

[Summer Class Schedule](#)

Summer Sessions Schedule go live 1/11/2025

[How to register and enroll:](#)

Summer registration opens 2/15/25

Fully Online Courses. Available to UCLA, Non-UCLA Students, and Professionals

Session A8: Meets from June 23 – August 15, 2025: Duration 8 weeks

Session A9: Meets June 23 – August 22, 2025: Duration 9 weeks

C&EE M20. Introduction to Computer Programming with MATLAB (A8)

Instructor: Lopez Droguett, E.

Email: eald@g.ucla.edu

(Same as Mechanical and Aerospace Engineering M20.) Requisite: Mathematics 33A. Fundamentals of computer programming taught in context of MATLAB computing environment. Basic data types and control structures. Input/output. Functions. Data visualization. MATLAB-based data structures. Development of efficient codes. Introduction to object-oriented programming. Examples and exercises from engineering, mathematics, and physical sciences. Letter grading.

C&EE 103. Applied Numerical Computing and Modeling in Civil and Environmental Engineering (A9)

Instructor: Shaik, R.

Email: riyaz@ucla.edu

Requisites: course M20 (or Computer Science 31), Mathematics 33B or Mechanical and Aerospace Engineering 82 (either may be taken concurrently). Introduction to numerical computing with specific applications in civil and environmental engineering. Topics include error and computer arithmetic, root finding, curve fitting, numerical integration and differentiation, solution of systems of linear and nonlinear equations, numerical solution of ordinary and partial differential equations. Letter grading.

C&EE 108. Introduction to Mechanics of Deformable Solids (A8)

Instructor: Ahlberg, E.

Email: eahlberg@ucla.edu

Requisites: course 91 or Mechanical and Aerospace Engineering 101, Mathematics 32B, Physics 1A. Review of equilibrium principles; forces and moments transmitted by slender members. Concepts of stress and strain. Stress-strain relations with focus on linear elasticity. Transformation of stress and strain. Deformations and stresses caused by tension, compression, bending, shear, and torsion of slender members. Structural applications to trusses, beams, shafts, and columns. Introduction to virtual work principle. Letter grading..

C&EE 110. Introduction to Probability and Statistics for Engineers (A8)

Instructor: Burton, H.J.

Email: hvburton@ucla.edu

Requisites: Mathematics 32A, 33A. Recommended: course M20. Introduction to fundamental concepts and applications of probability and statistics in civil engineering, with focus on how these concepts are used in experimental design and sampling, data analysis, risk and reliability analysis, and project design under uncertainty. Topics include basic probability concepts, random variables and analytical probability distributions, functions of random variables, estimating parameters from observational data, regression, hypothesis testing, and Bayesian concepts. Letter grading.

C&EE 148. Wood & Timber Design (A8)

Instructor: Ahlberg, Eric

Email: eahlberg@ucla.edu

Recommended requisites: courses 108, 135A. Properties and behavior of wood and wood products, analysis and design of wood and timber structural members subjected to flexural, shear, and axial stresses; connections, fasteners, and detailing; and light-framed wood shear walls and diaphragms. Students will understand the basic properties and behavior of wood. Students will also understand wood material design methods based on the National Design Specification for Wood and ASCE-7, and connection and lateral resistance design. Letter grading.

C&EE 153. Introduction to Environmental Engineering Science (A8)

Instructor: Mohanty, Sanjay

Email: mohanty@g.ucla.edu

Recommended requisites: course 107 (or Mechanical and Aerospace Engineering 103). Water, air, and soil pollution: sources, transformations, effects, and processes for removal of contaminants. Water quality, water and wastewater treatment, waste disposal, air pollution, global environmental problems. Letter grading.