

COURSE DETAIL

COMPUTATIONAL METHODS IN FLUID MECHANICS

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

133

UCEAP Course Suffix**UCEAP Official Title**

COMPUTATIONAL METHODS IN FLUID MECHANICS

UCEAP Transcript Title

COMP FLUID MECHANIC

UCEAP Quarter Units

6.00

UCEAP Semester Units

4.00

Course Description

This course introduces students to the principles and methodologies under the hood of typical CFD software. Major topics include numerical discretization, stability and accuracy analysis, and methods for solving incompressible viscous fluid flow and convective heat transfer problems. Students write a code/script to solve simple fluid problems. Students gain a working knowledge of the basic principles of fluid flow simulation and implementation of computational methods in solving complex problems. The course requires students to take prerequisites.

Language(s) of Instruction

English

Host Institution Course Number

ME4233

Host Institution Course Title

COMPUTATIONAL METHODS IN FLUID MECHANICS

Host Institution Course Details

<https://nusmods.com/courses/ME4233/computational-methods-in-fluid-mechanics>

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department

Mechanical Engineering

Course Last Reviewed

2024-2025

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