

CEE Graduate Course Descriptions – Summer 2026

GENG-8020: Engineering Project Management

This course will expose students to principles, concepts, and tools utilized in project management activities. This course will include topics such as defining project scope, and time, cost, risk, procurement and stakeholder management. The students will be engaged in working on a major project to develop proficiency in project management activities and tools. (Open to Masters of Engineering and Masters of Engineering Management students, excluding students in the MEng Auto Program. Open to engineering MAsc/PhD students on permission of the department/faculty as a qualifying course only. Will not count for credit towards MAsc/PhD degree.

Instructor: TBD

CIVL 8900-21: Special Topics: GIS Data Modeling

This course examines a range of advanced topics that are utilized to analyze and model spatial datasets with emphasis on transportation related problems. Key topics covered include: spatial data management, data representation and integration; data automation & model building; multi-criteria evaluation; site suitability; least-cost path analysis; network analysis; location-allocation problems; spatial statistics methods to explore and model spatial datasets (namely point events, continuous and area data); machine learning and big data analysis. The course follows a problem-solving based approach to study real world data in a GIS environment using contemporary GIS software (e.g., ArcGIS10.x).

(Cross-listed with ENVE 8900-21).

Instructor: Dr. H. Maoh

CIVL 8900-59: Special Topics: Modular Construction, Design, and Technology

Introduction to modular construction; Types of modular building, Steel, timber, concrete; Planning of modular buildings; Hybrid modular construction systems; Structural design of steel and light steel modules; Structural design of concrete modules; Structural design of timber-framed modules; Cladding, roofing, and balconies in modular construction; Constructional issues in modular systems; Factory production of modules; Service interfaces in modular construction.

Instructor: TBD

ENVE 8900-31: Special Topics: Water Treatment & Reuse

Conventional water treatment systems. Disinfection requirements, technologies, and by-products. Membrane processes, advanced oxidation processes. Chemicals of emerging concern. Water reuse criteria and applications.

Instructor: TBD

ENVE 8900-21: Special Topics: GIS Data Modeling (see CIVL 8900-21)