

## CIVIL ENGINEERING COURSE PLAN BY SEMESTER

### CORE

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

FIRST YEAR					
Fall Semester			Spring Semester		
ENGL 101	English Composition	3	ENGL 102	English Composition	3
CHEM 111	General Chemistry	3	CHEM 112	General Chemistry	3
CHEM 111L	General Chemistry Lab	1	CHEM 112L	General Chemistry 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
COMM 101	Fundamentals of Speech Communications	3	PHYS 211L	Physics I with Calculus Lab	1
17			16		

### DIVERSITY

If one of the courses used to meet the Civil Engineering requirements is not a Diversity course then an additional course must be taken.

SECOND YEAR					
Fall Semester			Spring Semester		
CE 210 #	Engineering Surveying	2	CE 280	Civil Engineering Case Studies	2
CE 211 #	Engineering Surveying Lab	1	ENGR 220	Engineering Dynamics	3
ENGR 210	Engineering Statics	3	ENGR 350	Engineering Mechanics of Materials	3
MATH 275	Multivariable & Vector Calculus	4	MATH 333	Differential Equations with Matrix Theory	4
PHYS 212	Physics II with Calculus	4	ENGL 202	Technical Communication	3
PHYS 212L	Physics II with Calculus Lab	1	H/S	Area I/II CORE Course	3
15			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	ENGR 330	Fluid Mechanics	3
CE 321 #	Principles of Environmental Engineering Lab	1	ENGR 331	Fluid Mechanics Lab	1
CE 352 #	Structures I	3	CE 341	Construction Materials Lab	1
CE 360 #	Engineering Properties of Soils	3	CE 370 **	Transportation Engineering Fundamentals	3
CE 361 #	Engineering Properties of Soils Lab	1	CE 450 **	Reinforced Concrete Design	3
CMGT 240	Intro to Construction Management	3	ENGR 245	Intro to Materials Science	3
H/S	Area I/II CORE Course	3	H/S	Area I/II CORE Course	3
17			17		

### ELECTIVE OFFERINGS

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

FOURTH YEAR					
Fall Semester			Spring Semester		
ENGR 240	Introduction to Circuits	3	ENGR 320	Thermodynamics I	3
CE 400 #	Engineering Practice	3	CE 483 **	Senior Design Project II	3
CE 481 #	Senior Design Project I	1	CE TE	CE Technical Elective	3
CE DE	CE Design Elective	3	Tech	Technical Elective	3
Sci	Science Elective	3 - 4	H/S	Area I/II CORE Course	3
H/S	Area I/II CORE Course	3			
16 - 17			15		

# - Offered FALL only

\*\* - Offered SPRING only

**TOTAL CREDITS:  
131-132**

## CIVIL ENGINEERING ELECTIVES

### CE DESIGN ELECTIVES (CE DE)

CE 424	Water Treatment Plant System & Design
CE 425	Wastewater Treatment Plant System & Design
CE 436	Hydraulics
CE 438	Water Resources Engineering
CE 452	Structural Steel Design
CE 454	Timber Design
CE 456	Masonry Design
CE 460	Geotechnical Engineering Design
CE 462	Foundation Design
CE 470	Highway and Traffic Systems Design

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

#### *CE DESIGN ELECTIVES (see above)*

*and*

CE 310	Advanced Surveying
CE 354	Structures II
CE 390	Codes and Official Documents
CE 412	Hydrogeology
CE 416	Hydrology
CE 420	Environmental Process Chemistry
CE 422	Hazardous Waste Engineering
CE 433	Contaminant Transport
CE 472	Transportation Planning
CE 475	Traffic Engineering

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