MATH H1709: Business Mathematics

Module Title:	Business Mathematics
Language of Instruction:	English

Credits:	10

NFQ Level:	6

Module Delivered In	No Programmes

Teaching & Learning Strategies:	Classes with be practical in focus, using example questions to illustrate key points and theories. Students will be expected to complete work-sheets in their independent learning time to re-enforce understanding of key issues

Module Aim:	To give a thorough grounding in the mathematics required for the successful understanding and solution of business problems.

Learning Outcomes	
On successful completion of this module the learner should be able to:	
LO1	Apply mathematical skills to solve numerical problems in the area of business
LO2	Solve mathematical problems and manipulate formula, as appropriate
LO3	Appraise capital investment projects on the basis of Net Present Value and Internal Rate of Return
LO4	Apply statistical skills to solve business problems and model, analyse, interpret and present business data, using the principles of statistics.
LO5	Display key date in structured business scenarios, create graphs, tables and charts to highlight relevant numerical business information

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
Mathematics of Finance • Simple and compound interest • Present and Future Value • Discounting • Arithmetic series and their application to regular investments • Annuities and their Present Value • Straight line and reducing balance methods of depreciation
Capital Investment Appraisal • Net Present Value of investments • Internal Rate of Return • Straight line and reducing balance methods of depreciation
Equations • Linear and quadratic equations and their graphs • Solving simultaneous equations • Simultaneous inequalities • Graphing inequalities • Graphical solution of Linear Programming problems
Calculus • Differentiation and Applications/Rules of Differentiation • Maximum and Minimum points • Graphing Economic Functions • Business Applications: • Marginal Cost, Marginal Revenue, Profit Maximisation
Probability • Introduction to probability • Normal Distribution
Statistics • Introduction • Purpose of Statistics
Measures of Central Tendency and Dispersion • Mean, Mode and Median • Standard Deviation, Range • Coefficient of Variation • Application and Interpretation in Quality Control
Correlation and Regression Correlation and Regression
Time Series and Forecasting Time Series and Forecasting
Index Numbers Index Numbers

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*
Short Answer Questions	Class Test: Short questions to reinforce learning	1,2,3	10.00	n/a
Examination	Class Test: Class test to reinforce learning	1,2,3	10.00	n/a
Other	Assignment: Application of business mathematics to real-life situation	4,5	20.00	n/a

No Project

No Practical

End of Module Formal Examination

Assessment Type	*Assessment Description*	*Outcome addressed*	*% of total*	*Assessment Date*
Formal Exam	Final Exam: Final end of year	1,2,3,5	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
Independent Learning	30 Weeks per Stage	3.67
	Total Hours	200.00