Name of Programme : **CE/EE/ET/ME/MT/CM / IT**

Programme Code : **01/ 02/ 03/ 04 / 05/ 06 / 07**

Name of Course : **Applied Mathematics –II**

Course Code : **SC 162**

Prerequisite : **Applied Mathematics- I (SC 161)**

Teaching Scheme:

	Hours /Week	Total Hours
Theory	03	48
Term Work /Tutorial	01	16

Evaluation:

	Progressive Assessment	Semester End Examination			
		Theory	Practical	Oral	Term work
Duration	Three class tests of 60 minutes duration	3 Hrs	---	---	---
Marks	20	80	---	---	---

Course Aim:

This subject intends to teach students basic facts, concepts, principles and procedure of Mathematics as a tool to analyze Engineering problems and as such it lays down foundation for the understanding of engineering science and core technology subjects.

Course Objectives:

The students will be able to,

1. Under stand basic facts of Mathematics about the field of analysis of any Engineering problem.
2. Know the standard ways in which the problem can be approached.
3. Apply basic concepts to engineering problems.

Course Contents:

Sr. No.	Name	Periods	Marks
1	**FUNCTIONS AND LIMITS :**	**10**	**16**
	2.1 Functions: Concept of functions, Types of functions; (only definitions)	02	04
	2.2 Limits: Concept of limits and limits of functions. (algebric, trigonometric, Logarithmic and exponential.)	08	12
2	**DERIVATIVES:**	**16**	**24**
	1.1 Definition of the derivative, derivatives of standard Functions.	03	04
	1.2 Differentiation of sum, difference, product and quotient of two or more functions	03	04
	1.3 Differentiation of composite, inverse, implicit functions.	04	06
	1.4 Differentiation of parametric exponential and logarithmic Functions.	04	06
	1.5 Successive differentiation.	02	04
3	**APPLICATIONS OF DERIVATIVES:**	**04**	**08**
	2.1 Geometrical meaning of derivative (Equations of tangents and Normals)	02	04
	2.2 Maxima and minima of functions.	02	04
4	**INTEGRATION**	**12**	**20**
	Definitions, standard formulae, integration of algebraic sum of two or more functions, integration by substitutions and by trigonometric , transformations, integration of √ax2+ bx+c, 1⁄ √ax2+ bx+c, integration by parts, integration by partial fractions.		
5	**Definite integrals**	**06**	**12**
	Definition and properties of definite integrals Example based on these properties		

Reference Books

Author	Title	Publisher
Vishwanath	Engineering Mathematics Vol.I	Satya Prakashan, New Delhi
S.P. Deshpande	Mathematic for polytechnic students I and II	Pune Vidyarthi Griha Prakashan
H.K. Dass	Mathematics for Engineering Vol-I	S.Chand and Company
Shantinarayan	Engineering Mathematics vol-I and II	S.Chand and Company

Learning Resources: Chalk, Board etc.

Specification Table:

Sr.No.	Topic	Cognitive Levels			Total
		Knowledge	Comprehension	Application	
1	**FUNCTION AND LIMITS**	04	06	06	16
2	**DERIVATIVES**	08	16	00	24
3	**APPLICATIONS OF DERIVATIVES**	00	00	08	08
4	**INTEGRATION**	06	10	04	20
5	**DEFINITE INTEGRALS**	04	04	04	12
	Total	22	36	22	80