ACCT C2G03: Accounting and Mathematics

Module Title:	Accounting and Mathematics
Language of Instruction:	English

Credits:	5

NFQ Level:	6

Module Delivered In	3 programme(s)

Teaching & Learning Strategies:	Lectures and Tutorials Private study

Module Aim:	The aim of the mathematics component of this module is to develop the students' mathematical and statistical skills and reasoning and to enable them to apply them to financial and research activities. The module will introduce the students to relevant software applications which can be used for statistical analysis. During accounting component of this module students will also develop a knowledge of the accounting and business techniques associated with construction

Learning Outcomes	
On successful completion of this module the learner should be able to:	
LO1	Describe basic concepts in statistics and apply statistical skills to explore data numerically and graphically using manual approaches and IT approachs.
LO2	Solve well formed problems by identifying variables, selecting the appropriate formula, applying appropriate mathematical techniques and presenting an answer in applied questions.
LO3	Calculate the solutions for a variety of financial maths topics including APR, EAR, IRR, BCR, NPV, Present and Future values associated with loan payments and sinking funds etc using information technology where appropriate.
LO4	Complete and defend cost control procedures used in construction project through accounting principles
LO5	Prepare and discuss forecasted budgetary expenditure and financial reports

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
Financial Calculations (a) Revise the calculation of simple and compound interest. (b) Calculation of loan repayments (c) Mortgage calculations (d) Calculation of Monthly payments, and total interest paid (e) Amortisation and amortisation schedule (f) Inflation: Indices, Manipulation and adjustment, price (g) Depreciation: straight line and reducing balance method.
Introduction to Statistics (a) Describe statistics and data analysis. (b) Distinguish between categorical (nominal, ordinal) and numerical (discrete, continuous) data. (c) Tabulate data and interpret data using Excel and Excel functions (Formulas, Pivot Tables etc). (d) Draw and Interpret Charts and Graphs manually and using appropriate IT packages. (e) Explain the terms population and sample. (f) Distinguish between and describe random and non-random sampling methods. (g) Design a questionnaire. Distinguish between types of questions and data. Describe how to conduct a sample survey. Describe experiments and observational studies.
Further Topics in Statistics (a) Calculations of the correlation coefficient and the regression line equation. Plotting scatter points and the regression line, Interpolating and Extrapolating using the equation and or the regression line. Using Excel to generate regression lines and correlation data. (b) Draw and interpret the shape of histograms, ogives and boxplots. Calculate and interpret the mean, mode and median. Calculate and interpret quartiles, the range, the interquartile range. Calculate and interpret the variance and standard deviation. (c) Prepare and interpret statistical output from excel/other statistical software.
Basic Introduction to Accounting and Finance (a) Accounts: financial, management, types of reports (final accounts, financial reviews) (b) Types of Business Structures (Partnerships, Sole Trader, Limited)
Financial Statements (a) Preparation of Financial Reviews and Final Accounts (Income Statement and Balance Sheet) with basic adjustments e.g. Depreciation (b) Cash Flow Statement
Project and Capital Investment Appraisal (a) Decision making and relevant costs (b) Methods of project/capital appraisal e.g. Payback, NPV, ARR, IRR

Assessment Breakdown	%
Continuous Assessment	50.00%
Project	50.00%

Continuous Assessment				
Assessment Type	*Assessment Description*	*Outcome addressed*	*% of total*	*Assessment Date*
Other	Continuous Assessment	1,2,3	25.00	n/a
Other	Continuous Assessment	4,5	25.00	n/a

Project				
Assessment Type	*Assessment Description*	*Outcome addressed*	*% of total*	*Assessment Date*
Project	n/a	1,2,3	25.00	n/a
Project	n/a	4,5	25.00	n/a

No Practical

No End of Module Formal Examination

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	12 Weeks per Stage	5.00
Estimated Learner Hours	12 Weeks per Stage	3.33
	Total Hours	100.00

Module Delivered In

Programme Code	Programme	Semester	Delivery
CW_CMOPT_B	Bachelor of Science (Honours) in Construction Management	4	Mandatory
CW_CMQSU_B	Bachelor of Science (Honours) in Quantity Surveying	4	Mandatory
CW_CMBSE_D	Bachelor of Science in Construction Management	4	Mandatory