ZMAT H2201: Mathematics

Module Title:	Mathematics
Credits:	10
NFQ Level:	6
Module Delivered In	1 programme(s)
Teaching & Learning Strategies:	As well as traditional lectures students will undertake in-class exercises on material presented in class. Small group tutorials will encourage further problem solving and dicussion.
Module Aim:	To provide students with some mathematical techniques appropriate for computer systems management.

Learning Outcomes	
On successful completion of this module the learner should be able to:	
LO1	Apply the basic concepts of number theory
LO2	solve various types of probability problems using the theory of probability distributions;
LO3	Explain and apply some numerical Analysis techniques
LO4	demonstrate an understanding of calculations underlying various financial arrangements;

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.*
1st year Mathematics

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Module Content & Assessment

Indicative Content
Number Theory Elementary number theory, Euclidean algorithm, Linear congruences, basic cryptography
Numerical Methods Newton's method, line and curve fitting, forecasting, programming techniques
Further Probability and Statistics review of basic probability, basic statistics, probability distributions, normal ,binomial and Poisson distributions.
Financial Mathematics geometric series, compound Interest, savings and investments, loans and mortgages, discounting, annuity, investment appraisal.

Assessment Breakdown	%
Continuous Assessment	30.00%
End of Module Formal Examination	70.00%

Continuous Assessment

Assessment Type	*Assessment Description*	*Outcome addressed*	*% of total*	*Assessment Date*
Other	CA marks will be based on the results of three 1 hour written tests during the term.	1,2,3,4	30.00	n/a

No Project

No Practical

End of Module Formal Examination

Assessment Type	*Assessment Description*	*Outcome addressed*	*% of total*	*Assessment Date*
Formal Exam	The terminal examination will include questions on all aspects of the course	1,2,3,4	70.00	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	2.00
Estimated Learner Hours	30 Weeks per Stage	1.00
Tutorial	30 Weeks per Stage	1.00
	Total Hours	120.00

Module Delivered In

Programme Code	Programme	Semester	Delivery
CW_KWCAP_C	Higher Certificate in Computing	2	Mandatory