

### Summary Information

Module Code	5502CVQR
Formal Module Title	Engineering Mathematics II
Owning School	Civil Engineering and Built Environment
Career	Undergraduate
Credits	10
Academic level	FHEQ Level 5
Grading Schema	40

### Teaching Responsibility

LJMU Schools involved in Delivery
LJMU Partner Taught

### Partner Teaching Institution

Institution Name
Oryx Universal College WLL

### Learning Methods

Learning Method Type	Hours
Lecture	22
Tutorial	11

### Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
JAN-PAR	PAR	January	12 Weeks

## Aims and Outcomes

Aims	To develop knowledge and understanding of the probability theory and statistics underpinning engineering, and to apply these techniques within an engineering context. To further develop the knowledge and understanding of relevant mathematical techniques underpinning engineering, and to apply these within an engineering context.
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**After completing the module the student should be able to:**

### Learning Outcomes

Code	Number	Description
MLO1	1	Demonstrate knowledge and understanding of probability and apply the theory proficiently and critically to the solution of engineering problems.
MLO2	2	Apply a range of statistical methods, tools and notations proficiently in the analysis and solution of engineering problems.
MLO3	3	Apply damped mass and spring models and the 1-dimensional wave equation proficiently in the analysis and solution of engineering problems.

## Module Content

Outline Syllabus	Probability Discrete and continuous distributions Hypothesis testing: Mann Whitney, t-test, Chi-squared Correlation and regression. The Monte Carlo method Inhomogeneous 2nd order differential equation Partial Differentiation The 1-dimensional wave equation
Module Overview	
Additional Information	This module develops the student's knowledge and understanding of engineering mathematics and statistics, and their limitations, for use in the analysis and solution of engineering problems.

## Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Exam	Examination	100	1.5	MLO1, MLO2, MLO3

## Module Contacts

### Module Leader

Contact Name	Applies to all offerings	Offerings
Stephen Wylie	Yes	N/A

### Partner Module Team

Contact Name	Applies to all offerings	Offerings
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