

COURSE DETAIL

MECHANICS OF FLUIDS

Country

Ireland

Host Institution

University College Dublin

Program(s)

Irish Universities, University College Dublin

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Mechanical Engineering

UCEAP Course Number

102

UCEAP Course Suffix**UCEAP Official Title**

MECHANICS OF FLUIDS

UCEAP Transcript Title

MECHANICS OF FLUIDS

UCEAP Quarter Units

4.00

UCEAP Semester Units

2.70

Course Description

This is a course in fluid mechanics for engineers of all disciplines. The course covers a range of topics including, but not limited to: gases, liquids, and solids; continuum hypothesis; Lagrangian and Eulerian descriptions; fluid properties control volume analysis; Reynolds transport theorem; conservation laws of mass; linear momentum; angular momentum and energy; flow through conduits, nozzles, diffusers, and conduit bends; propulsion; Bernoulli's equation; static, dynamic, and total pressure; pitot tube similarity and dimensional analysis; repeating variable method; Buckingham's PI theorem; similitude; basis of model development internal flow; Newton's law of viscosity; Poiseuille flow; friction factor; non-circular conduits; and Pelton wheel water turbines.

Language(s) of Instruction

English

Host Institution Course Number

MEEN20010

Host Institution Course Title

MECHANICS OF FLUIDS

Host Institution Campus

UC Dublin

Host Institution Faculty

Host Institution Degree

Host Institution Department

Mechanical Engineering

[Print](#)