

**SAMANTA CHANDRASEKHAR INSTITUTE
OF TECHNOLOGY & MANAGEMENT**
SEMILIGUDA-764 036, KORAPUT

DEPT. OF Mechanical Engineering

LESSON PLAN AND PROGRESS REGISTER

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

SESSION 2023-24 (Even)

NAME Er. Jitendra Kumar Muduli

DESIGNATION Lecturer

DEPT. Mechanical (Diploma - 4th & 6th)

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

4th

Branch

Mechanical

Month & Date	Course No. & Title	Brief note of the topics to be covered	No. of Classes Required
2/1/24 to	Performance of I.C. Engine	1. Define mechanical efficiency, Indicated thermal efficiency, Relative Efficiency, brake thermal efficiency, overall efficiency, Mean effective pressure & specific fuel consumption.	2
9/1/24			1
		2. Define air-fuel ratio & calorific value of fuel	2
		3. Work out problems to determine efficiency & specific fuel consumption.	3
11/1/24 to	Air compressor	1. Explain functions of compressor & industrial use of compressor air.	1
31/1/24		2. classify air compressor & principle of operation	2
		3. Describe the parts & working principle of reciprocating air compressor	2
		4. Explain the terminology of reciprocating compressor such as	3
		bore, stroke, pressure ratio, free air delivered & volumetric efficiency.	
		5. Derive the work done of single stage & two stage compressor with and without clearance.	2
		6. Solve simple problems.	2
2/2/24 to	Properties of steam.	1. Difference between gas & vapours.	1
		2. Formation of steam	
19/2/24		3. Representation on P-V, T-S, H-S, T-H diagram	2

LESSON PLAN

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

Semester 4th Branch Mechanical

Month & Date	Course No. & Title	Brief note of the topics to be covered	No. of Classes Required
		4. Definition & properties of steam.	1
		5. Use of steam table & mollier chart for finding unknown properties.	2
		6. Non flow & flow process of vapour	1
		7. P-V, T-S, & H-S diagram	2
		8. Determine the changes in properties & solve simple numericals.	2
20/2/24 to	steam generation	1. classification & types of Boiler. 2. Important terms for Boiler.	2
9/3/24		3. Comparison between fire tube & water tube Boiler	2
		4. Description & working of common boilers (Cochran Lancashire, Babcock & wilcox Boiler)	4
		5. Boiler Draught (Forced, induced & balanced)	2
9/3/24		6. Boiler mounting & accessories	2
11/3/24 to	steam power cycles	1. Carnot cycle with vapour 2. Drive work & efficiency of the cycle.	3
30/3/24			

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

4th

Mechanical

Month & Date	Course No. & Title	Brief note of the topics to be covered	No. of Classes Required
		3. Rankine cycle, P-V, T-S, H-S, diagram, Derive work & efficiency,	4
		Effect of various end conditions, Reheat cycle & regenerative cycle.	
		4. solve simple numerical on cannot vapour cycle & Rankine cycle.	2
2/4/24	Heat Transfer	1. Modes of Heat Transfer (Conduction, Convection, Radiation)	1
to 16/4/24		2. Fourier Law of heat conduction & Thermal conductivity (K)	2
		3. Newton's laws of cooling	1
		4. Radiation heat transfer (Stefan Boltzman & Kirchhoff's law) only statement.	2
		5. Black Body Radiation, Definition of Emissivity, absorptivity, Transmissibility.	2

LESSON PLAN

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

Semester

6th

Branch

Mechanical

Month & Date	Course No. & Title	Brief note of the topics to be covered	No. of Classes Required
02/01/24 to	PLANT ENGINEERING	1. Selection of site of Industry. 2. Define plant layout. 3. Describe objective & principles of plant layout.	2
17/01/24			
		4. Explain process layout, product layout and combination layout.	1
		5. Techniques to improve layout.	1
		6. Principles of material handling equipments	2
		7. Plant maintenance. 8. Importance of plant maintenance	2
		9. Break down maintenance. 10. Preventive maintenance	2
		11. Scheduled maintenance	
19/11/24 to	Operations & Research	1. Introduction to operations Research and its applications.	2
30/11/24		2. Define Linear Programming, Problems.	} 3
		3. Solution of L.P.P by graphical method and PERT (problems)	
		4. Evaluation of project completion time by critical path method and PERT simple problems	} 3
		5. Explain distinct features of PERT with respect to CPM	2

LESSON PLAN

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

Semester

6th

Branch

Mechanical

Month & Date	Course No. & Title	Brief note of the topics to be covered	No. of Classes Required
01/02/24 to	Inventory control.	1. classification of inventory 2. objectives of inventory control	2
19/02/24		3. Describe the functions of inventories.	1
		4. Benefits of inventory control, 5. Costs associated with inventory	2
		6. Terminology in inventory control. 7. Explain & derive economic order quantity for Basic model (numericals)	} 4
		8. Define & explain ABC Analysis	
			2
20/02/24 to	Inspection &	1. Define inspection & quality control 2. Describe planning & inspection.	2
19/03/24	Quality control.	3. Describe types of inspection 4. Advantage and disadvantage of quality control	2
		5. study of factors influencing the quality of manufacture	1
		6. Explain the concept of statistical quality control, control chart (X, R, P, C)	2
		7. Methods of attributes. 8. Concept of ISO 9001-2008	2
		9. Quality management system, Registration or certification procedure.	} 3
		10. Benefits of ISO to the organisation.	

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

6th

Mechanical

Month & Date	Course No. & Title	Brief note of the topics to be covered	No. of Classes Required
		11. JIT, Six sigma , 7S, Lean manufacturing	2
		12. solve related problems.	1
20/03/24 to	Production Planning	1. Introduction,	3
16/4/24	& control	2. Major function of production & control, 3. Methods of forecasting 4. Routing	2
		5. scheduling 6. Dispatching	} 2
		7. Controlling 8. Types of Production.	
		9. Mass production. 10. Batch Production,	} 3
		11. Job order production.	
		12. Principles of product and process planning.	3