



C. U. Shah University, Wadhwan City

Faculty of Computer Science

Name of Program: Bachelor of Science (Information Technology)

Semester : I

W.e.f June-2014

Teaching & Evaluation Scheme

Sr. No	Subject Code	Subject Name	Teaching Hours/Week				Credits	Evaluation Scheme/Semester							
			Th	Tu	Pr	Total		Theory				Practical			Total Marks
								Sessional Exam		University Exam		Internal		Uni .	
								Mark	Hrs	Mark	Hrs	Pr	TW	Pr	
4	4CS01IFM1	Fundamental Mathematics for Computer.	4	2	-	6	5	30	1.5	70	3	-	-	-	100

Objectives: This course provides the foundational introduction to the fundamental concepts in Mathematics.

Pre-requisites: A basic understanding of Mathematical Operations.

Ch. No.	Chapter Name	Chapter Topics	Total Hrs
1	Set Theory	Introduction to set theory, Methods of representation of set, Operations on set and its properties, Venn Diagram, DeMorgan's Laws, Cartesian product, Typical examples	10
2.	Determinant & Matrix	Introduction to Determinants, Definition of Matrix, Types of matrices, Algebraic operations on Matrices, Solutions of linear equations using matrix inverse & Cramer's method, Typical examples	9
3.	Co-ordinate geometry	Introduction , Quadrants and lines, Distance between two points, Section formula, Area of triangles, Different forms of equation of straight line: <ul style="list-style-type: none"> • Origin slope form Line intercept form Slope intercept form • Two intercept form Slope point form Parallel & perpendicular lines, Typical examples	9
4.	Trigonometry	Introduction to trigonometric functions, Identities, Graphs of sine and cosine, Unit of angles(Degree & Radian), Inverse trigonometric functions	8
5.	Differentiation	Definition , Rules of differentiation, Derivatives of algebraic, Derivatives of trigonometric, Derivatives of parametric, Derivatives of logarithmic, Derivatives of implicit functions	10
6.	Integration	Definition, Standard formulae, Method of substitution, Integration by parts, Partial fraction, Definite Integral and its properties	9
Total			55

Teaching Methodology:

Revision, Paper Solving, Seminar, MCQ Quiz, Viva Test

Learning Outcomes:

At the end of this course the students have advanced knowledge of mathematics.

Books Recommended:

1. "Advanced Mathematics", Ravi Gor, Nirav Publication (4th Edition-2006)
2. "Polytechnic Mathematics", S. P. Deshpande, Pune VidyarthiGruhPrakashan, 1984

Reference Books:

1. "Mathematical & statistical foundation of computer science", C. J. Amnadas & Co (New Edition-2013).
2. "BCA Advanced Mathematics", H. R. Vyas, B. S. Shah Publication (3rd Edition-2007)
3. "Polytechnic mathematics", D. S. Prakash, S. Chand company Ltd.