BA123   Mathematics I

COURSE INFORMATION

Prerequisites	Academic Year & Level		Teaching Methods			Credit Hrs.
	Year	Semester	Lecture	Tutorial	Lab.	
None	1	1	2	2	0	3

COURSE AIM

Introduce students to differentiation, trigonometric, inverse trigonometric, algorithmic, exponential and hyperbolic functions, as well as parametric, implicit and partial differentiation. Also, provide students with a general overview of limits, Taylor's Also, provide students with a general overview of limits, Taylor's and Maclaurin's expansions, curve sketching and conic sections.

COURSE WEEKLY CONTENTS

1   Functions – Graphs of rational functions
2   Inverse functions – Transformations of functions
3   The Derivative – Basic rules of differentiation – The Chain Rule
4   Trigonometric functions and their derivatives
5   Inverse trigonometric functions and their derivatives – Implicit differentiation
6   Exponential and logarithmic functions and their derivatives
7   Hyperbolic functions and their derivatives- Midterm Exam
8   Inverse hyperbolic functions and their derivatives
9   L'Hopital's rule
10   Partial derivatives
11   Taylor's and Maclaurin's expansion
12   Conic sections and 12th Assessment
13   Conic sections
14   Antiderivatives – The Fundamental Theorem of Calculus
15   Final revision

STUDENT GRADING & ASSESSMENT

Weeks	Exams		Assign.	Quizzes	Reports	Present.	Lab.	Total
1 to 7	20	Midterm	←	1 0	M A R K S		→	30
			To be freely distributed among possible assessments					
8 to 12	←			2 0	M A R K S		→	20
13 to 15	←			1 0	M A R K S		→	10
16 or 17	40	Final						40
Total	Exams		Assign.	Quizzes	Reports	Present.	Lab.	100

REFERENCES

Textbook	ISBN-13: 978-1-133-95399-9
Other	