Module Definition Form (MDF)

Module code: MOD008107	**Version:** 2 **Date Amended:** 17/10/2024

1. Module Title
Maths for Engineers

2a. Faculty Leader
Chinchu Babu

2b. School
SE: ARU College

2c. Faculty
Faculty of Science and Engineering

3a. Level
3

3b. Module Type
Standard (fine graded)

4a. Credits
15

4b. Study Hours
150

5. Restrictions

Type	Module Code	Module Name	Condition
Pre-requisites:	None		
Co-requisites:	None		
Exclusions:	None		
Courses to which this module is restricted:			

LEARNING, TEACHING AND ASSESSMENT INFORMATION

6a. Module Description

Maths for Engineers is intended for students progressing onto engineering and computing degree programmes. This module will give you an early introduction to the concepts of calculus, vector and matrix mathematics, which will allow you to stand in good stead when progressing to level 4.

6b. Outline Content

- Differentiation of various functions
- The product, chain and quotient rules of differentiation
- Integration of various functions
- Integration by parts and by changing the variable
- Vector arithmetic
- Matrix arithmetic

6c. Key Texts/Literature

The reading list to support this module is available at: http://readinglists.anglia.ac.uk/modules/mod008107

6d. Specialist Learning Resources

None

7. Learning Outcomes (threshold standards)

No.	Type	On successful completion of this module the student will be expected to be able to:
1	Knowledge and Understanding	Differentiate arithmetic, trigonometric, logarithmic and exponential functions
2	Knowledge and Understanding	Integrate arithmetic, trigonometric, logarithmic and exponential functions
3	Knowledge and Understanding	Manipulate and combine simple vectors and matrices
4	Intellectual, practical, affective and transferrable skills	Apply the principle of calculus to a range of engineering problems

8a. Module Occurrence to which this MDF Refers				
Year	**Occurrence**	**Period**	**Location**	**Mode of Delivery**
2022/3	F01CAM	Trimester 1	ARU Cambridge Campus	Face to Face

8b. Learning Activities for the above Module Occurrence			
Learning Activities	**Hours**	**Learning Outcomes**	**Details of Duration, frequency and other comments**
Lectures	0	N/A	N/A
Other teacher managed learning	48	1-4	4 hours a week x 12 teaching weeks
Student managed learning	102	1-4	Pre and post session preparation, reading and research. Other tasks as detailed in Module guide
TOTAL:	150		

9. Assessment for the above Module Occurrence					
Assessment No.	**Assessment Method**	**Learning Outcomes**	**Weighting (%)**	**Fine Grade or Pass/Fail**	**Qualifying Mark (%)**
010	Coursework	1 2 3 4	50 (%)	Fine Grade	30 (%)
In-class test (up to 1.5 hours)					
Assessment No.	**Assessment Method**	**Learning Outcomes**	**Weighting (%)**	**Fine Grade or Pass/Fail**	**Qualifying Mark (%)**
011	Coursework	1 2 3 4	50 (%)	Fine Grade	30 (%)
In-class test (up to 1.5 hours)					

In order to pass this module, students are required to achieve an overall mark of 40%.
In addition, students are required to:
(a) achieve the qualifying mark for each element of fine graded assessment of as specified above
(b) pass any pass/fail elements