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
CE 284	Engineering Methods	2	ENGL 202	Technical Communication	3
ENGR 210	Engineering Statics	3	CE or ME 350	Engineering Mechanics of Materials	3
MATH 275	Multivariable & Vector Calculus	4	MATH 333	Differential Equations with Matrix Theory	4
UF 200	Civic and Ethical Foundations	3			
		15			15

ADMISSION TO UPPER DIVISION
Please see our web site concerning the requirements for taking Upper Division courses.

The following courses must be completed in order to apply for **Admission to Upper Division**:
CE 280, CHEM 112, CE/ME/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.

THIRD YEAR

Fall Semester			Spring Semester		
CE 320 #	Principles of Environmental Engineering	3	CE or ME 330	Fluid Mechanics	3
CE 321 #	Principles of Environmental Engineering Lab	1	CE or ME 331	Fluid Mechanics Lab	1
CE 340 or ENGR 245	Engineering Properties of Construction Matierials or Intro to Materials Science	3	CE 360 **	Engineering Properties of Soils	3
			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	CMGT 120	Intro to Construction Management	3
ENGR 220	Engineering Dynamics	3	ME 302 or ENGR 240	Thermodynamics I or Introduction to Circuits	3
DLV	***Visual and Performing Arts***	3			
		17			17

ELECTIVE OFFERINGS
For a list of upcoming elecive 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
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: 122-124

CE Web Site: http://coen.boisestate.edu/ce

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

CE DESIGN ELECTIVES (see above)

		CE 351	Codes and Official Documents
CE 310	Advanced Surveying	CE 354	Structures II
CE 402	Computational Techniques	CE 433	Contaminant Transport
CE 410	Engineering Hydrology	CE 437	GIS in Water Resources
CE 412	Hydrogeology	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.

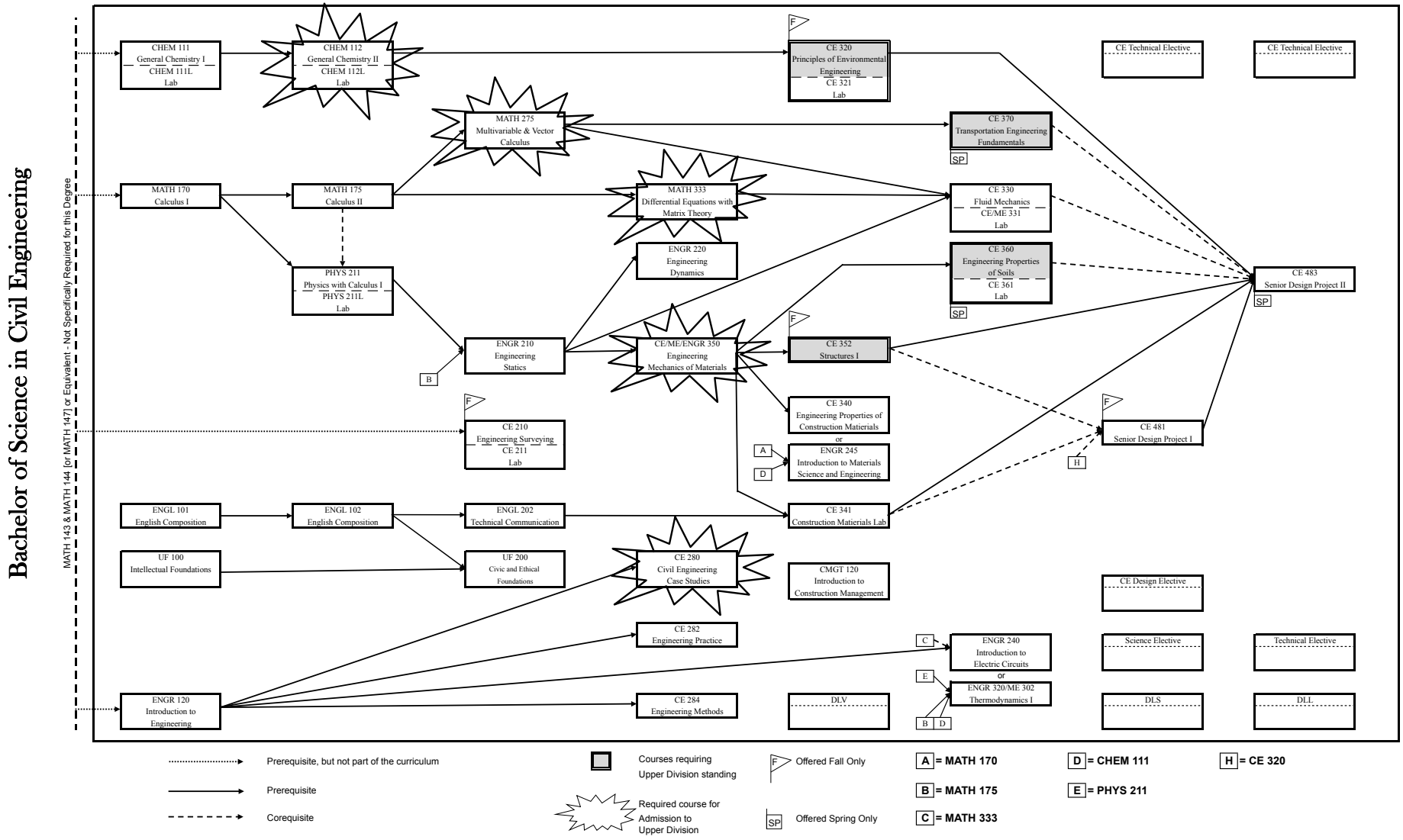
** CE Internship and/or Independent Study may be used for up to 3 credits each in meeting the Technical Elective requirements.

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 Mgmnt	GEOS 101	Environmental Geology
ENVHLTH 416	Noise And Other Physical Agents		
ENVSTD 121	Introduction To Environmental Studies		

2014-2015


Bachelor of Science in Civil Engineering
MATH 143 & MATH 144 [or MATH 147] or Equivalent - Not Specifically Required for this Degree
CHEM 111 General Chemistry I / CHEM 111L Lab
CHEM 112 General Chemistry II / CHEM 112L Lab
CE 320 Principles of Environmental Engineering / CE 321 Lab
F
CE Technical Elective
CE Technical Elective
MATH 275 Multivariable & Vector Calculus
CE 370 Transportation Engineering Fundamentals
SP
MATH 170 Calculus I
MATH 175 Calculus II
MATH 333 Differential Equations with Matrix Theory
CE 330 Fluid Mechanics / CE/ME 331 Lab
ENGR 220 Engineering Dynamics
CE 360 Engineering Properties of Soils / CE 361 Lab
SP
CE 483 Senior Design Project II
SP
PHYS 211 Physics with Calculus I / PHYS 211L Lab
ENGR 210 Engineering Statics
B
CE/ME/ENGR 350 Engineering Mechanics of Materials
F
CE 352 Structures I
F
CE 210 Engineering Surveying / CE 211 Lab
CE 340 Engineering Properties of Construction Materials
or
A
D
ENGR 245 Introduction to Materials Science and Engineering
F
CE 481 Senior Design Project I
H
ENGL 101 English Composition
ENGL 102 English Composition
ENGL 202 Technical Communication
CE 341 Construction Matierials Lab
UF 100 Intellectual Foundations
UF 200 Civic and Ethical Foundations
CE 280 Civil Engineering Case Studies
CMGT 120 Introduction to Construction Management
CE Design Elective
CE 282 Engineering Practice
C
ENGR 240 Introduction to Electric Circuits
or
E
ENGR 320/ME 302 Thermodynamics I
B
D
Science Elective
Technical Elective
ENGR 120 Introduction to Engineering
CE 284 Engineering Methods
DLV
DLS
DLL
Prerequisite, but not part of the curriculum
Prerequisite
Corequisite
Courses requiring Upper Division standing
Required course for Admission to Upper Division
Offered Fall Only
Offered Spring Only
A = MATH 170
B = MATH 175
C = MATH 333
D = CHEM 111
E = PHYS 211
H = CE 320