

Baccalaureate Civil Engineering & Honors Curriculum Fall 2021

Hours	FIRST SEMESTER	Hours	SECOND SEMESTER
Freshman Year			
4	Chem 105 Principles of Chem I (Pre Req)1 yr hs chem. or Chem 103; Math 106 or c//)	5	Phys 205 Science & Eng Honors Phys (Math 171) ⁷
3	Engl 298 Writing and Research Honors	3	Honors 280 Arts & Humanities
4	ForL 203	4	Math 172 Calculus II or Math 182 (Math 171) ⁷
4	Math 171 Calculus I (Math 106/108) ¹	2	Math 220 Linear Alg or Math 230 (Math 171 c//)
2	ENGR 120 Innovation in Design	3	EconS 198 Economics Honors ⁶
17	Total Hours ADMIT TO MAJOR¹	17	Total Hours
Sophomore Year			
3	CE 211 Statics (Math 172/182 c//; Phys 201 + 211/205 c//)	3	ME 212 Dynamics (CE 211)
4	ForL 204	3	CE 215 Mechanics of Material (CE 211)
3	Honors 370 Global Issues in Social Sciences	2	CE 203 Numerical Computing for Engrs (Math 172, 220) ⁵
2	Math 273 Calculus III or Math 283 (Math 172) ⁷	3	Stat 360 or 370 Statistics (Math 172)
3	Biological Sciences	1	ME 220 Materials Lab (CE 215 c//)
15	Total Hours	4	Phys 202 + 212 Classical Phys (Phys 201 + 211 or Phys 205) OR Phys 206 Honors (Phys 201 + 211 or 205) OR Geol 102 OR Chem 106 or 116 (Chem 105) ^{2, 7}
		16	Total Hours
Junior Year			
Writing Portfolio: must complete after 60 credits Apply for Graduation before last semester begins			
2	CstM 254 Construction Graphics ⁵	2	CE 321 Numerical Methods for Civ. Engr (Math 273, Math 220) ⁵
2	CE 302 Intro to Surveying (Math 171) ⁵	3	CE 322 Transportation Engineering (Stat 360/370c//) ⁵
3	CE 315 Fluid Mechanics (ME 212) ⁵	3	CE 351 Water Resources Engineering (CE 315) ⁵
4	CE 317 Geotechnical Engr (CE 215; CE 315 c//) ⁵	3	Math 315 Diff Equations (Math 273, 220 c//)
3	CE 330 Structural Engineering (CE 215) ⁵	3	Engl 402 Technical Writing OR Com 400 Communicating Science & Technology
3	CE 341 Environmental Engineering (Chem 105)	3	MSE 201 Materials Science (Chem 105; Phys 201) OR ME 301 Thermodynamics (Phys 201) OR CE 320 Construction Materials (CE 211; CE 215; Com 400/Engl 402c//) ⁵
17	Total Hours	17	Total Hours
Senior Year			
All students required to fulfill the Experiential Requirement prior to graduation. Recommended to take (FE) Fundamentals of Engineering Exam.			
3	Honors 380 Global Issues in the Arts and Humanities	3	CE 465 Integrated CE Des or ENGR 421/431 IDEX ^{4,5*}
3	CE Laboratory (CE 400, 415, 416) ⁵	3	CE 463 Engineering Administration ⁵
9	CE Electives ³	3	Honors 390 Global Issues in the Sciences
1	CE 480 Ethics & Professionallism ⁵	9	CE Electives ³
16	Total Hours	18	Total Hours

See the department for senior year options.

¹Incoming first-year students or change of major students ready to take Math 171 or a higher math course are directly admitted to the major.

²Course strongly recommended for an Environmental Engineering emphasis.

³Elective 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, not including CE laboratory, will be selected from at least two different areas (environmental, geotechnical, hydraulics, structural, sustainability, and transportation/pavement).

⁴CE 465 or ENGR 421/431 will fulfill the Honors Senior Thesis Option and the Research Seminar, application required for ENGR 421.

⁵Admitted major in CE, or instructor permission required.

⁶EconS 198 is an approved substitution for Honors 270 for engineering majors.

⁷Engineering students who take Phys 205, Chem 116, Math 182, or Math 283 do not take Honors 290.

*CE 465 to be taken in final semester.

**Removed [C] COM 102 or H D 205 as requirement for Honors students due to the extensive writing, presenting, essays, research, and discussions in seminar courses.