

SAMANT CHANDRASEKHAR INSTITUTE OF TECHNOLOGY & MANAGEMENT

SEMILIGUDA - 764036, KORAPUT

DEPT OF.....MECHANICAL ENGINEERING.....

LESSON PLAN AND PROGRESS REGISTER

(To be maintained by all members of the teaching staff)

SESSION 2023-24
3rd SEMESTER

NAME : Er. USHA KIRAN
DESIGNATION : HOD (MECHANICAL DEPT)
DEPT : MECHANICAL ENGG.


SIGNATURE

LESSON PLAN

Degree / Diploma

(Theory / Pract / Lab / Workshop)

Semestre 3rd Branch Mechanical

Month & Date	Course No. & Title	Brief note of the topics to be covered	No. of Classes Required
17/8/23	TH-2 Strength of material	1.0 Simple stress and strain	
		1.1 Types of load, stresses and strain, Hooke's law	01
		Young's Modulus, Bulk Modulus, Modulus of Rigidity	
18/8/23		Derive the relation between three elastic constants	01
19/8/23		1.2 Principle of superposition stresses in composite section	01
24/8/23	do	1.3 Temperature stress Determine the temperature stress in composite bar (Single core)	01
22/8/23 23/8/23		1.4 Strain Energy and resilience. Stress due to gradually applied, suddenly applied and Impact load.	02
25/8/23		1.5 Simple problems on above.	02
28/8/23		2.0 Thin Cylinder and Spherical shell under internal pressure.	01

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Semester 3rd

Branch Mechanical

Month & Date	Course No. & Title	Brief note of the topics to be covered	No. of Classes Required
28.8.23	TH-2 SOM Strength	2.1 Defination of hoop & longitudinal stress, strain	01
29.8.23	of Material	2.2 Derivation of hoop stress longitudinal stress, hoop strain longitudinal strain and volumetric strain	01
31.8.23	↑	2.3 Computation of the change in length, diameter of volume.	01
1.9.23		2.4 Simple problems on above.	02
29.23	8	3.0 Two dimensional stress systems	01
4.9.23	↓	3.1 Determination of normal stress, shear stress and resultant stress on oblique plane.	01
5.9.23		3.2 Location of principal plane and computation of	01
7.9.23		Principal stress and Maximum shear stress Using Mohr's Circle.	
8.9.23		3.3 Location of principal plane and computation of principal stress and Maximum shear stress Using Mohr's Circle.	01

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Semestre 3rd Branch Mechanical

Month & Date	Course No. & Title	Brief note of the topics to be covered	No. of Classes Required
9.9.23	TH-2 Som	④ Bending Moment and shear force	01
11.9.23	Strength of Material	4.1 Types of beam and load	01
12.9.23		4.2 Concepts of shear force and bending moment.	01
14.9.23		4.3 Shear force and Bending moment diagram and its salient features illustration	01
16.9.23		in Cantilever beam.	0
21.9.23		4.4 S.F.D and B.M.D Simply supported beam.	0
22.9.23		S.F.D and B.M.D over hanging beam. under point load and UDL.	02
23.9.23		Problem Solving class	02
		⑤ Theory of Simple Bending	
		5.1 Assumption in the theory of Bending	01
		5.2 Bending equation, Moment of resistance, section of Modulus & Neutral axis.	01

Semester - 03rd Branch - Mechanical.

Month & Date	Course No & Title	Brief note of the topics to be covered.	No. of Classes Required
26.9.23	TH-2 Strength of Material	5.3 Solve simple problems. (6) Combined Direct and Bending stresses	01
30.9.23	↑	6.1 Define column	01
		6.2 Axial load, Eccentric load on Column.	01
3.10.23		6.3 Direct stresses, Bending stresses.	02
5.10.23			
7.10.23	↓	Maximum and Minimum stresses.	01
19.10.23	↓	Numerical problem on above topics.	02
28.10.23	-	Buckling load computation using Euler's formula (no derivative)	02
2.11.23		in column with various end condition.	01
8.11.23		(7) Torsion 7.0 Assumption of Pure torsion.	01

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Semestre 03 Branch Mechanical

Month & Date	Course No. & Title	Brief note of the topics to be covered	No. of Classes Required
6.11.23	TH-2 Strength of	7.1 The torsion equation for solid and hollow circular shaft.	01
7.11.23	Material	7.2 Comparison between solid and hollow shaft.	01
10.11.23	↑	7.3 Subjected to pure torsion	01
11.11.23 16.11.23		7.4 Problem Solving class.	02
	0	7.5 Polar moment of resistance & section modulus	01
	↓	7.6 Shear stress & shear strain	01
		7.7 Shear stress distribution in circular shaft	01
		7.8 Deflection of shaft	01
		7.9 Power transmitted by shaft	01

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DEPT. OF MECHANICAL ENGINEERING

LESSON PLAN AND PROGRESS REGISTER

(To be maintained by all members of the teaching staff)

SESSION 2023-24
5th semester.

NAME

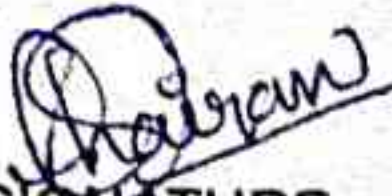
ER. USHA KIRAN

DESIGNATION

HOD (MECHANICAL DEPT)

DEPT.

MECHANICAL


SIGNATURE

This Lesson Plan and Progress Register is to be submitted to the Director for verification and counter signature twice in every semester. The H.O.D. must verify and sign this Register before submission.

COURSES ALLOTTED

FOR DIFFERENT BRANCHES & SEMESTER (Degree/Diploma/+2 Science)

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N.B. : Submission of Annual Lesson Plan-cum-Progress Register and performance Report for Assessment are responsibility of each faculty member.

LESSON PLAN

Degree/Diploma/+2 Science
(Theory/Pract/Lab/Workshop)

Semester 5th

Branch Mechanical

Month & Date	Course No. & Title	Brief note of the topics to be covered	No. of Classes Required
18/08/23	TH-2 DME	① <u>Introduction</u> - 1.1. Introduction to machine design and classify it.	01
	(Design of Machine Element)		
21/8/23		1.2 Different Mechanical engineering materials used in design with their uses and their mechanical and physical properties	01
22/8/23		1.3 Define working stress, yield stress, ultimate stress and factor of safety	01
23/8/23	0	Stress-Strain Curve for M.S & C.I	01
		1.4 Modes of failure (By elastic deflection, general yielding and fracture.)	01
25/8/23		1.5 State the factors governing the design of machine elements.	02
28/8/23		1.6 Describe the design Procedure.	01
		② <u>Design of fastening Elements.</u>	
29/8/23		2.1 Joints and their classification.	01

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Degree/Diploma/+2 Science
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Semester 5th Branch Mechanical

Month & Date	Course No. & Title	Brief note of the topics to be covered	No. of Classes Required
4/9/23	TH-2 DME	2.2 State types of welded joint.	01
8/9/23	(Design of Machine Element)	2.3 state advantages of welded joint over other joints.	01
11/9/23		2.4 Design welded joint for eccentric loads.	01
12/9/23	↑	2.5 state types of riveted joint and types of rivet.	01
13/9/23		2.6 Describe the failure of riveted joints.	01
15/9/23		2.7. Determine strength & efficiency of riveted joint.	01
18/9/23	0	2.8 Design riveted joint for pressure vessel.	01
22/9/23		2.9 Solve numerical on welded joint and riveted joint.	01
25/9/23	↓	Problem Solving Class.	01
		3.0 Design of shafts & keys.	
26/9/23		3.1 State function of shafts	01
27/9/23		3.2 state materials of shaft.	01
3/10/23		3.3 Design solid and hollow shaft to transmit	01

LESSON PLAN

Degree/Diploma/+2 Sc
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Semester 5th

Branch Mechanical

Month & Date	Course No. & Title	Brief note of the topics to be covered	No. of Class Requi
	TH-2 DME	a given power at given r.p.m based on	
4/10/23	(Design of	(a) strength i) shear stress ii) combined bending tension	01
	Machine Element)	b) Rigidity i) Angle of twist ii) Deflection	
		iii) Modulus of rigidity.	
6/10/23	↑	3.4) shaft standard size of shaft as per I.S.	01
9/10/23	↑	3.5) Effect of key way Effect of key way.	01
10/10/23	↓	3.6) state function of keys types of keys and	01
	to	materials of key.	
11/10/23		3.7) Design rectangular Sunk Key considering its failure against shear and crushing.	01
13/10/23	↓	3.8) Design rectangular Sunk key by using empirical relation for given diameter of the shaft.	01
16/10/23		3.9) state specification of parallel key, Gib-head key, taper key as per Ios.	01
17/10/23		3.10) solve numerical on Design of shaft & keys.	01

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Degree/Diploma/+2 Scier
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Semester 5th Branch Mechanical

Month & Date	Course No. & Title	Brief note of the topics to be covered	No. of Classes Required
18/10/23	TH-2 DME	Problem Solving Class	01
20/10/23	(Design of	Doubt clearing class	01
	Machine (4) Design of Coupling Element)		
1/11/23		4.1 Design of shaft coupling.	} 01
3/11/23		4.2 Types of Coupling	
6/11/23	↑	4.3 Requirement of good shaft coupling.	01
8/11/23		4.4 Design of sleeve or muff-coupling.	01
10/11/23		4.5 Design of clamp or compression coupling.	01
14/11/23 15/11/23		4.6 Solve simple numerical on above.	02
	↓	⑤ Design of a closed coil helical spring.	
17/11/23		5.1 Materials used for helical spring.	01
20/11/23		5.2 Standard size of Spring wire (SWG)	01
21/11/23		5.3 Terms used in compression spring	01
22/11/23		5.4 Stress in helical spring of circular wire	01

LESSON PLAN

Degree/Diploma/+2 Scien
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Semester 5th

Branch Mechanical

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