

Liverpool John Moores University

Title: Applied Maths 1
Status: Definitive
Code: **3518IFESG** (124227)
Version Start Date: 01-08-2021

Owning School/Faculty: Engineering
Teaching School/Faculty: Study Group

Team	Leader
Jack Mullett	Y

Academic Level: FHEQ3 **Credit Value:** 10 **Total Delivered Hours:** 41.5
Total Learning Hours: 100 **Private Study:** 58.5

Delivery Options

Course typically offered: Runs Twice - S1 & S2

Component	Contact Hours
Lecture	22
Seminar	12
Workshop	6

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	ASS1	Examination 1.5 hours	100	1.5

Aims

To introduce students to the principles of Applied Mathematics and to give students the grounding necessary to progress to IY1.

Learning Outcomes

After completing the module the student should be able to:

- 1 Identify the appropriate functions, physical quantities and units involved in the mathematical description of a problem.
- 2 Produce mathematical formulations and plots of vector quantities as well as calculate sums and products involving two or more different vectors.
- 3 Predict the effects of forces on particles and the effect of moments on simple three-dimensional objects as a result of Newton's laws of motion.

Learning Outcomes of Assessments

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

Examination	1	2	3
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Outline Syllabus

Basic mathematical concepts:

- *Working with physical quantities, units and significant figures*
- *Functions and graphs*
- *Introduction to trigonometric functions*
- *Vectors I: Mathematical and graphical representations*
- *Vectors II: Vector algebra and products*

Forces and Moments

- *Newton's laws of motion*
- *Moments of forces*

Learning Activities

Lectures and seminars will be used to consolidate knowledge of Applied Maths. Students also use computer simulations and have practical sessions where they can examine the principles they have learnt in action.

Notes

None