

# EWRE ME Curriculum

Updated March 2024

*Students earning an ME in Civil Engineering take 30 credits comprising a mix of required and other core courses (4), modern practice electives (2), and technical electives (4). Course options for the groups of classes vary by subdiscipline (“track”). Across all tracks, students take no fewer than six courses (18 credits) of graduate CE coursework.*

## Required Courses

NA

## Other Core Classes

*Students select four courses from this list.*

CE 5020 Introduction to Geographic Information Systems  
CE 5240 Groundwater Hydrology and Contaminant Transport  
CE 6015 Project Management  
CE 6030 Green Engineering and Sustainability  
CE 6215 Stormwater Management  
CE 6220 Water Chemistry for Environmental Engineering  
CE 6230 Hydrology  
CE 6260 Environmental Microbiology and Biological Waste Treatment  
CE 6500 Land Development  
CE 6500 Physicochemical Processes

## Modern Practice Electives

*Students select two courses from this list.*

CE 6050 Risk Analysis  
CE 6250 Environmental Systems Modeling and Management  
CE 6280 Stochastic Hydrology  
CE 6290 Hydroinformatics  
CE 6500 Sustainability and Systems in the Built Environment  
CE 6500 Remote Sensing for Environmental Engineers  
EVHY 5610 GIS Resilience  
EVHY 5700 Forest Hydrology

## Technical Electives

*Students select four courses (5xxx-level or above) from the following programs. One of the technical electives may constitute research or supervised professional experience [with appropriate approvals] via CE 6995. See website for additional details.*

Civil Engineering (CE), Applied Mathematics (APMA), Architecture (ARCH), Chemical Engineering (CHE), Computer Science (CS), Data Science (DS), Economics (ECON), Environmental Science (EVSC/EVHY/EVGE/EVEC/EVAT), Landscape Architecture (LAR), Planning (PLAN/PLAC), Public Health Sciences (PHS), Public Leadership (PSPL), Statistics (STAT), Systems Engineering (SYS).

**NOTES:**

Pre-requisites of the EWRE track include: college calculus through Multivariable Calculus, college chemistry, and college physics; plus, Introduction to Environmental Engineering (CE 2100 or equivalent), and a class in either Water Resources Engineering (CE 3220 or equivalent) or Water/Wastewater Treatment (CE 3100 or equivalent). SYS 6070 may be used to meet the requirement for CE 2100 equivalent for students entering without a CEE BS.

Students must complete at least six CE courses.

Students may be permitted to modify this framework, pending approval of their academic advisor or the ME Program Director.