

Civil Engineering

First Year

Fall Semester

3	ENC 1101 Composition I
4	MAC 2281 Engineering Calculus I
3	CHS 2440 Chemistry for Engineers
1	CHS 2440L Chemistry for Engineers La b
R	EGN 3000 Foundations of Engineering
1	EGN 3000 LAB Foundations of Engineering
3	FKL Social & Behavioral Science Elective
15	<i>Total Credits</i>

Spring Semester

3	ENC 1102 Composition II
4	MAC 2282 Engineering Calculus II
3	GLY 3850 Geology for Engineers
3	PHY 2048 General Physics I
1	PHY 2048L General Physics I Lab
3	EGS 1113 Introduction to Design Graphics
17	<i>Total Credits</i>

Second Year

Fall Semester

4	MAC 2283 Engineering Calculus III
3	PHY 2049 General Physics II
1	PHY 2049L General Physics II Lab
3	* EGN 3311 Statics
3	EGN 4427 Numerical & Computer Tools I
3	FKL Humanities Elective
17	<i>Total Credits</i>

Spring Semester

3	MAP 2302 Differential Eq. or EGN 3433 Modeling and Analysis of Engr Systems
3	EGN 3321 Dynamics
3	EGN 3353 Basic Fluid Mechanics
3	EGN 3331 Mechanics of Materials
1	EGN 3331L Mechanics of Materials Lab
3	EGN 3365 Materials I
16	<i>Total Credits</i>

Summer School

3	EGN 3615 Engr Econ
3	FKL Human/Diversity & Global Elective
3	ENC 3246 Communication for Engrs (6A WI)
9	<i>Total Credits</i>

Third Year

Fall Semester

3	ENV 4001 Environmental Systems Engineering
3	TTE 4004 Transportation Engineering I
3	EGN 3343 Thermodynamics
3	EGN 3443 Probability & Statistics for Engineers
3	EGN4454 Numerical & Computer Tools II
15	<i>Total Credits</i>

Spring Semester

3	CES 3102 Structures I
3	CWR 4202 Hydraulics
1	ENV 4004L Environmental/Hydraulics Lab
3	EGN 3373 Intro to Electrical Systems I
3	CE Concentration Elective
3	FKL Humanities Elective
16	<i>Total Credits</i>

Internship/Co-op

List Company/employer name and position

Fourth Year

Fall Semester

3	CEG 4011 Geotechnical Engineering I
1	CEG 4011L Geotechnical/Transportation Lab
3	CE Concentration Elective
3	CE Concentration Elective
3	FKL Fine Arts Elective
13	<i>Total Credits</i>

Spring Semester

3	CE Concentration Elective
3	CE Concentration Elective
3	CE Capstone Design Requirement (CD)
1	CGN 4122 Professional/Ethical Issues in Engr
3	FKL Social & Behavioral Science Elective
13	<i>Total Credits</i>

Note:

Courses in bold must be completed with an overall grade point average of 2.30.

* - Critical course that begins a 5 semester sequence

R – Required course

Entrance Requirements into the Department of Civil and Environmental Engineering

- Completion of the following courses with a minimum grade of C and an overall grade point average of 2.30 (based on best attempt) for the following courses:
 - ___ Calculus I or Engineering Calculus I (MAC2311 or MAC2281)
 - ___ General Chemistry I (CHM2045&2045L)
 - ___ Calculus II or Engineering Calculus II (MAC2312 or MAC2282)
 - ___ Physics I (PHY2048, 2048L)
 - ___ Calculus III or Engineering Calculus III (MAC2313 or MAC 2283)
 - ___ Physics II (PHY2049, PHY2049L)
- Need a USF GPA and an Overall GPA of 2.00 or better

Continuation Requirements:

- 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](#).
- “C-” is the minimum acceptable grade in each engineering course. A minimum GPA of 2.00 in the following categories must be maintained at all times: Overall, USF, Math/Science, Engineering Courses and Specialization Courses.
- *All math, science and engineering courses must be successfully completed in no more than three registered attempts. Grades of W, I, IF, U, R, and M are considered attempts. Registration that is canceled for non-payment is also considered an attempt.*

Gordon Rule (6A) is fully met through the mathematics courses above, ENC1101, ENC1102, ENC 3246 and by selecting one technical or general education elective that is an approved 6A communication course. Gordon Rule communication requirement is met for any student entering USF with 60 or more hours.

Exit Requirements: Exit requirements must be taken at USF. The Capstone Design Requirement (CD) and Writing Intensive (WI) exit requirements are met through ENC3246 and Capstone Design Course.

Course sequence: Statics should be taken as early as possible in preparation for your major. Foundation of Knowledge & Learning (FKL) courses may be taken in any order.

Civil Engineering Concentration AND CAPSTONE DESIGN Requirements

Civil Engineering students take one of the 3 tracks listed:

Structures/Materials/Geotechnical Track		Geotechnical/Transportation Track	
CES 4702 Concepts of Concrete Design (R)	3	CGN 4851 Concrete Construction Materials (R)	3
CES 4605 Concepts of Steel Design (R)	3	CEG 4012 Geotechnical Engineering II (R)	3
CGN 4851 Concrete Construction Materials (R)	3	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	CEG 4850 Capstone Geotechnical/Transportation Design	3
CES 4750 Capstone Structures/Materials/Geotechnical Design	3		
Environmental/Water Resources Track		The Program supports the following technical 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		CES 4605 Concepts of Steel Design	3
TTE 4005 Transportation Engineering II	3	CES 4702 Concepts of Concrete Design	3
Technical Elective	3	CGN 4851 Concrete Construction Materials	3
Technical Elective	3	CGN 4933 Special Topics in Civil & Environmental Engr **	3
CWR 4812 Capstone Water Resources/Environmental Design	3	CWR 4540 Water Resources Engineering I	3
		ENV 4417 Water Quality and Treatment	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 Concentration