

MBA Program
MATHEMATICAL CONCEPTS AND METHODS
 Sample Course Outline



SUMMARY:		
<p>The primary aim of the course is for participants to build confidence in the basic elements of mathematical thinking and practice. A secondary aim of the course is to give students an introduction to Excel. The course extends over 7 weeks with two X 80 minute class session and one tutorial per week. A set of practice exercises are distributed after each class. The curriculum is organized into three sections</p> <p>(1) Algebra, (2) Functions, and (3) Rates of Change.</p>		
Course Title:	Mathematical Concepts and Methods	Course No. MNGT5231

Prerequisites/Sequence.

Basic mathematical skills are required for: Data Analysis and Decision Making, Statistical Modelling and Forecasting, Finance, Marketing Engineering, Economics and Operations Management. The math skills covered are directed towards these courses. While the emphasis in these courses is on calculation, a basic level of algebra is required to understand what you are calculating.

Course aims / objectives.

The primary aim of the course is for participants to build confidence in the basic elements of mathematical thinking and practice. A secondary aim of the course is to give students an introduction to Excel.

Preliminary readings to be done prior to the first class. NIL

Detailed list of Texts & References to include Recommended Readings for the whole course.

Text Books

No particular textbook is required or recommended. Search library catalogue under "business mathematics"=subject.

- *Mathematics Made Simple* by Sperling and Stuart (2 copies in Lowy, 1 in main)
- *Introductory Mathematical Analysis for Students of Business and Economics* by Haeussler and Paul (1 copy in Lowy, further copies in Main)

Class Notes

Will be distributed via a CD during class time.

Computation

For your MBA course you should have a hand-held "scientific" calculator and access to Microsoft Excel.

Lecture Guides by Week / Course Schedule (as separate documents if necessary)

- WEEK 1: L1-1: Rules of Algebra; fractions
L1-2: More fractions; Powers and their applications
- WEEK 2: L2-1: Logarithms; continuous interest
L2-2: Continuous rate of return; Solving equations; QUIZ 1
- WEEK 3: L3-1: Linear functions; QUIZ 2
L3-2: Quadratic functions, applications
- WEEK 4: L4-1: Exponential growth
L4-2: Introduction to rates of change; QUIZ 3
- WEEK 5: L5-1: Derivatives of simple polynomials; finding the optimum
L5-2: Product and functions of functions; QUIZ 4
- WEEK 6: L6-1: Rate of change of log(f); Functions of several variables
L6-2: Using Solver in Excel; QUIZ 5
- WEEK 7: Review; QUIZ 6

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Assessment requirements as follows:

No final mark is awarded for this course, only a pass or fail. Assessment will be based on six in-class quizzes. Don't panic about the assessment. I will give UNLIMITED assistance in preparing you for these quizzes. We have never lost a student yet!

Mid-term Exam	No		
End-of-term Exam	No	Weighting of each assessment component	In Class Quiz x 6
Group assessment	No		
Individual assessment	Yes	Is the course	Pass/Fail
Group Presentation	No	Late Policy [deduction of marks for last assignment(s) /project(s)]	
Individual Presentation	No	Return of assignments & projects: where should they be handed in?	Class