COURSE DETAIL

NUMERICAL METHODS IN ENGINEERING
Country Singapore
Host Institution National University of Singapore
Program(s) National University of Singapore
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Mechanical Engineering
UCEAP Course Number 130
UCEAP Course Suffix
UCEAP Official Title NUMERICAL METHODS IN ENGINEERING
UCEAP Transcript Title NUMERICAL METHODS
UCEAP Quarter Units 6.00
UCEAP Semester Units 4.00

Course Description

This course introduces students to fundamental concepts of numerical analysis as a powerful tool for solving a wide variety of engineering problems. Topics include numerical solution of linear systems of algebraic equations, numerical solution of nonlinear algebraic equations and systems of equations, elementary unconstrained optimization techniques, regression and interpolation techniques, numerical differentiation and integration, as well as the numerical solution of Ordinary Differential Equations (ODE). Applications are drawn from a broad spectrum of diverse disciplines in Mechanical Engineering. The course also introduces the use of scientific computing software packages for the numerical solution of practical engineering problems. The course requires students to take prerequisites.

Language(s) of Instruction
English

Host Institution Course Number
ME3291

Host Institution Course Title
NUMERICAL METHODS IN ENGINEERING

Host Institution Course Details
https://nusmods.com/courses/ME3291/numerical-methods-in-engineering

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department
Mechanical Engineering

Course Last Reviewed
2024-2025

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