

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	1BS201		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	-	-	-
<b>Pre- requisite:</b>									
<ul style="list-style-type: none"> <li>None</li> </ul>									
<b>Learning outcomes:</b>									
<ul style="list-style-type: none"> <li>The course content should be taught so as to understand and perform the Engineering concepts and computations.</li> <li>Use proper Mathematical tool to understand engineering principles and concepts and the core Technological studies.</li> <li>Understand all basic fundamentals of Differentiation and Integration.</li> </ul>									
<b>Theory Syllabus</b>									
<b>Unit</b>	<b>Content</b>								<b>Hrs.</b>
1	<b>Co-ordinate Geometry:</b> <b>Point :</b> Distance Formula, Mid-point, Area of a Triangle. <b>Straight Line :</b> Forms of Equation of St Lines, Slope & Intercepts of a line, Parallel and Perpendicular lines. <b>Circle :</b> Equation of Circle, Centre and radius, Tangent and Normal.								10
2	<b>Function &amp; Limit:</b> <b>Function:</b> Concept and Examples <b>Limit:</b> Concept of Limit, Standard Formulae and related Examples.								10
3	<b>Differentiation &amp; it's Applications:</b> <b>Differentiation:</b> 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. <b>Application:</b> Velocity & Acceleration.								16
4	<b>Integration &amp; its application:</b> <b>Integration:</b> 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. <b>Application:</b> Apply the Integration for finding Area.								14
5	<b>Statistics:</b> <b>Measures of Central Tendency:</b> for Ungrouped and Grouped Data : Mean, Median and Mode <b>Measure of Dispersion:</b> 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**

<b>Sr.No</b>	<b>Title of Books</b>	<b>Author</b>	<b>Publication</b>
<b>1</b>	Advance Mathematics	N R Pandya	Macmillan Publishers India Ltd.,2012
<b>2</b>	Applied Mathematics	Prakash D S	Pune Vidyarthi Gruh Prakashan,1984
<b>3</b>	Polytechnic Mathematics	S P Deshpande	Pune Vidyarthi Gruh Prakashan
<b>4</b>	Higher Engineering-Mathematics	B.S.Grewal	Khanna Publication