

GANPAT UNIVERSITY										
FACULTY OF ENGINEERING & TECHNOLOGY										
Programme		Diploma Programme				Branch/Spec.		All		
Semester		I				Version				
Effective from Academic Year					2018-19		Effective for the batch Admitted in			
Subject code		1BS221			Subject Name		Mathematics - II			
Teaching scheme						Examination scheme (Marks)				
(per week)		Lecture(DT)		Practical(Lab.)		Total		CE	SEE	Total
		L	TU	P	TW					
Credit		3	1	-	-	4	Theory	40	60	100
Hours		3	1	-	-	4	Practical	-	-	-
•	<ul style="list-style-type: none"> The course content should be taught so as to understand and perform the Engineering concepts and computations. Use proper Mathematical tool to understand engineering principles and concepts and the core Technological studies. Understand all basic fundamentals of Differentiation and Integration. 									
Theory Syllabus										
Unit		Content				LEARNING OUTCOMES				Hrs.
1		Co-ordinate Geometry: 1.1 Point : Distance Formula, Mid-point, Area of a Triangle. 1.2 Straight Line : Forms of Equation of St Lines, Slope & Intercepts of a line, Parallel and Perpendicular lines. 1.3 Circle : Equation of Circle, Centre and radius, Tangent and Normal.				1.1 Students are able to know the subject contents, planning, books etc. for the semester 1.2 Students are able to put ideas and concepts to work in solving problems. 1.3 Students are able to				10

		solve the problems using distance formula for triangle, quadrilateral, circumcenter of triangle.	
2	Function & Limit: 2.1 Function: Concept and Examples 2.2 Limit: Concept of Limit, Standard Formulae and related Examples.	2.1 Students understand the relationship between sets as a function and can find domain, co-domain and range of function 2.2 Students can solve the examples of limit using the definition.	10
3	Differentiation & it's Applications: 3.1 Differentiation: Definition and Formulas , Rules of Sum, Product, Quotient of Functions, Chain Rule, Derivative of Implicit functions and Parametric functions, Logarithmic Differentiation, Successive Differentiation, Taylor's & Maclaurin's expansions of single variable. 3.2 Application: Velocity & Acceleration.	3.1 Students know the rules of derivatives for Addition, Subtraction, Multiplication and Division of two functions. 3.2 Students know about differentiation of a composite function, Chain Rule and examples based on chain rule. 3.3 Students can understand about Application of Derivatives to find velocity and Acceleration and Examples	16
4	Integration & its application: 4.1 Integration: Concept , Integral of Standard Functions, Working Rules of Integration, Integration by Parts, Integration by Substitution Method, Partial	4.1 Student understand about working rules of Integration with examples	14

	Fraction Method, Definite Integral and its properties. Leibniz's theorem. 4.2 Application: Apply the Integration for finding Area.	4.2 Students know Definite Integration, Application of Integration, Examples to find area and volume	
5	Statistics: 5.1 Measures of Central Tendency: for Ungrouped and Grouped Data : Mean, Median and Mode 5.2 Measure of Dispersion: for Grouped and Ungrouped data : Standard deviation	5.1 Students know about Data Collection, Classification, Measures of Central Tendency, 5.2 Students can understand about Standard Deviation for grouped data and can solve it's Examples	10

Practical content :

Experiments/Practical/Tutorials/Simulations would be carried out based on syllabus

SUGGESTED LEARNING RESOURCES

List of Books

Sr.No	Title of Books	Author
1	Advance Mathematics	N R Pandya
2	Applied Mathematics	Prakash D S
3	Polytechnic Mathematics	S P Deshpande
4	Higher Engineering-Mathematics	B.S.Grewal

