453 Numerical & Computer Tools I	1 EGN 3331L Mechanics of Materials Lab	
3 EGN 3365 Materials I		
1 Apply for Progression to Upper Division		
17 <i>Total Credits</i>	13 <i>Total Credits</i>	9 <i>Total Credits</i>

Third Year

Fall Semester	Spring Semester	Summer
3 ENV 4001 Environmental Systems Engineering	3 CES 3102 Structures I	Recommended Internship/Co-op
3 TTE 4004 Transportation Engineering I	3 CWR 4202 Hydraulics	List Company/employer name and position
3 EGN 3343 Thermodynamics	3 GLY 3850 Geology for Engineers	
3 EGN 3443 Probability & Statistics for Eng (TGEI)	4 CE Track Elective	
3 EGN 4454 Numerical & Computer Tools II	3 CE Track Elective	
15 <i>Total Credits</i>	16 <i>Total Credits</i>	

Fourth Year

Fall Semester	Spring Semester
3 CEG 4011 Geotechnical Engineering I	3 CGN 3021L Civil Engineering Lab
1 CEG 4011L Geotechnical Lab	3 CE Track Elective
6 CE Track Electives (two courses)	3 CE Track Elective
2 General Elective	3 CGN 4122 Professional/Ethical Issues in Eng (TGEE)
3 EGN 3373 Intro to Electrical Systems I	3 CE Capstone Design Requirement (TGEH)
1 Apply for Graduation	
15 <i>Total Credits</i>	15 <i>Total Credits</i>

Note: Courses in bold must be completed with an overall grade point average of 3.0, see overleaf.

R – Required course

** - High Priority course that begins a five-semester sequence

* Students must meet the Civic Literacy requirement with credit for AMH 2010 (fall 2024 or later), AMH 2020, or POS 2041 **and** passing the Florida Civics Literacy Exam.

TGEC = Creative Thinking, TGEI = Information & Data Literacy, TGED = Human & Cultural Diversity,

TGEE = Ethical Reasoning & Civic Engagement, TGEH = High Impact Practice Capstone

Civil Engineering Requirements for Progression to the Upper Division

- Completion of the following courses with a minimum grade of C and a cumulative **3.0 GPA** (based on best attempt with maximum two attempts) for the following courses:
 - ___ Calculus I or Engineering Calculus I (MAC2311 or MAC2281)
 - ___ General Chemistry I or Chemistry for Engineers (CHM2045 & 2045L or CHS 2440 & 2440L)
 - ___ Calculus II or Engineering Calculus II (MAC2312 or MAC2282)
 - ___ Physics I with lab (PHY2048 and PHY2048L)
 - ___ Calculus III or Engineering Calculus III (MAC2313 or MAC 2283)
 - ___ Physics II with lab (PHY2049 or 2061 and PHY2049L)
- Need a USF GPA and an Overall GPA of 2.00 or better

Continuation and Graduation Requirements

Reference Catalog: https://catalog.usf.edu/preview_program.php?catoid=21&poid=10328

- Requires a minimum grade of "C-" as well as a **2.50 GPA** (based on best attempt) averaged over the following courses: [EGN 3311 Statics](#), [EGN 3331 Mechanics of Materials](#), [EGN 3353 Basic Fluid Mechanics](#), [EGN 3365 Materials Engineering I](#).
- Unless otherwise stated, the minimum acceptable grade in all BSCE required math, science, engineering, and specialization courses is a C- or higher. A total of only two D grades are allowed in engineering courses. The department must be contacted to find out the specialization courses in which D grades are not allowed.
- Students must have and maintain a minimum 2.0 Semester GPA, 2.0 Math and Science GPA, 2.0 Engineering GPA, 2.0 Specialization GPA, 2.0 USF GPA, and 2.0 Overall GPA.
- All math, science and engineering courses must be successfully completed in no more than **two** registered attempts. Grades of W, IF, U, and R are considered attempts.*

CE TRACK (19 Hrs) with CAPSTONE DESIGN (Complete One)

Structures/Materials/Geotechnical Track		Geotechnical/Transportation Track	
CES 4702 Concepts of Concrete Design (R)	3	CGN 4851C Concrete Construction Materials (R)	4
CES 4605 Concepts of Steel Design (R)	3	CEG 4012 Geotechnical Engineering II (R)	3
CGN 4851C Concrete Construction Materials (R)	4	TTE 4005 Transportation Engineering (R)	3
CEG 4012 Geotechnical Engineering II or		Technical Elective	3
TTE 4005 Transportation Engineering II	3	Technical Elective	3
Technical Elective	3	Technical Elective	3
Technical Elective	3	CEG 4850 Capstone Geotechnical/Transportation Design	3
CES 4750 Capstone Structures/Matrls/Geotech Design	3		
Environmental/Water Resources Track		The Program supports the following TECH. ELECTIVE courses:	
ENV 4417 Water Quality and Treatment (R)	3	CCE 4031 Construction Management	3
CWR 4540 Water Resources Engineering (R)	3	CEG 4012 Geotechnical Engineering II	3
CEG 4012 Geotechnical Engineering II or	3	CES 4605 Concepts of Steel Design	3
TTE 4005 Transportation Engineering II		CES 4702 Concepts of Concrete Design	3
ENV 4004L Environmental Engineering Lab	1	CGN 4851 Concrete Construction Materials	3
Technical Elective	3	CGN 4933 Special Topics in Civil & Env. Eng***	3
Technical Elective	3	CWR 4540 Water Resources Engineering I	3
Technical Elective	3	ENV 4417 Water Quality and Treatment	3
CWR 4812 Capstone Water Resources/Environmental	3	ENV 4082 Environmental Field Sampling	3
Design		ENV 4071 Environmental Site Assessment	3
		ENV 4612 Green Engineering for Sustainability	3
		SUR 2101C Engineering Land Surveying	3
		TTE 4003 Transportation and Society	3
		TTE 4005 Transportation Engineering II	3

*** Please see academic advisor for selected special topics courses.

(R) = Required for Track