

GOVT.POLYTECHNICMAYURBHANJ ,LESSONPLAN-2026/27(WINTER)

Discipline: MEACHANICAL ENGG.		Semester:3rdSem		Name of theTeachingFaculty: Thakura Hansdah	
SUBJECT:STRENGTH OF MATERIAL		No.of Days/Perweek classallotted:03	CHAPTER	SemesterFromdate:1.07.2026ToDate:15.11.2026	
MONTH	Week	DAY	CHAPTER -1	TOPIC	
JULY	1st	2ND		1.0 Simple stress& strain	
		3RD		1.1 Types of load, stresses & strains,(Axial and tangential)	
		5th		Hooke's law, Young's modulus,	
	2ND	2ND		Hooke's law, Young's modulus,	
		3RD		Solve the numerical problem	
		5th		bulk modulus, modulus of rigidity	
		2ND		Solve the numerical problem	
	3rd	3RD		Derive the Poisson's ratio	
		5th		Derive the relation between three elastic constants,	
		2ND		Derive the relation between three elastic constants,	
		3RD		1.2 Principle of super position, stresses in composite section	
	4TH	4TH		1.3 Temperature stress, determine the temperature stress in composite bar (single core)	
		2ND		1.4 Strain energy and resilience, Stress due to gradually applied, suddenly applied and impact load	
		3RD		Solve of simple problem	
	---	2ND		Solve of simple problem	
		3RD			

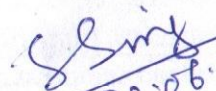
AUGUST	5TH		CHAPTER-2	2.0 Thin cylinder and spherical shell under internal pressure
		4TH		2.1 Definition of hoop and longitudinal stress, strain
		5TH		REMEDIAL CLASS
	1ST	2ND		Derivation of hoop stress, longitudinal stress, hoop strain, longitudinal strain and volumetric strain
		3RD		2.3 Computation of the change in length, diameter and volume
		4TH		Computation of the change in length, diameter and volume
		5th		Computation of the change in length, diameter and volume
	2ND	2ND		REVISION
		3RD		Solve of simple problem
		4TH		Solve of simple problem
	3RD	2ND	chapter-3	3.0 Two dimensional stress systems
		3RD		Introduction of Normal stress, Principal plan, shear stress etc
		4TH		3.1 Determination of normal stress, shear stress and resultant stress on oblique plane
		5th		3.1 Determination of normal stress, shear stress and resultant stress on oblique plane
		2ND		CLASS TEST-1
	4TH	3RD		3.3 Location of principal plane and computation of principal stress and Maximum shear stress using Mohr's circle
		4TH		3.3 Location of principal plane and computation of principal stress and Maximum shear stress using Mohr's circle
		2ND		Question Discussion
	5TH	3RD		4.0 Bending moment & shear force
		4TH		4.1 Types of beam and load
		5TH		4.2 Concepts of Shear force and bending moment of cantilever beam with point load
				4.2 Concepts of Shear force and bending moment of cantilever beam UDL

SEPTEMBER	1ST	2ND	CHAPTER-4	Shear Force and Bending moment diagram and its salient features illustration in , simply supported beam under point load .
		3RD		Shear Force and Bending moment diagram and its salient features illustration in , simply supported beam under UDL
		4TH		Solve numerical problem cantilever .simply supported and over hanging beam
		5TH		REMEDIAL CLASS
	2ND	2ND	chapter-5	Solve numerical problem cantilever .simply supported and over hanging beam
		3RD		Solve numerical problem cantilever .simply supported and over hanging beam
		4TH		Solve numerical problem cantilever .simply supported and over hanging beam
		2ND		5.0 Theory of simple bending.
	3RD	3RD		5.1 Assumptions in the theory of bending,
		4TH		5.2 Bending equation, Moment of resistance, Section modulus& neutral axis.
		5TH		5.2 Bending equation, Moment of resistance, Section modulus& neutral axis.
		2ND		INTERNAL ASSESMENT
	4TH	3RD	CHAPTER-6	5.3 Solve simple problems.
		4TH		6.0 Combined direct & bending stresses
		5TH		6.1 Define column Axial load, Eccentric load on column,
		4TH		6.3 Direct stresses, Bending stresses, Maximum& Minimum stresses. Numerical problems on above
	1ST	4TH		6.3 Direct stresses, Bending stresses, Maximum& Minimum stresses. Numerical problems on abo
	2ND	2ND		6.4 Buckling load computation using Euler's formula (no derivation) inColumns with various end conditions
				7.0 Torsion
				7.1 Assumption of pure torsion

OCTOBER		3RD	chapter-7	7.2 The torsion equation for solid shaft
		4TH		The torsion equation for solid shaft
		1st		The torsion equation for solid shaft
	3RD	2ND		7.2 The torsion equation for solid shaft
		3RD		7.1 The torsion equation for hollow circular shaft
		4TH		7.1 The torsion equation for hollow circular shaft
		5TH		7.2 Comparison between solid and hollow shaft subjected to pure torsion and solvr the numerical problem on above.
	4TH	2ND		7.2 Comparison between solid and hollow shaft subjected to pure torsion and solvr the numerical problem on above.
		3RD		SOLVE SIMPLE NUMERICAL PROBLEM
		4TH		SOLVE SIMPLE NUMERICAL PROBLEM
		5TH		Comparison between solid and hollow shaft subjected to pure torsion and solvr the numerical problem on above
	5TH	2ND		7.2 Comparison between solid and hollow shaft subjected to pure torsion and solvr the numerical problem on above.
		3RD		SOLVE SIMPLE NUMERICAL PROBLEM
		4TH		REVISION
		5TH		REVISION
NOVEMBER	1st	2ND		SOLVE SIMPLE NUMERICAL PROBLEM
		3RD		REVISION
		4TH		CLASS TEST-2
	2ND	2ND		REVISION
		3RD		REVISION


subject expert
30/08/2025
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30.08.26
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