

MATH C2610: Engineering Mathematics 2

Module Title:			Engineering Mathematics 2		
Language of Instruction:		n:	English		
Credite: 5		5			
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NFQ Level:		6			
Module Delivered In			3 programme(s)		
Teaching & Learning Strategies:			(a) A series of lectures will be delivered using whiteboard and data projector. (b) The Institute Managed Learning Environment will be used to interactively communicate with students e.g. on-line test, discussion forums, reference information (c) Mathematical software (e.g. Matlab) will be used by students to re-enforce the mathematical principles and practices		
Module Aim:			To give the students the knowledge, competencies and skills necessary to support the mathematical procedures encountered in the other modules of this course.		
Learning Ou	itcomes				
On successf	ul completio	n of th	nis module the learner should be able to:		
LO1	Demonstra	nonstrate a competence in differentiating a variety single variable and multi variable functions.			
LO2	Apply diffe	upply differentiation to a range of real problems in Engineering.			
LO3	Demonstra	ate a c	competence in integrating a variety of functions and solve simple first order differential equations.		
LO4	Apply integration to a range of real problems in Engineering.		n to a range of real problems in Engineering.		
Pre-requisit	e learning				
Module Rec This is prior l	ommendati earning (or	ions a prac	ctical skill) that is recommended before enrolment in this module.		
No recomme	ndations list	ted			
<i>Incompatible Modules</i> These are modules which have learning outcomes that are too similar to the learning outcomes of this module.					
No incompatible modules listed					
Co-requisite Modules					
No Co-requisite modules listed					
Requirements This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed.					
Mathematics 1" or equivalent					



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Module Content & Assessment

Indicative Content

(b)Integration

The integration of functions an anti-derivative. Integration of basic functions by rule. Integration of functions using the special methods of partial fractions, algebraic substitutions and integration by parts. Areas under curves, average and RMS values using the definite integral. Application of integration to areas of engineering

(a) Differentiation First principles, differentiation as rate of change and slope of a tangent. Basic, product, quotient and chain rules. Applications of derivative to engineering.

Assessment Breakdown	%
Continuous Assessment	40.00%
End of Module Formal Examination	60.00%

Continuous Assessment						
Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date		
Case Studies	n/a	1,2,3,4	40.00	n/a		

No Project

No Practical

End of Module Formal Examination				
Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Formal Exam	n/a	1,2,3,4	60.00	End-of-Semester

SETU Carlow Campus reserves the right to alter the nature and timings of assessment



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Module Workload

Workload: Full Time		
Workload Type	Frequency	Average Weekly Learner Workload
Lecture	Every Week	3.00
Independent Learning	Every Week	4.00
	Total Hours	7.00

Module Delivered In Programme Code Programme

Programme Code	Programme	Semester	Delivery
CW_EEBEE_B	Bachelor of Engineering (Honours) in Biomedical Electronics	4	Mandatory
CW_EESYS_B	Bachelor of Engineering (Honours) in Electronic Engineering	4	Mandatory
CW_EEBEE_D	Bachelor of Engineering in Biomedical Electronics	4	Mandatory

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