Subject Description Form

Subject Code	AMA1500
Subject Title	Foundation Mathematics for Accounting and Finance
Credit Value	3
Level	1
Pre-requisite/ Co-requisite/ Exclusion	Nil
Objectives	The lectures aim to provide students of Accounting & Finance with basic knowledge of mathematics required for the understanding of quantitative methods and other concepts in their discipline. To develop students' ability for logical thinking and effective communication, tutorial sessions will be held.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: (a) apply mathematical reasoning to analyze essential features of different mathematical problems arising from business and economics; (b) make use of the knowledge of mathematical techniques and adapt known solutions to various situations; (c) use mathematical modeling in problem solving; (d) demonstrate abilities of logical and analytical thinking.
Subject Synopsis/ Indicative Syllabus	(1) *Sets*: Set notations, elements and subsets, power sets, ordered pairs, relations and functions, equivalence relations. (2) *Elementary functions*: Polynomials, rational functions, exponential and logarithmic functions. (3) *Limits and continuity*: Intuitive concepts about limit of a function at a point, left-hand and right-hand limits, simple limit theorems, some special limits. Concept of a continuous function, some special properties of real valued continuous functions on an interval. (4) *Differential Calculus and applications*: Concept of derivatives and differentials, rules of differentiation, L'Hopital's rule, maxima and minima, applications to curve sketching. Partial derivatives and the chain rule, implicit differentiation, constrained optimization.

	(5) *Integral Calculus*: Indefinite integrals as anti-derivatives, rules of integration, techniques of integration. Definite integrals as limits of sums, Fundamental theorem of calculus, integration by parts and reduction formulas. Applications.
Teaching/Learning Methodology	A two hour mass lecture will be conducted each week to initiate students into the ideas, concepts and techniques of the topics in the syllabus, which is then reinforced by a one hour tutorial designed to consolidate and develop students' knowledge through discussion and practical problem solving.
Assessment Methods in Alignment with Intended Learning Outcomes	(see table below)

Specific assessment methods	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)			
		a	b	c	d
1. Continuous Assessment	40%	✓	✓	✓	✓
2. Examination	60%	✓	✓	✓	✓
Total	100%				

Continuous Assessment comprises of assignments, in class quizzes, online quizzes and a mid-term test. A 3-hour examination is held at the end of the semester.

Questions used in assignments, quizzes, tests and examinations are used to assess the student's level of understanding of the basic concepts and their ability to use mathematical and numerical techniques in solving problems in various disciplines.

Student Study Effort Required	Class contact:	
	▪ Lecture	26 Hrs.
	▪ Tutorial	13 Hrs.
	▪ Mid-term test and Examination	5 Hrs.
	Other student study effort:	

	▪ Assignments and self-study	73 Hrs.
	Total student study effort	117 Hrs.
Reading List and References	Chung, K.C. A short course in Calculus and matrices. McGraw Hill, 2013. K.F. Hung, Wilson C.K. Kwan and Glory T.Y. Pong. Foundation Mathematics & Statistics, McGraw Hill 2013. Thomas, G.B., Weir, M.D. & Hass, J. Thomas' Calculus, 14th edition, Pearson Education 2017	