

EBA1203 Calculus I**COURSE INFORMATION**

Prerequisites	Academic Year & Level		Teaching Methods			Credit Hrs.
	Year	Semester	Lecture	Tutorial	Laboratory	
None “for students of mathematics section”, OR EBA0201	1	1	2	2	0	3

COURSE AIM

- Differentiate certain types of functions (trigonometric functions and their inverse, exponential function, and logarithmic function).
- Understand and use the applications of differentiation (l'Hopital, Taylor and Maclaurin's expansions).

COURSE WEEKLY CONTENTS

- 1 Basic rules of differentiation.
- 2 Trigonometric function and their derivatives
- 3 Inverse of trigonometric and their derivatives
- 4 Logarithmic function and their derivatives
- 5 Exponential function and their derivatives
- 6 Derivatives of hyperbolic functions and their inverse
- 7 Parametric differentiation, Implicit differentiation
- 8 L'Hopital rule
- 9 Partial Differentiation
- 10 Taylor's and Maclaurin's expansions
- 11 Physical application
- 12 Curve sketching (Critical, maximum, minimum and inflection points)
- 13 Curve sketching (rational functions)
- 14 Conic sections
- 15 Review

STUDENT GRADING & ASSESSMENT

Weeks	Exams	Assign.	Quizzes	Reports	Present.	Lab.	Total
1 to 7	←		30	MARKS		→	30
8 to 12	←		20	MARKS		→	20
1 to 15	←		10	MARKS		→	10
16 or 17	40	Final					40

REFERENCES

Textbook Sherman K.Stein, Anthony Barcellos, Calculus & Analytic Geometry, McGraw-Hill Higher Education.