

Environmental Resource Engineering (ERE) Concentration

The Environmental Resources Engineering (ERE) Concentration is offered to students who wish to expand their education with an emphasis on environmental concerns, assessment of the environmental impact of new or existing products or processes, methods for solving problems resulting from pollution in the air, water, or earth, and the management of energy and resources, in order to minimize pollution in the environment. Students should declare their intention no later than the junior year and must earn a grade of C- or better in both CEN 303 and CEN 304 in order to enroll in the List B and List C courses as well as to have the concentration appear on the transcript of record.

The concentration consists of completing both CEN 325 and CEN 411 as well as a combination of courses from three lists. Students are required to take two courses from List A, two courses from List B, and three courses from List C. Students will also complete a capstone design project having an environmental resources engineering emphasis. Students pursuing the concentration are required to earn at least a grade of C in each course in List B and List C.

List A: CEN Foundation Core: Two courses required.

Course	Title
CEN 307 or CEN 408	Analysis & Design of Reinforced Concrete Structures <u>OR</u> Analysis & Design of Steel Structures
CEN 323	Geotechnical Engineering
CEN 334	Traffic Engineering

List B: ERE Foundation Core: EGR 411 and CEN 465 are required. Each course must be passed with a grade of C or better.

Course	Title
EGR 411	Intro to Geographic Info Systems
CEN 465	Pollutant Transport in the Environment

List C: ERE Technical Electives: Three courses required. Each course must be passed with a grade of C or better.

Course	Title
CEN 412	Pollution Control of Waste
CEN 414	Hazardous Waste Management
CEN 424	Physical-Chemical Treatment Processes
CEN 428	Probability and Statistics for Civil Engineers
CEN 430	Topics in Civil & Environmental Engineering (topic must be relevant to ERE Concentration – requires prior approval of the advisor)
CEN 433	Special Topics in Geotechnical Engineering
CEN 455	Sustainable Infrastructure
CEN 456	Waves and Tides
CEN 460	Climate Resiliency Engineering
CEN 464	Environmental Water Chemistry
CEN 475	Introduction to Environmental Turbulence
CHM 356	Atmospheric/Terrestrial Environmental Chemistry
EGR 415	Environmental Fluid Mechanics
SUS 348	Ocean Policy and Law