FOUNDATION MATHEMATICS FOR BUSINESS

Subject Code: AMA102  
Level: 1  
Contact Hours: Lect: 28 Tut: 14  
Student Effort: 120  
Assessment Method: Coursework 40% Examination 60%  
Credit Value: 3  
Pre-requisites: Nil  
Co-requisites: Nil  
Exclusions: Nil  
Subject Leader/Lecturer/Dept.: (AMA)

Subject Aim:

This subject is intended to:

1. This is a bridging subject to provide the 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.

Learning Outcomes:

Students will demonstrate their ability to:-

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;
4. undertake continuous learning.

Syllabus Content:

1. Basic concepts  
   Functions and inverse functions; Elementary functions; Mathematical Induction; Complex numbers.
2. Differential calculus  
   Limits; Continuity; Derivatives; Techniques of differentiation; Maxima and minima; Applications.
3. Linear Algebra  
   Matrices and determinants; Systems of linear equations.
4. Probability and Statistics  
   Descriptive statistics; Frequency distribution; Mean, median and mode; Variance and standard deviation; Probability theory; Discrete and continuous random variables; Normal distribution.

Learning and Teaching Approach (tasks and activities designed to achieve learning outcomes):

The lectures aim to provide the students with an integrated knowledge required for the understanding and application of mathematical concepts and techniques. To develop students’ ability for logical thinking and effective communication, tutorial and presentation sessions will be held.

Assessment (assessment of student performance resulting from learning tasks):

Continuous Assessment: 40%  
Examination: 60%  
Total: 100%

The continuous assessment comprises of assignments, in-class quizzes and tests. The assignments are used to assist the students to reflect and review on their progress. The end-of-semester examination is used to assess the knowledge acquired by the students and their ability to apply and extend such knowledge.

Reading List: