UAB The University of Alabama at Birmingham
School of Engineering

Department of Civil, Construction, and Environmental Engineering

Fall 2025 Advanced Courses

The complexity of the AEC industry requires an understanding of the essential elements of the business, legal, and technical issues encountered in a world-wide competitive environment. Properly equipped practitioners will be positioned to assume more responsibility with commensurate benefits, higher pay and broader career advancement opportunities.

UAB's Civil, Construction, & Environmental Engineering department is proud to offer our fall graduate classes to industry professionals looking to enhance their knowledge. The courses will be delivered on campus or online as indicated in the course description. Students would register as non-degree seeking.

Courses can count towards a certificate or future program if you choose to pursue.

For more information, please contact Dianne Gilmer at: digilmer@uab.edu or 205-975-5848.

CE 515	Building Information Modeling
Allen Murphree	TR 9:30am-10:45am On campus
This class provides an introduction to the virtual world of design and construction. Topics include technology usages, with a focus on AutoCAD, Revit, and Navisworks Manage software.	

CE 597	Construction Engineering Management
Wesley Zech	MW 2:00pm– 3:15pm On campus
Study of construction management services that include: project planning, scheduling, estimating, budgeting, contract administration, agreements, and ethics.	

CE 580	Intro to Water and Wastewater Treatment
Corey Masuca	TR 11:00am– 12:15pm On campus
Physical unit operations, and chemical/biological unit processes for water and wastewater treatment. Design of facilities for treatment. Treatment and disposal of sludge.	

CE 622	Traffic Flow Theory
Virginia Sisiopiku	TR 11:00am– 12:15pm On campus
This course provides an overview of the fundamental aspects of Traffic Flow Theory, both at the microscopic and macroscopic levels.	

CE 567	Wind and Seismic Loads
Nasim Uddin	MW 11:00am-12:15pm On campus
Methods for calculating loads on structures caused by extreme winds and earthquakes. Calculation of wind load sand seismic loads on various types of structures according to theory and codes.	

CECM 669	Advanced Project Management
Dianne Gilmer	Online
Skills generally required for sound project management are studied in addition to specific challenges typically associated with construction companies. Satisfies educational requirement to sit for the PMP © exam.	

CECM 670	Constr Estimating & Bidding
Wesley Zech	Online
Provides a broad study of estimating methodologies ranging from rough "ball park" estimates to detailed unit pricing is presented focusing on labor, equipment, materials, subcontractors, job conditions, location, overhead, and profit.	

CECM 673	Proj Planning & Control
Allen Murphree	Online
This course provides a thorough understanding of the project scheduling process in construction planning and control.	

CECM 674	Green Bldg Dsgn/ Construct
Jason Kirby	Online
The course addresses the key concepts, viewpoints and fundamentals essential for understanding green building design and sustainable construction.	

CECM 675	Adv Construct & Egr Econ
Talat Salama	Online
This course provides an extensive overview of financial and managerial accounting concepts for non-financial managers.	

CESC 608	Green Infrastr & Transportation
Virginia Sisiopiku	Online
The course covers planning, design, and policy issues related to sustainable transportation.	

CECM 689	BIM Techniques
Allen Murphree	Online
This course provides students with an overview of the evolution of BIM technology in the construction industry followed by hands-on training in the basic application of contemporary BIM software.	

CESE 690	Masonry Design
Jamieson Matthews	Online
Design and detailing of masonry structures. Nomenclature, properties, and specifications for components. Design of assemblages, simple masonry structures, unreinforced and reinforced elements.	

CESE 656	Adv Mech of Materials
Nasim Uddin	Online
This course will review the basic fundamentals of mechanics of materials and will extend the concepts to include 3-dimensional stress and strain, plastic behavior, energy methods, nonlinear behavior, fatigue and fracture, rectangular linear elastic plates, indeterminate structures and stability.	