

# Govt. Polytechnic Arwal

## Lesson Plan for Applied Mathematics

**Faculty Name-** Shweta Kumari

**Topic Name –** Applied Mathematics

**Branch –** Mechanical Engineering

**Learning Unit Title–** Integration

**Curricular Area**

UNIT-01 Integration: definition of integration as anti-derivative.

**Standards**

According to the SBTE Syllabus

**Objective**

1. This course is aimed to develop the basic Mathematical skills Of Engineering students that are imperative for effective understanding subjects.
2. Use appropriate mathematical concepts and skills to solve problems in both familiar and unfamiliar situations including those in real-life contexts.
3. Select and apply general rules correctly to solve problems including those in real-life contexts.
4. The topics introduced will serve as basics tools for specialized studies in many fields of engineering and technology.

**Lesson Plan**

Unit	Week	Days	Topic	Platform
1	1	1	1.1 Definition of integration as anti-derivative.	Classroom /VCS
		2	Integration of standard function.	
	2	3	1.2 rules of integration , integrals of sum	Classroom /VCS
		4	Difference, scalar multiplication.	
	3	5	1.3 Methods of integration	Classroom /VCS
			1.3 (i) integration by substitution	
			1.3 (ii) integration of rational function	
	4	6	1.3 (iii) integration by partial fraction	Classroom /VCS
			1.3 (iv) integration by trigonometric transformation	
			1.3 (v) integration of parts	
	5	8	1.4 definite integration	Classroom /VCS
		9	1.4 (i) definition of definite integral	
6	10	1.4 (ii) properties of definite integral with simple problems	Classroom /VCS	

**Note** :- Class duration may be increase.