

Liverpool John Moores University

Title: FLUID MECHANICS AND HYDRAULICS
Status: Definitive
Code: **5502ICBTME** (127055)
Version Start Date: 01-08-2021

Owning School/Faculty: Engineering
Teaching School/Faculty: ICBT, Colombo

Team	Leader
Alison Cotgrave	Y

Academic Level: FHEQ5
Credit Value: 15
Total Delivered Hours: 68
Total Learning Hours: 150
Private Study: 82

Delivery Options

Course typically offered: Semester 1 and Summer

Component	Contact Hours
Lecture	45
Practical	6
Tutorial	15

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	AS1	Examination	60	2
Practice	AS2	Practical/Lab assignment (1500 words)	40	

Aims

This unit aims to develop learners' knowledge of the principles of fluid mechanics and the techniques used to predict the behaviour of fluids in engineering applications

Learning Outcomes

After completing the module the student should be able to:

- 1 Demonstrate the understanding of basic concepts of fluid statics and dynamics.
- 2 Apply these concepts during problem solving.
- 3 Relate the theoretical concepts learned to practical aspects of fluid statics and dynamics.
- 4 Analyse and evaluate a practical fluid mechanics problem based on the concepts learned.

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

Examination	1	2
Practical/Lab assignment	3	4

Outline Syllabus

Governing equations in fluid mechanics
Ideal fluid flow
Viscous flow
Dimensional analysis and similarity theory
Fluid power transmission systems
Lubrication
Fluid machinery

Learning Activities

Students will be supported in their learning, to achieve the above learning outcomes, in the following ways:

By a series of lectures and tutorials and through participation within laboratory practical sessions for problem solving.

Self-managed investigative study to analyse cases related to fluid mechanics

Notes

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