

# 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

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