

Civil Engineering Undergraduate Curriculum Fall 2009

FRESHMAN YEAR

<u><i>First Semester</i></u>	<u><i>Second Semester</i></u>
<p>(4) Chem 105 Principles of Chem I (1 yr hs Chem or Chem 101; Math 107 c//)</p> <p>(3) Engl 101 Intro Writing [W]</p> <p>(3) GenEd 110 World Civ I [A]²</p> <p>(4) Math 171 Calculus I [N] (Math107)¹</p> <p>(2) ENGR 120 Innovation in Design</p> <p>(16) Total Hours</p>	<p>(4) Biol 102 OR MBioS 101³</p> <p>(3) Gen Ed 111 World Civ II [A]²</p> <p>(4) Math 172 Calculus II (Math 171)¹</p> <p>(2) Math 220 Linear Alg (Math 171 c//)</p> <p>(3) EconS 101 OR 102 Micro/Macro[S]²</p> <p>(16) Total Hours</p>

SOPHOMORE YEAR

<u><i>First Semester</i></u>	<u><i>Second Semester</i></u>
<p>(3) Intercultural Studies [I][G][K]²</p> <p>(3) CE 211 Statics(Math 172 c//; Phys 201 c//)¹</p> <p>(3) ComSt 102, ComSt 235, OR (4) HD 205 [C]</p> <p>(2) EE 221 Numerical Computing for Engrs (Math 172, 220)</p> <p>(2) Math 273 Calculus III (Math 172)</p> <p>(4) Phys 201 Classical Phys (Math 171)¹</p> <p>(17/18) Total Hours</p> <p style="text-align: center;">CERTIFY¹</p>	<p>(3) ME 212 Dynamics (CE 211)</p> <p>(3) CE 215 Mech of Materials (CE 211)</p> <p>(3) Tier II Arts and Humanities [H][G]²</p> <p>(3) Math 315 Diff Eq (Math 273, 220 c//)</p> <p>(1) ME 220 Materials Lab (CE 215 c//)</p> <p>(4) Phys 202 Classical Phys (Phys 201) OR Geo 102⁴ OR Chem 106³</p> <p>(16) Total Hours</p>

JUNIOR YEAR

Writing Portfolio must complete after 60 credits

<u><i>First Semester</i></u>	<u><i>Second Semester</i></u>
<p>(2) Cst M 254 Constr Graphics (certified)</p> <p>(2) CE 302 Intro to Surveying (Math 171)⁷</p> <p>(3) CE 315 Fluid Mechanics (ME 212)</p> <p>(3) CE 317 Geotech Engr (CE 215; CE315 c//) [M]⁷</p> <p>(3) CE 330 Structural Engineering (CE 215)⁷</p> <p>(3) CE 341 Environmental Engr (Chem 105; MBioS 101 rec)</p> <p>(16) Total Hours</p>	<p>(3) CE 322 Transportation Engr (Math/Stat 360 /370 c//; CE 302 c//)⁷</p> <p>(3) CE 351 Water Resources (CE 315)⁷</p> <p>(2) CE 303 CE Computer Applications (CstM 254)⁷</p> <p>(3) Math/Stat 360 or 370 Statistics (Math 172)</p> <p>(3) Engl 402 Technical Writing [W]</p> <p>(2) EE 304 Electric Circuits (Math315 c//)</p> <p>OR (3) ME 301 Thermodynamics (Phys 201)</p> <p>(16/17) Total Hours</p>

SENIOR YEAR

All students required to take Fundamentals of Engineering Exam and fulfill the Experiential Requirement prior to graduation.

<u><i>First Semester</i></u>	<u><i>Second Semester</i></u>
<p>(3) CE 463 Engineering Administration</p> <p>(1) CE 480 Ethics & Professionalism [M]⁷</p> <p>(3) CE Laboratory (CE400, 414, 415, 416)^{5,7}</p> <p>(9) CE Electives⁵</p> <p>(16) Total Hours</p>	<p>(3) CE 465 Integrated C E Des [M]^{6*}</p> <p>(1) CE 466 FE Exam Review</p> <p>(3) Tier III Hum/Soc [T]²</p> <p>(9) CE Electives^{5,7}</p> <p>(16) Total Hours</p>

The alternate senior year schedules shown below are offered to those students interested in studying with an Environmental, Water Resources, Structural or Infrastructure engineering emphasis. This would substitute for the senior year above and complete the study schedule for the Bachelor of Science degree in Civil Engineering.

Environmental Engineering Emphasis

<u><i>First Semester</i></u>	<u><i>Second Semester</i></u>
<p>(3) CE 404 Sustainable Eng. I⁵</p> <p>(3) CE 409 Air Quality Modeling⁵</p> <p>(3) CE 415 Env Meas (CE 341, Engl 402)^{5,7}</p> <p>(3 or 4) CE 418 Hazardous Waste Eng. (CE 341)⁵</p> <p>(3) CE 463 Engineering Administration</p> <p>(1) CE 480 Ethics & Professionalism [M]⁷</p> <p>(16/17) Total Hours</p>	<p>(3) CE 408 Air Pollution Control Eng.⁵</p> <p>OR CE 419 Hazardous Waste Treatment (CE 418)⁵</p> <p>(3) CE 442 Water/Waste (CE 341)⁵</p> <p>(3) CE 465 Integrated C E Des [M]^{6*}</p> <p>(1) CE 466 FE Exam Review</p> <p>(3) CE Elective^{5,7}</p> <p>(3) Tier III Hum/Soc [T]²</p> <p>(16) Total Hours</p>

Water Resources Emphasis

<u><i>First Semester</i></u>	<u><i>Second Semester</i></u>
<p>(3) CE 404 Sustainable Eng. I⁵</p> <p>(3) CE 451 Open Channel Flow (CE 351)⁵</p> <p>(3) CE 456 Sustainability in Wat. Res.⁵</p> <p>(3) CE 463 Engineering Administration</p> <p>(3) CE 475 Groundwater (CE 317; and Math 172 or c//)⁵</p> <p>(1) CE 480 Ethics & Professionalism [M]⁷</p> <p>(16) Total Hours</p>	<p>(3) CE 416 Hydraulics Lab (CE 315, Engl 402)^{5,7}</p> <p>(3) CE 460 Advanced Hydrology (CE 351)⁵</p> <p>(3) CE Elective^{5,7}</p> <p>(3) CE 465 Integrated C E Des [M]^{6*}</p> <p>(1) CE 466 FE Exam Review</p> <p>(3) Tier III Hum/Soc [T]²</p> <p>(16) Total Hours</p>

Structural Engineering Emphasis

<u><i>First Semester</i></u>	<u><i>Second Semester</i></u>
<p>(3) CE 463 Engineering Administration</p> <p>(3) CE 430 Analysis of Indeterm Structures (CE 330; Math 220; EE 221)^{5,7}</p> <p>(3) CE 433 Reinforced Concrete Des. (CE 330)^{5,7}</p> <p>(3) CE 436 Design of Timber Structures (CE 330)^{5,7}</p> <p>(3) CE Elective⁵ OR Tier III Hum/Soc [T]²</p> <p>(1) CE 480 Ethics & Professionalism [M]⁷</p> <p>(16) Total Hours</p>	<p>(3) CE 414 Structural Design Laboratory (CE 431, 433, 434, or 436, or c://; Engl 402)^{5,7}</p> <p>(3) CE 431 Structural Steel Design (CE 330)^{5,7}</p> <p>(3) CE 434 Prestressed Concrete & Masonry (CE 433)^{5,7}</p> <p>(3) CE 465 Integrated CE Design[M]^{6*}</p> <p>(1) CE 466 FE Exam Review</p> <p>(3) Tier III Hum/Soc [T]²</p> <p>OR (3) CE Elective [CE 435 recommended (CE 317)^{5,7}]</p> <p>(16) Total Hours</p>

Infrastructure Engineering Emphasis

<u><i>First Semester</i></u>	<u><i>Second Semester</i></u>
<p>(3) CE 430 Analysis of Indeterminate Structures (CE 330; Math 220; EE 221)^{5,7}</p> <p>(3) CE 433 Reinforced Concrete Des. (CE 330)^{5,7}</p> <p>OR CE 425 Soil and Site Improvement (CE 317)^{5,7}</p> <p>(3) CE 463 Engineering Administration</p> <p>(3) CE 473 Pavement Design (CE 317; EconS 101/102; c// in CE 322)⁵</p> <p>(3) CE 474 Idaho Interm. Transp. Eng. (CE 322)⁵</p> <p>(1) CE 480 Ethics & Professionalism [M]⁷</p> <p>(16) Total Hours</p>	<p>(3) CE 400 CE Materials (Engl 402)^{5,7}</p> <p>(3) CE 434 Prestressed Concrete Des.(CE 433)^{5,7}</p> <p>(3) CE 435 Foundations (CE 317)^{5,7}</p> <p>(3) CE 465 Integrated CE Design [M]^{6*}</p> <p>(1) CE 466 FE Exam Review</p> <p>(3) Tier III Hum/Soc [T]²</p> <p>(16) Total Hours</p>

¹Classes that must be completed prior to certification.

²General Education Requirement courses. Students with a PSED of Fall 2000 and after must satisfy the American Diversity [D] requirement.

³Course strongly recommended for an Environmental and Infrastructure Engineering emphasis.

⁴Course strongly recommended for a Structural Engineering emphasis.

⁵Elective Courses: The total credit hours for elective courses must be distributed such that at least 3 courses, not including the lab, are DES (design emphasis) in order for a student to qualify for a degree. CE electives including CE laboratory will be selected from at least two different areas (environmental, geotechnical, hydraulics, structural, sustainable, and transportation/pavement).

⁶CE 465 must be taken in the final semester. *Two CE elective courses must be completed before enrollment in CE 465.

⁷Certified major in C E, or instructor permission required.