GANPAT UNIVERSITY

FACULTY OF ENGINEERING AND TECHNOLOGY (DIPLOMA PROGRAMMES)

Programme	Diploma Programme	Branch/Spec.	All
Semester	II	Version	1.0.0.0
Effective from Academic Year	2018-19	Effective for the batch Admitted in : June-2018	
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	-	-	-

Pre- requisite:

- None

Learning outcomes:

- 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	Hrs.
1	**Co-ordinate Geometry:** **Point** : Distance Formula, Mid-point, Area of a Triangle. **Straight Line :** Forms of Equation of St Lines, Slope & Intercepts of a line, Parallel and Perpendicular lines. **Circle :** Equation of Circle, Centre and radius, Tangent and Normal.	**10**
2	**Function & Limit:** **Function:** Concept and Examples **Limit:** Concept of Limit, Standard Formulae and related Examples.	**10**
3	**Differentiation & it's Applications:** **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. **Application:** Velocity & Acceleration.	**16**
4	**Integration & its application:** **Integration**: Concept , Integral of Standard Functions, Working Rules of Integration, Integration by Parts, Integration by Substitution Method, Partial Fraction Method, Definite Integral and its properties. Leibniz's theorem. **Application:** Apply the Integration for finding Area.	**14**
5	**Statistics:** **Measures of Central Tendency:** for Ungrouped and Grouped Data : Mean, Median and Mode **Measure of Dispersion:** for Grouped and Ungrouped data : Standard deviation	**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	Publication
1	Advance Mathematics	N R Pandya	Macmillan Publishers India Ltd.,2012
2	Applied Mathematics	Prakash D S	Pune Vidyarthi Gruh Prakashan,1984
3	Polytechnic Mathematics	S P Deshpande	Pune Vidyarthi Gruh Prakashan
4	Higher Engineering-Mathematics	B.S.Grewal	Khanna Publication