

## LESSION PLAN

Discipline :Mechanical engineering	Semester : 3RD	Name of the Teachnig Faculty : Mrs LOPAMUDRA SWAIN
Subject: Strength Of Materials	No.of days/Per weeks Class Alloted Weeks	Semester :3rd No.of Weeks : 4
Weeks	Class day	<b>Theory</b>
3rd week(Sep- 2022)	1st	Simple stress& strain , Types of load, stresses & strains,(Axial and tangential) Hooke's Law
	2nd	Types of load, stresses & strains,(Axial and tangential) Hooke's Law
	3rd	Young's modulus, bulk modulus, modulus of rigidity
	4th	Temperature stress, determine the temperature stress in composite bar (single core)
4th week	1st	Temperature stress, determine the temperature stress in composite bar (single core)
	2nd	Poisson's ratio, derive the relation between three elastic constants
	3rd	Principle of super position, stresses in composite section
	4th	Strain energy and resilience, Stress due to gradually applied, suddenly applied and impact load
2nd week (Oct- 2022)	1st	Simple problems on above,Thin cylinder and spherical shell under internal pressure
		<b>CLASS TEST -1</b>
	2nd	Definition of hoop and longitudinal stress, strain, Derivation of hoop stress, longitudinal stress, hoop strain
	3rd	Computation of the change in length, diameter and volume,longitudinal strain and volumetric strain
	4th	Two dimensional stress systems ,Determination of normal stress, shear stress and resultant stress on oblique plane
3rd week	1st	Determination of normal stress, shear stress and resultant stress on oblique plane
	2nd	Location of principal plane and computation of principal stress
	3rd	Location of principal plane and computation of principal stress and Maximum shear stress using Mohr's circle
	4th	Location of principal plane and computation of principal stress and Maximum shear stress using Mohr's circle
4th week	1st	Bending moment& shear force
	2nd	Types of beam and load
	3rd	Types of beam and load
	4th	Concepts of Shear force and bending moment
1st week (Nov - 2022)	1st	Shear Force and Bending moment diagram and its salient features
	2nd	Illustration of SFD & BMD in cantilever beam, simply supported beam

