

Subject Description Form

Subject Code	AMA102
Subject Title	Foundation Mathematics for Business
Credit Value	3
Level	1
Pre-requisite/ Co-requisite/ Exclusion	Nil
Objectives	This is a bridging subject to provide students with a broad foundation in Mathematics. It aims to prepare the students to study an undergraduate programme in a business related discipline. The emphasis will be on the application of mathematical methods to solving basic mathematical problems and the development of ability of logical thinking and effective communications.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: <ol style="list-style-type: none"> 1. apply mathematical reasoning to analyse essential features of different mathematical problems such as differentiation and basic probability; 2. extend their knowledge of mathematical techniques and adapt known solutions to different situations; 3. search for useful information and use statistical tables in solving basic statistical problems.
Subject Synopsis/ Indicative Syllabus	<p><i>Basic concepts</i> Functions and inverse functions; Elementary functions; Mathematical Induction; Complex numbers.</p> <p><i>Differential calculus</i> Limits; Continuity; Derivatives; Techniques of differentiation; Maxima and minima; Applications.</p> <p><i>Linear Algebra</i> Matrices and determinants; Systems of linear equations.</p> <p><i>Probability and Statistics</i> Descriptive statistics; Frequency distribution; Mean, median and mode; Variance and standard deviation; Probability theory; Discrete and continuous random variables; Normal distribution.</p> <p><i>Elementary Financial Mathematics</i> Compound interest; Present Value; Annuity.</p>
Teaching/Learning Methodology	The subject will be delivered mainly through lectures and tutorials. The lectures are organized to emphasize on the integration of mathematical concepts and techniques. The students' learning outcomes are then reinforced by activities involving tutorial exercises and assignments.

Assessment Methods in Alignment with Intended Learning Outcomes	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)		
			1	2	3
	a. Continuous Assessment	40%	✓	✓	
	b. Examination	60%	✓	✓	✓
	Total	100 %			
<p>Continuous Assessment comprises of assignments and a mid-term test. A written examination is held at the end of the semester.</p> <p>To pass this subject, students are required to obtain Grade D or above in both the Continuous Assessment and the Examination components.</p>					
Student Study Effort Required	Class contact:				
	▪ Lecture				26 Hrs.
	▪ Tutorial and Student Presentation				13 Hrs.
	Other student study effort:				
	▪ Assignment				33 Hrs.
	▪ Self-study				33 Hrs.
	Total student study effort				
Reading List and References	<u>Textbook:</u>				
	K.F. Hung, Wilson C.K. Kwan and Glory T.Y. Pong	Foundation Mathematics & Statistics			McGraw Hill 2013
	<u>References:</u>				
	Bostock, L. & Chandler S.	Core Mathematics for A-Level 3 rd edition			Stanley Thornes 2000
Walpole, R.E., Myers, R.H., Myers, S.L. & Ye, K.Y.	Probability and Statistics for Engineers and Scientists 9 th edition			Prentice Hall 2012	