

Module Title:	Applied Mathematics
Credits:	5
NFQ Level:	6
Module Delivered In	3 programme(s)
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	
<i>On successful completion of this module the learner should be able to:</i>	
LO1	Calculate the area and volume of regular shapes and to use algebra to determine parameters and to derive units for parameters from expressions.
LO2	Use algebraic methods to solve and manipulate equations.
LO3	Evaluate distances, angles and areas for right angled and non right angled triangles.
LO4	Plot and interpret linear and non linear functions and extract information from the plots.
LO5	Produce statistical graphs including histograms and ogives and calculate Mode, Mean, Median and the quartile values.

Pre-requisite learning
Module Recommendations <i>This is prior learning (or a practical skill) that is recommended before enrolment in this module.</i>
No recommendations listed
Incompatible Modules <i>These are modules which have learning outcomes that are too similar to the learning outcomes of this module.</i>
No incompatible modules listed
Co-requisite Modules
No Co-requisite modules listed
Requirements <i>This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed.</i>
No requirements listed

Module Content & Assessment

Indicative Content

(1) COMPUTATION:

(a) Basic Calculator functions and Basic Mathematical Rules (b) Scales, Fractions and Ratios (c) Accuracy and Precision (d) Units and derived units (e) Basic Algebra (f) Indices and Powers (g) Transposition of formulae

(2) AREA AND VOLUME:

(a) Perimeter, Area & Volume of Regular and Irregular Shapes (b) Approximation of Area and Volume

(3) TRIGONOMETRY:

(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) EQUATIONS:

(a) Graphed representations of linear (b) quadratic and cubic equations. (c) Graphical and numerical simultaneous solutions.

(5) STATISTICS:

(a) Statistical graphs (Bar chart, Pie-chart, Ogive, Histogram), (b) Calculation of Mode, Mean, Median and the quartile values, (c) Introduction to central tendency & dispersion.

Assessment Breakdown	%
Project	50.00%
End of Module Formal Examination	50.00%

No Continuous Assessment

Project

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Project	Weekly worksheets	1,2,4,5	50.00	n/a

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	50.00	End-of-Semester

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

Module Workload

Workload: Full Time		
<i>Workload Type</i>	<i>Frequency</i>	<i>Average Weekly Learner Workload</i>
Lecture	12 Weeks per Stage	3.00
Tutorial	12 Weeks per Stage	2.00
Estimated Learner Hours	15 Weeks per Stage	5.00
Total Hours		135.00

Module Delivered In

Programme Code	Programme	Semester	Delivery
CW_CMOPB_B	Bachelor of Science (Honours) in Construction Management	1	Mandatory
CW_CMQSU_B	Bachelor of Science (Honours) in Quantity Surveying	1	Mandatory
CW_CMBSE_D	Bachelor of Science in Construction Management	1	Mandatory