

#### MATH C2610: Engineering Mathematics 2

Language of Instruction:       End         Credits:       5         NFQ Level:       6         Module Delivered In       3 p         Teaching & Learning Strategies:       (a) Leaform         Module Aim:       To pro         Learning Outcomes       To pro         On successful completion of this may LO1       Demonstrate a comp LO2         Apply differentiation       LO3         LO4       Apply integration to a         Pre-requisite learning       Module Recommendations This is prior learning (or a practical	Indirecting Mathematics 2 Indirecting Additional Indirections 2 Indirecting Additional Ind				
Credits:       5         NFQ Level:       6         Module Delivered In       3 p         Teaching & Learning Strategies:       (a)         Strategies:       (b)         Module Aim:       To prodition         Module Aim:       To prodition         On successful completion of this main team of the second team of team of team of team of team of	Drogramme(s)         D) A series of lectures will be delivered using whiteboard and data projector. (b) The Institute Managed arning Environment will be used to interactively communicate with students e.g. on-line test, discussion rums, reference information (c) Mathematical software (e.g. Matlab) will be used by students to re-enforce e mathematical principles and practices         D) ogive the students the knowledge, competencies and skills necessary to support the mathematical cocedures encountered in the other modules of this course.         Indulte the learner should be able to:         petence in differentiating a variety single variable and multi variable functions.				
NFQ Level:       6         Module Delivered In       3 p         Teaching & Learning Strategies:       (a)         Strategies:       (a)         Module Aim:       To product the strategies:         Module Aim:       To product the strategies:         On successful completion of this means the strategies:       To product the strategies:         On successful completion of this means the strategies:       To product the strategies:         LO1       Demonstrate a completion of this means the strategies:         LO2       Apply differentiation         LO3       Demonstrate a completion to the strategies:         LO4       Apply integration to at strategies:         Pre-requisite learning       This is prior learning (or a practication the strategies)	A series of lectures will be delivered using whiteboard and data projector. (b) The Institute Managed arring Environment will be used to interactively communicate with students e.g. on-line test, discussion rums, reference information (c) Mathematical software (e.g. Matlab) will be used by students to re-enforce e mathematical principles and practices				
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Learning Outcomes         On successful completion of this main         LO1       Demonstrate a completion         LO2       Apply differentiation         LO3       Demonstrate a completion         LO4       Apply integration to a         Pre-requisite learning       Module Recommendations         This is prior learning (or a practical)	nodule the learner should be able to: petence in differentiating a variety single variable and multi variable functions.				
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LO2 Apply differentiation LO3 Demonstrate a comp LO4 Apply integration to a Pre-requisite learning Module Recommendations This is prior learning (or a practical					
LO3       Demonstrate a comp         LO4       Apply integration to a         Pre-requisite learning         Module Recommendations         This is prior learning (or a practical	to a range of real problems in Engineering.				
LO4 Apply integration to a Pre-requisite learning Module Recommendations This is prior learning (or a practical					
Pre-requisite learning Module Recommendations This is prior learning (or a practical	Demonstrate a competence in integrating a variety of functions and solve simple first order differential equations.				
Module Recommendations This is prior learning (or a practical	LO4 Apply integration to a range of real problems in Engineering.				
This is prior learning (or a practical					
No second store listed	I skill) that is recommended before enrolment in this module.				
No recommendations listed	No recommendations listed				
Incompatible Modules These are modules which have lea	arning outcomes that are too similar to the learning outcomes of this module.				
No incompatible modules listed					
Co-requisite Modules					
No Co-requisite modules listed					
<b>Requirements</b> This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed.					
Mathematics 1" or equivalent					



## MATH C2610: Engineering Mathematics 2

#### **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



#### MATH C2610: Engineering Mathematics 2

### Module Workload

Weddeed Full Time		
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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