

Liverpool John Moores University

Title: MATHEMATICS 2
Status: Definitive
Code: **3002ENGPT** (119539)
Version Start Date: 01-08-2016

Owning School/Faculty: General Engineering Research Institute
Teaching School/Faculty: General Engineering Research Institute

Team	Leader
David Harvey	Y

Academic Level: FHEQ3 **Credit Value:** 12 **Total Delivered Hours:** 18
Total Learning Hours: 120 **Private Study:** 102

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Workshop	18

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Test	AS1	In class tests	50	
Test	AS2	Computer based exercises	50	

Aims

To strengthen the understanding of trigonometry and its applications for those students whose mathematical qualification is less than A level or equivalent, and allow progression to further mathematics modules

Learning Outcomes

After completing the module the student should be able to:

- 1 Apply trigonometric principles to engineering/technological situations
- 2 apply geometrical principles to engineering/technological situations
- 3 represent simple functions and data in graphical form

Learning Outcomes of Assessments

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

In class tests	1	2	3
Computer based exercises	1	2	3

Outline Syllabus

Trigonometry: measurement of angles, degrees, radians; right angle triangles, Pythagoras, sine, cosine, tangent; oblique triangles, sine rule, cosine rule; graphs of trigonometric functions; inverse trigonometric functions; simple trigonometric equations; trigonometric identities; properties of trigonometric functions, period, frequency, amplitude, phase angle.
Geometry: perimeters, areas, volumes, typical applications.
Graphs; Cartesian coordinates, straight line - gradient intercept form

Learning Activities

The module is delivered via a computer aided learning package with tutor support available throughout workshop sessions and via email. Additional drop in sessions are also available

Notes

To strengthen the understanding of trigonometry and its applications for those students whose mathematical qualification is less than A level or equivalent, and allow progression to further mathematics modules