

Liverpool John Moores University

Title: FURTHER APPLIED MATHS
Status: Definitive faculty appr change
Code: **6050PSM** (115956)
Version Start Date: 01-08-2016

Owning School/Faculty: Education
Teaching School/Faculty: Education

Team	Leader
Philip Duggan	Y

Academic Level: FHEQ6 **Credit Value:** 24 **Total Delivered Hours:** 50
Total Learning Hours: 240 **Private Study:** 190

Delivery Options

Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	28
Seminar	20

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	AS1	Examination	50	2
Essay	AS2	Coursework (3000 word equivalent)	50	

Aims

This module aims to deepen students' knowledge of classical mechanics to A Level standard. The knowledge and skills they gain will enable them to solve a wide variety of problems. Students will be encouraged to reflect on their learning and consider effective strategies for teaching mathematics at higher levels.

Learning Outcomes

After completing the module the student should be able to:

- 1 Select and use appropriate mathematical techniques to the solution of applied problems in mechanics in unseen contexts.
- 2 Understand and apply a range of modelling techniques from the field of mechanics with appreciation of the limitations of the model and the need to validate and revise models.
- 3 Employ appropriate technological tools to find exact or approximate solutions to a variety of problems.

Learning Outcomes of Assessments

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

EXAM	1	
CW	2	3

Outline Syllabus

Statics

Kinematics

Newton's Law of Motion

Linear momentum

Connected particles

Energy

Circular motion and SHM

Learning Activities

Mathematical concepts will be explored in interactive lectures and workshops backed up by tasks for individual learning. These will use a mix of media, e.g. web-based materials including video tutorials and on-line exercises, practical activities using ICT as well as more traditional text-book approaches.

Notes

This module extends introduces students to the principal concepts underlying classical mechanics and the mathematical modeling process.