COURSE DETAIL

THE FINITE ELEMENT METHOD
Country United Kingdom - Scotland
Host Institution University of Edinburgh
Program(s) University of Edinburgh
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Civil Engineering
UCEAP Course Number 144
UCEAP Course Suffix
UCEAP Official Title THE FINITE ELEMENT METHOD
UCEAP Transcript Title FINITE ELEMENT MTHD
UCEAP Quarter Units 4.00
UCEAP Semester Units 2.70

Course Description

This course introduces students to the fundamental theory of the finite-element method (FEM) as a general tool for numerically solving differential equations for a wide range of engineering problems, with special focus on solid and structural mechanics. The course covers the following topics: approximation, weighted residuals and Rayleigh-Ritz methods; finite-element formulation for solids; continuum elements; structural elements; material non-linearity; geometric non-linearity; heat transfer problems and thermal stress analysis; and transient problems.

Language(s) of Instruction
English

Host Institution Course Number
CIVE10034

Host Institution Course Title
THE FINITE ELEMENT METHOD

Host Institution Course Details
http://www.drps.ed.ac.uk/25-26/dpt/cxcive10034.htm

Host Institution Campus

Host Institution Faculty
School of Engineering

Host Institution Degree

Host Institution Department

Course Last Reviewed
2025-2026

Print