

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.