

EBA1204 Calculus II**COURSE INFORMATION**

Prerequisites	Academic Year & Level		Teaching Methods			Credit Hrs.
	Year	Semester	Lecture	Tutorial	Laboratory	
EBA1203	1	2	2	2	--	3

COURSE AIM

1. Integrate different types of functions using various methods (Integrating by substitution, integration by parts).
2. Understand and use the applications of integration (Area & volume, average of a function, length of a curve).
3. Learn the basic theory of linear algebra
4. Solve system of linear equations using matrices, and determinants.

COURSE WEEKLY CONTENTS

- 1 Definition of indefinite integrals & table of famous integrals.
- 2 Simple rules of integration & the fundamental theorem of calculus.
- 3 Integration by parts.
- 4 Integration by parts & integration of rational functions.
- 5 Integration of rational functions.
- 6 Integration of Trigonometric powers.
- 7 Definite integration. Areas and Volumes.
- 8 Length of the curve.
- 9 Average of a function & numerical integration.
- 10 Matrix Algebra.
- 11 Solution of system of linear equations.
- 12 Eigenvalues and Eigenvectors.
- 13 Physical meaning of Eigenvalues and Eigenvectors & Cayley
- 14 Hamilton theorem.
- 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.