

**CIVIL ENGINEERING  
COURSE PLAN BY SEMESTER**

**FOUNDATIONS**

For suggestions as to which Foundations courses to take speak with an advisor, or go to our web site.

FIRST YEAR					
Fall Semester			Spring Semester		
ENGL 101	Introduction to College Writing	3	ENGL 102	Intro to College Writing and Research	3
CHEM 111	General Chemistry I	3	CHEM 112	General Chemistry II	3
CHEM 111L	General Chemistry I Lab	1	CHEM 112L	General Chemistry II Lab	1
MATH 170	Calculus I	4	MATH 175	Calculus II	4
ENGR 120	Introduction to Engineering	3	PHYS 211	Physics I with Calculus	4
UF 100	Intellectual Foundations	3	PHYS 211L	Physics I with Calculus Lab	1
17			16		

SECOND YEAR					
Fall Semester			Spring Semester		
CE 210 #	Engineering Surveying	2	CE 280	Civil Engineering Case Studies	2
CE 211 #	Engineering Surveying Lab	1	CE 282 **	Engineering Practice	3
ENGL 202	Technical Communication	3	CMGT 240	Intro to Construction Management	3
ENGR 210	Engineering Statics	3	ENGR 220	Engineering Dynamics	3
MATH 275	Multivariable & Vector Calculus	4	ENGR 350	Engineering Mechanics of Materials	3
UF 200	Civic and Ethical Foundations	3	MATH 333	Differential Equations with Matrix Theory	4
16			18		

The following courses must be completed in order to apply for **Admission to Upper Division**:  
 CE 280, CHEM 112, ENGR 350, MATH 275 and MATH 333  
 Please check our web site for the minimum GPA required in these courses and other requirements to be met for a successful application.

**ADMISSION TO UPPER DIVISION**

Please see our web site concerning the requirements for taking Upper Division courses.

THIRD YEAR					
Fall Semester			Spring Semester		
CE 320 #	Principles of Environmental Engineering	3	CE 360 **	Engineering Properties of Soils	3
CE 321 #	Principles of Environmental Engineering Lab	1	CE 361 **	Engineering Properties of Soils Lab	1
CE 341	Construction Materials Lab	1	CE 370 **	Transportation Engineering Fundamentals	3
CE 352 #	Structures I	3	ENGR 320	Thermodynamics I	3
ENGR 240	Introduction to Circuits	3	ENGR 330	Fluid Mechanics	3
ENGR 245	Intro to Materials Science	3	ENGR 331	Fluid Mechanics Lab	1
DLV	Visual and Performing Arts	3			
17			14		

**ELECTIVE OFFERINGS**

For a list of upcoming elective offerings go to our web site.

FOURTH YEAR					
Fall Semester			Spring Semester		
CE 481 #	Senior Design Project I	1	CE 483 **	Senior Design Project II	3
CE DE	CE Design Elective	3	CE TE	CE Technical Elective	3
CE TE	CE Technical Elective	3	CE TE	CE Technical Elective	3
Sci	Science Elective	3-4	Tech	Technical Elective	3
DLS	Social Sciences	3	DLL	Literature and Humanities	3-4
13-14			12-13		

# - Offered **FALL** only

\*\* - Offered **SPRING** only

**TOTAL CREDITS:  
123-125**

## CIVIL ENGINEERING ELECTIVES

### CE DESIGN ELECTIVES (CE DE)

A Civil Engineering Design Elective is defined as a nonrequired course, taught by the Civil Engineering Department, with a primary emphasis on design.

CE 424	Water Treatment Plant System & Design	CE 470	Highway and Traffic Systems Design
CE 425	Wastewater Treatment Plant System & Design		
CE 436	Hydraulics	CE 450	Reinforced Concrete Design
		CE 452	Structural Steel Design
CE 460	Geotechnical Engineering Design	CE 454	Timber Design
CE 462	Foundation Design	CE 456	Masonry Design

### CE TECHNICAL ELECTIVES (CE TE)

A Civil Engineering Technical Elective is defined as a non-required course, taught by the Civil Engineering Department. Civil Engineering Technical Electives include all Civil Engineering Design Electives.

<b>CE DESIGN ELECTIVES (see above)</b>			
CE 310	Advanced Surveying	CE 351	Codes and Official Documents
		CE 354	Structures II
CE 412	Hydrogeology	CE 433	Contaminant Transport
CE 416	Hydrology	CE 437	GIS in Water Resources
		CE 438	Water Resources Engineering
CE 420	Environmental Process Chemistry		
CE 422	Hazardous Waste Engineering	CE 472	Transportation Planning
CE 423	Air Pollution Control	CE 475	Traffic Engineering
CE 426	Aqueous Geochemistry		

### TECHNICAL ELECTIVES (Tech)

#### CE DESIGN ELECTIVES (see above)

and

#### CE TECHNICAL ELECTIVES (see above)

and

#### SCIENCE ELECTIVES (300 & 400 level courses only)

and

CE 493	Internship **
CE 496	Independent Study **

and

*Many upper division courses from departments and programs outside of Civil Engineering.*

*ENGR 360 may not be used as a Technical Elective.*

A Technical Elective is defined as a non-required course that is related to the Civil Engineering profession. The course may be taught by departments other than Civil Engineering. Civil Engineering Technical and Design Electives as well as 300 & 400 level courses listed as Science Electives may be used as Technical Electives. Courses outside the Civil Engineering Department may be used for Technical Electives with the approval of the Civil Engineering Faculty.

\*\* CE Internship and/or Independent Study may be used for up to 3 credits each in meeting the Technical Elective requirements

### SCIENCE ELECTIVES (Sci)

A Science Elective is defined as a science course from a field that is not Chemistry or Physics that expands the students understanding of the nature of an aspect of Civil Engineering. Courses in addition to those listed may be used to meet this requirement with the approval of the Civil Engineering Faculty.

BIOL 100	Concepts of Biology	GEOG 321	Sustainability Of Natural Resources
BIOL 107	Introduction to Human Biology	GEOG 331	Climatology
BIOL 109	Plants and Society	GEOG 360	Introduction To GIS
BIOL 191	General Biology I	GEOPH 305	Applied Geophysics
BIOL 192	General Biology II	GEOS 100	Fundamentals of Geology
ENVHLTH 310	Water Supply And Water Quality Mgmt	GEOS 101	Environmental Geology
ENVHLTH 416	Noise And Other Physical Agents		
ENVSTD 121	Introduction To Environmental Studies		