

B.S. in Civil Engineering

Four-Year Plan

Catalog Year 2013-2014

Below is the *advised sequence* of courses for this degree program.
The official degree requirements can be found in the University General Catalog.

| Course Number and Title | Units | Prerequisites |
|---|-------|--|
| 1ST SEMESTER | | |
| MATH 122A/B or MATH 125 Calculus I with Applications | 5/3 | Appropriate Math Placement |
| CHEM 151 General Chemistry I | 4 | |
| ENGL 101 First-Year Composition | 3 | |
| ENGR 102 Introduction to Engineering | 3 | Concurrent enrollment or completion of MATH 122B or MATH 125 |
| Tier I General Education | 3 | |
| 2ND SEMESTER | | |
| MATH 129 Calculus II | 3 | MATH 122B or 125 with C or better |
| MCB 181R,L Introductory Biology I or GEOS 251 Physical Geology | 4 | |
| PHYS 141 Introductory Mechanics | 4 | MATH 122B or MATH 125; Concurrent enrollment in MATH 129 |
| ENGL 102 First-Year Composition | 3 | ENGL 101 |
| Tier I General Education | 3 | |
| 3RD SEMESTER | | |
| CE 210 Engineering Graphics | 3 | |
| CE 214 Statics | 3 | PHYS 141; MATH 129 |
| MATH 223 Vector Calculus | 4 | MATH 129 with C or better |
| PHYS 241 Introductory Electricity and Magnetism or CHEM152 General Chemistry II | 4 | For PHYS 241: PHYS 141. For CHEM 152: CHEM 151 |
| Tier I General Education | 3 | |
| 4TH SEMESTER | | |
| CE 215 Mechanics of Solids | 3 | CE 214 |
| CE 218 Mechanics of Fluids | 3 | CE 214 |
| MATH 254 Intro to Ordinary Differential Equations | 3 | MATH 129 with C or better |
| CE 251 Elementary Surveying | 3 | |
| Tier I General Education | 3 | |

| Course Number and Title | Units | Prerequisites |
|---|-------|--|
| Advanced Standing is required for 3xx and 4xx courses (See advisor for requirements) | | |
| 5TH SEMESTER | | |
| CE 301 Engineering Communications | 2 | |
| CE 303 Numerical Analysis for Civil Engineers | 3 | ENGR 102; MATH 129 |
| CE 333 Elementary Structural Analysis | 3 | CE 215 |
| CE 343 Geotechnical Engineering and Design | 4 | CE 215 |
| CE 363 Transport Engineering and Pavement Design | 4 | CE 215 |
| 6TH SEMESTER | | |
| CE 323 Hydraulic Engineering and Design | 4 | CE 218 |
| CE 334 Structural Design in Steel or Technical Elective | 3 | For CE 334: CE 333 |
| CE 370R Environmental and Water Engineering | 3 | |
| CE 370L Environmental and Water Engineering Lab | 1 | |
| CE Lab Elective | 1 | |
| CE 310 Probability and Statistics in Civil Engineering | 3 | MATH 129 |
| 7TH SEMESTER | | |
| CE 408A Issues in Civil Engineering Practice | 3 | 2 of the following: CE 323, CE 334 or 335, CE 343, CE 363, CE 370R,L |
| CE 335 Structural Design in Concrete or Technical Elective | 3 | CE 333 |
| CE Technical Elective | 3 | |
| CE Technical Elective | 3 | |
| Engineering Science Elective Modules | 3 | |
| CE Lab Elective | 1 | |
| 8TH SEMESTER | | |
| CE 408B Civil Engineering Senior Capstone Design | 3 | CE 301; CE 408; 4 of the following: CE 323, CE 334 or 335; CE 343, CE 363, CE 370R,L |
| CE Technical Elective | 3 | |
| CE Technical Elective | 3 | |
| CE Lab Elective | 1 | |
| Tier II General Education | 3 | |
| Tier II General Education | 3 | |

*Tier I and II General Education Courses must meet University general education requirements. One course must be recognized by the university as meeting the Diversity Requirement.