MATH H1507: Applied Mathematics

Module Title:	Applied Mathematics
Credits:	5
NFQ Level:	6
Module Delivered In	No Programmes
Teaching & Learning Strategies:	Lectures Tutorials Private study
Module Aim:	The aims of the module are to equip the student with the mathematical skills required for the study of the course.

Learning Outcomes	
On successful completion of this module the learner should be able to:	
LO1	Use algebraic methods to solve and manipulate equations.
LO2	Plot and interpret linear and non linear functions and extract information from the plots.
LO3	Evaluate distances, angles and areas for right angled and non right angled triangles.
LO4	Produce statistical graphs including histograms and ogives and calculate Mode, Mean, Median and the quartile values.
LO5	Calculate the area and volume of regular shapes and to use algebra to determine parameters and to derive units for parameters from expressions.

Pre-requisite learning
Module Recommendations *This is prior learning (or a practical skill) that is recommended before enrolment in this module.*
No recommendations listed
Incompatible Modules *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.*
No requirements listed

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Module Content & Assessment

Indicative Content
(1) COMPUTATION: (30 hours) (a) Logs & Indices (b) Transposition of formulae (c) Fractions (d) Units and derived units (e) Area & volume (f) Approximation of area & Volume.
(2) EQUATIONS: (20 Hours) (a) Graphed representations of linear (b) quadratic and cubic equations. (c) Graphical and numerical simultaneous solutions.
(3) TRIGONOMETRY: (20 hours) (a) Solution of right angled triangles, (b) Unit circle, (c) Radian measure, (d) Solving triangles with the sin & cosine rules, (e) Area of triangles.
(4) STATISTICS: (20 hours) (a) Statistical graphs (Bar chart, Pie-chart, Ogive, Histogram), (b) Notation, (c) Calculation of central tendency & dispersion.

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*
Other	Continuous Assessment	1,2,3,4,5	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	No Description	1,2,3,4,5	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	30 Weeks per Stage	3.00
Estimated Learner Hours	30 Weeks per Stage	3.00
	Total Hours	180.00