

## Civil Engineering Sample Plan: Environmental & Water Resources Engineering Focus

The sample plan below shows you **one** of several possible ways to complete this degree. Your academic plan may look different if you have already fulfilled some requirements, if you have multiple course options to choose from in your major, or if courses do not fit your schedule in a given term. Work with your academic adviser to ensure that you are on track to graduate on time. Complete Program requirement information can be found within the UMD Catalog:

<http://www.d.umn.edu/catalogs/current/>

### Year 1 Fall Semester: 14 cr

CE 1025 - Introduction to Civil Engineering 1 cr  
 MATH 1296 - Calculus I 5 cr: LOGIC & QR  
 CHEM 1153 - General Chemistry I 4 cr: NAT SCI  
 CHEM 1154 - General Chemistry Lab I 1 cr: NAT SCI  
 Liberal Education Course 3 cr

### Year 1 Spring Semester: 16 cr

WRIT 1120 - College Writing 3 cr: WRITING & INFO LITERACY  
 COMM 1112 - Public Speaking 3 cr: COMM & LAN  
 MATH 1297 - Calculus II 5 cr: LOGIC & QR  
 PHYS 2013 - General Physics I 4 cr: NAT SCI  
 PHYS 2014 - General Physics Lab I 1 cr: NAT SCI

### Year 2 Fall Semester: 16 cr

CE 2017 - Engineering Mechanics (Statics and Strength) 5 cr  
 MATH 3280 - Differential Equations w/Linear Algebra 4 cr  
 STAT 3411 - Engineering Statistics 3 cr  
 CS 1411 - Intro to Programming in Matlab 4 cr

### Year 2 Spring Semester: 16 cr

MATH 3298 - Calculus III 4 cr  
 PHYS 2015 - General Physics II 4 cr  
 PHYS 2016 - General Physics Lab II 1 cr  
 CE 2020 - Computational Tools for Civil Engineers 4 cr.  
 CE 3221 - Fluid Mechanics 3 cr

### Year 3 Fall Semester: 17 cr

CE 3426 - Soil Mechanics 4 cr  
 CE 3025 - Environmental Engineering 4 cr: SUSTAIN  
 CE 3115 - Structural Analysis 3 cr  
 CE 3015 - CAD & Engineering Drawing 3 cr  
 ECON 1022 or 1023 - Macro or Micro Econ 3 cr: SOC SCI

### Year 3 Spring Semester: 17 cr

CE 3026 - Project Management 3 cr  
 CE 3316 - Transportation Engineering 4 cr  
 CE 3027 - Infrastructure Materials 4 cr  
 CE 3225 - Hydraulics & Hydrology 3 cr  
 Liberal Education Course 3 cr

### Year 3 Summer Semester: 5 cr

CE 3016 - Surveying 2 cr  
 WRIT 31xx - Advanced Writing 3 cr

### Year 4 Fall Semester: 15 cr

CE 4215 - Hydraulic Design 3 cr  
 or CE 4228 - Watershed Engineering 3 cr  
 CE 4257 - Solid Waste Management 3 cr  
 CE 4237 - Water quality Engineering 3 cr  
 CE 4126 - Design of Concrete Structures 3 cr  
 Civil Engineering or Technical Elective\*\* 3 cr  
 Liberal Education Course 3 cr

### Year 4 Spring Semester: 16 cr

CE 4255\* - Senior Design 4 cr  
 CE 4256 - Wastewater Treatment 3 cr  
 or CE 4246 Environmental Remediation Technologies 3 cr  
 or CE 4223 Environmental Sampling 3 cr  
 CE 4213 - Open Channel Hydraulics 3 cr  
 Civil Engineering or Technical Elective\*\* 3 cr  
 Liberal Education Course 3 cr

\*\*\**Technical Electives*: Related choices for the geotechnical path include CE 4135 (Advanced Reinforced Concrete and Steel Design), CE 4316 (Pavement Analysis & Design), or geotechnical engineering related courses (ME 4375, ME 5335, or any CE 54xx course not already taken)

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