

MODULE CODE: ACDA4008
TITLE: Mathematics
DATED: 15/08/2018

LEVEL: 4
CREDITS: 20

JACS CODE: H610

AIM(S)

- To provide in-depth coverage of important mathematical ideas and techniques necessary for an understanding of the mathematics encountered in sister modules.

LEARNING OUTCOMES

Upon the successful completion of this module, the student should be able to:

- Apply appropriate mathematical techniques to the solution of mathematical problems.

INDICATIVE CONTENT

- Fundamental Algebra/Trigonometry: Solution of Equations, matrix methods, complex numbers.
- Vector Analysis: vector rules and notation as applied to static and dynamic vector quantities.
- The Calculus: the methods of differentiation and integration, partial differentiation, 1st order differential equations.
- Statistics: Probability theory and statistical analysis.

LEARNING AND TEACHING STRATEGY

The study time for the module is divided as follows:

Activity type	Hours	Percentage
Scheduled learning	60	30%
Independent learning	140	70%
Placement learning	0	0%
TOTAL	200	100%

ASSESSMENT

Assessment Component 1

☒ Written exam ☐ Coursework ☐ Practical

Mode of assessment	Volume	Weighting
Written exam	1.5 hours	50%

Assessment Component 2

☒ Written exam ☐ Coursework ☐ Practical

Mode of assessment	Volume	Weighting
Written exam	1.5 hours	50%

Assessment Summary

Activity type	Percentage
Written exam	100%
Coursework	0%
Practical	0%
TOTAL	100%

READING LIST

Module Code	ACDA4008	
Module Title	Mathematics	
Classification	Reading List entry	Electronic*
Essential	Stroud, K.A. and Booth, D. J. (2013) <i>Engineering Mathematics, 7th Edition</i> Palgrave	☐
Further	Bird J.O. (2010) <i>Higher Engineering Mathematics, 8th Edition</i> , Newnes	☒
Further	Singh, K. (2011) <i>Engineering Mathematics through applications</i> , Palgrave	☐
Further	Websites http://www.khanacademy.org	☐