

Liverpool John Moores University

Title: MATHEMATICS 1
Status: Definitive
Code: **3001ENGPT** (119536)
Version Start Date: 01-08-2016

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

Team	Leader
David Burton	Y

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

Delivery Options

Course typically offered: Semester 1

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 algebraic ability of those students whose mathematical qualification is less than A-level or equivalent, and to allow progression onto further mathematics modules

Learning Outcomes

After completing the module the student should be able to:

- 1 Perform arithmetic calculations
- 2 Solve simple equations algebraically and numerically
- 3 Use logarithms and indices
- 4 Confidently use a scientific calculator

Learning Outcomes of Assessments

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

in class tests	1	2	3	4
computer based exercises	1	2	3	4

Outline Syllabus

Arithmetic:

*Factors, multiples, highest common factor, lowest common multiple;
 Fractions, addition, multiplication, division, simplification;
 Decimal fractions, decimal places, significant figures, scientific notation, rounding off;
 Error, percentage, modulus, sigma notation.*

Algebra:

*Fractions; addition, multiplications, division, simplification;
 Algebraic formulae, equations, transposition, simplification, factorization;
 Powers, product, quotient, power of a power, roots, negative indices;
 Exponential functions, introduction;
 Logarithms, logs to base 10, natural logs, products, quotients, powers;
 Inequalities, intervals;
 Proportionality, direct proportionality, inverse proportionality;
 Linear equations, solution, graphs;
 Simultaneous linear equations, analytical and graphical solution;
 Quadratic equations, solution using formula, graphs.*

Learning Activities

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

Notes

This module aims to strengthen the algebraic ability of students whose mathematical qualification is less than A level or equivalent and allow progression to further mathematics modules.