LESSON PLAN

Course Code& Course Name: - 170 - DYNAMICS OF MACHINES **SEM:** V

Programme: B .Tech A-SECTION **Department:** MECH

A.Y: 2015-16

S No.	Tentative Date	Topics to be covered	Actual Date	Num. of classes	Content Delivery Methods
UNIT-I FRICTION & CLUTCHES					
1.	22-06-15	Friction : Introduction ,inclined plane moving up		1	DM1,DM6
2.	23-06-15	Inclined plane moving down		1	DM1,DM6
3.	25-06-15	Problems		1	DM1, DM4
4.	26-06-15	Friction of screw and nuts		1	DM1,DM6
5.	27-06--15	Problems		1	DM1
6.	29-06-15	Pivot and collar bearings(Uniform pressure)		1	DM1,DM6
7.	30-06-15	Pivot and collar bearings(Uniform wear)		1	DM1,DM6
8.	02-07-15	problems		1	DM1
9.	03-07-15	Tutorial		1	DM2
10.	04-07-15	Friction circle and friction axis		1	DM1,DM6
11.	06-07-15	Lubricated surfaces, boundary friction, film lubrication		1	DM1,DM6
12.	07-07-15	Clutches – Single Plate Clutch		1	DM1,DM6
13.	09-07-15	Multi plate clutch,		1	DM1,DM6
14.	10-07-15	Cone clutch		1	DM1,DM6
15.	13-07-15	Centrifugal clutch Problems		1	DM1
16.	14-07-15	Tutorial		1	DM2
UNIT-II BRAKES & DYNAMOMETERS, PRECESSION					
17.	16-07-15	Brakes: Simple block brakes,		1	DM1
18.	17-07-15	Problems		1	DM1
19.	20-07-15	Internal expanding brake		1	DM1,DM6
20.	21-07-15	Band brake of a vehicle		1	DM1
21.	23-07-15	Problems		1	DM1
22.	24-07-15	Dynamometers-absorption type method &operation		1	DM1, DM6
23.	25-07-15	Transmission type method & operation		1	DM1
24.	27-07-15	problems		1	DM1
25.	28-07-15	Tutorial		1	DM2
26.	30-07-15	Gyroscope: Gyroscopes and introduction		1	DM1
27.	31-07-15	Effect of precession motion on motion on the stability of moving vehicles such as Aero planes		1	DM1
28.	01-08-15	Effect of precession motion on motion on the stability of moving vehicles such as ships		1	DM1
29.	03-08-15	Problems		1	DM1
30.	04-08-15	Effect of precession motion on		1	DM1,DM6

		motion on the stability of moving vehicles such as motor car			
31.	06-08-15	Problems		1	DM1
32.	07-08-15	Tutorial		1	DM2
UNIT-III TURNING MOMENT DIAGRAM & FLY WHEELS					
33.	18-08-15	Turning moment diagrams: Turning moment Introduction		1	DM1
34.	20-08-15	connecting rod angular velocity and acceleration		1	DM1
35.	21-08-15	problems		1	DM1
36.	22-08-15	Crank effort and torque diagrams		1	DM1
37.	24-08-15	Fluctuation if energy, Problems		1	DM1
38.	25-08-15	Fly wheels and their design		1	DM1
39.	27-08-15	problems		1	DM1
40.	28-08-15	Tutorial		1	DM2
UNIT-IV GOVERNORS, VIBRATIONS					
41.	29-08-15	Governors: Watt governor		1	DM1,DM6
42.	31-08-15	Porter governor		1	DM1
43.	01-09-15	Proell governor		1	DM1,DM6
44.	03-09-15	Hartnell governor		1	DM1
45.	04-09-15	problems		1	DM1
46.	07-09-15	Sensitiveness, Isochronisms and hunting		1	DM1
47.	08-09-15	Problems		1	DM1, DM4
48.	10-09-15	Tutorial		1	DM2
49.	11-09-15	Types of Vibrations		1	DM1
50.	14-09-15	Forced damped vibrations		1	DM1
51.	15-09-15	Forced damped vibrations		1	DM1
52.	18-09-15	Features of vibrating system		1	DM1
53.	19-09-15	Equilibrium method		1	DM1
54.	21-09-15	Energy method, Rayleigh's method		1	DM1
55.	22-09-15	Tutorial		1	DM2
UNIT-V BALANCING					
56.	25-09-15	Balancing : Balancing of rotating masses		1	DM1
57.	26-09-15	Single and different planes.		1	DM1
58.	28-09-15	Analytical and graphical methods		1	DM1
59.	29-09-15	Problems		1	DM1
60.	01-10-15	Balancing of reciprocating masses		1	DM1,DM6
61.	03-10-15	Problems		1	DM1
62.	05-10-15	Primary, secondary, higher balancing.		1	DM1
63.	06-10-15	Tutorial		1	DM2
64.	08-10-15	Problems		1	DM1, DM4
65.	09-10-15	problems		1	DM1
66.	12-10-15	Locomotive balancing		1	DM1
67.	13-10-15	Examination of 'V' multi cylinder in line and radial engines for		1	DM1

		primary and secondary balancing			
68.	15-10-15	problems		1	DM4
69.	16-10-15	Hammer blow, swaying couple and tractive efforts		1	DM1
70.	17-10-15	Tutorial		1	DM2
Total number of classes required to complete the syllabus				**70**	
Total number of classes available as per Schedule				**70**	

NOTE: DELIVERY METHODS : **DM1**: Lecture interspersed with discussions/BB, **DM2:** Tutorial, **DM3:** Lecture with a quiz, **DM4**: Assignment/Test, **DM5**: Demonstration (laboratory, field visit), **DM6:** Presentations/PPT

At the End of the course, students attained the **Course Outcomes:CO1,CO2,CO3,CO4,CO5** & sample proofs are enclosed in Course file.

Signature			
	Name of the Faculty	**Name of Course Co-ordinator**	**HOD**
	LEELA KRISHNA.J	P.V CHANDRASEKHARA RAO	DR. K. APPA RAO

LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING (AUTONOMOUS)
DEPARTMENT OF MECHANICAL ENGINEERING
(Accredited by NBA under Tier – I)

Laboratory Code	**: L 146**	**Lab: FLUID MECHANICS &HYDRAULIC MACHUNERY LAB**	
Class	**: B. Tech – V Semester (Section – A)**	**A.Y.**	**: 2015-16 (Mech Engg)**
Lab/Practicals	**: 3 hrs/ Week**	**Continuous Internal Assessment**	**: 25**
Credits	**: 02**	**Semester End Examination**	**: 50**
Name of the Faculty	: B VIJAYABHASKAR REDDY/K.SOMASEKHAR		

Batches (Section – B)

Total No. of students : 14761A0301 – 305
14761A0308-355
14761A0357-360
15765A0301-314
TOTAL = 71

Batch A1	**: 14761A0301-305**	**=**	**06**
Batch A2	**: 14761A0308 – 313**	**=**	**06**
Batch A3	**: 14761A0314 – 319**	**=**	**06**
Batch A4	**:14761A0320 – 325**	**=**	**06**
Batch A5	**:14761A0326 – 331**	**=**	**06**
Batch A6	**:14761A0332 – 338**	**=**	**06**
Batch B1	**: 14761A0339 – 344**	**=**	**06**
Batch B2	**: 14761A0345 – 350**	**=**	**06**
Batch B3	**: 14761A0351 – 357**	**=**	**06**
Batch B4	**:14761A0358 – 15765A0303**	**=**	**05**
Batch B5	**:15765A0304 – 309**	**=**	**06**
Batch B6	**:15761A0310 – 315**	**=**	**06**

LIST OF EXPERIMENTS

1. Verification of Bernoulli's Theorem
2. Calibration of Venturi meter
3. Calibration of Orifice meter.
4. Determination of friction factor for a given pipe line
5. Impact of jets on Vanes.
6. Performance Test on Pelton Wheel.
7. Performance Test on Kaplan Turbine.
8. Performance Test on Single Stage Centrifugal Pump.
9. Performance Test on Reciprocating Pump.
10. Turbine flow meter.

11. Caliberation of v notch

12. Caliberation of mouthpiece apparatus

Schedule of Experiments (Section –A)

BATCH-1

Date	Experiment (Batch)					
	Ex - 1	Ex – 2	Ex – 3	Ex – 4	Ex – 5	Ex – 6
1-2-2016	Demonstration of all experiments, CEOs and COs of the Laboratory (SE – 1 to 11)					
8-2-2016	A1	A2	A3	A4	A5	A6
15-2-2016	A2	A3	A4	A5	A6	A1
22-2-2016	A3	A4	A5	A6	A1	A2
29-2-2016	A4	A5	A6	A1	A2	A3
9-3-2016	A5	A6	A1	A2	A3	A4
21-3-2016	A6	A1	A2	A3	A4	A5
28-3-2016	A1	A2	A3	A4	A5	A6
4-4-2016	A2	A3	A4	A5	A6	A1
11-4-2016	A3	A4	A5	A6	A1	A2
18-4-2016	A4	A5	A6	A1	A2	A3
25-4-2016	A5	A6	A1	A2	A3	A4
2-5-2016	A6	A1	A2	A3	A4	A5
9-5-2016	INTERNAL EXAMINATION					

BATCH-2

Date	Experiment (Batch)					
	Ex - 1	Ex – 2	Ex – 3	Ex – 4	Ex – 5	Ex – 6
28-1-2016	Demonstration of all experiments, CEOs and COs of the Laboratory					
4-2-2016	B1	B2	B3	B4	B5	B6
11-2-2016	B2	B3	B4	B5	B6	B1
18-2-2016	B3	B4	B5	B6	B1	B2
25-2-2016	B4	B5	B6	B1	B2	B3
3-3-2016	B5	B6	B1	B2	B3	B4
10-3-2016	B6	B1	B2	B3	B4	B5
24-3-2016	B1	B2	B3	B4	B5	B6
31-3-2016	B2	B3	B4	B5	B6	B1
7-4-2016	B3	B4	B5	B6	B1	B2
14-4-2016	B4	B5	B6	B1	B2	B3
25-4-2016	B5	B6	B1	B2	B3	B4
28-4-2016	B6	B1	B2	B3	B4	B5
5-5-2016	INTERNAL EXAMINATION					

Lab incharge

LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING (AUTONOMOUS)
DEPARTMENT OF MECHANICAL ENGINEERING
(Accredited by NBA under Tier – I)

Laboratory Code	**: L 146**	**Lab: FLUID MECHANICS &HYDRAULIC MACHUNERY LAB**	
Class	**: B. Tech – V Semester (Section – B)**	**A.Y.**	**: 2016-17 (Mech Engg)**
Lab/Practicals	**: 3 hrs/ Week**	**Continuous Internal Assessment**	**: 25**
Credits	**: 02**	**Semester End Examination**	**: 50**
Name of the Faculty	: S RAMI REDDY/B VIJAYABHASKAR REDDY		

Batches (Section – B)

Total No. of students	**: 15761A0359 – 399**		
	15765A03A1 – 3B4, 16765A0316-329	**=**	**69**
Batch A1	**: 15761A0359 – 364**	**=**	**06**
Batch A2	**: 15761A0365 – 370**	**=**	**06**
Batch A3	**: 15761A0371 – 376**	**=**	**06**
Batch A4	**:15761A0377 – 382**	**=**	**06**
Batch A5	**:15761A0383 – 388**	**=**	**06**
Batch A6	**:15761A0389 – 394**	**=**	**06**
Batch B1	**: 15761A0395 – 3A0**	**=**	**06**
Batch B2	**: 15761A03A1-3A6**	**=**	**06**
Batch B3	**: 15761A03A7 – 3B1**	**=**	**06**
Batch B4	**:15761A03B2 – 16765A0318**	**=**	**06**
Batch B5	**:16765A0319 – 324**	**=**	**06**
Batch B6	**:16765A0325 – 329**	**=**	**06**

LIST OF EXPERIMENTS

1. Verification of Bernoulli's Theorem
2. Calibration of Venturi meter
3. Calibration of Orifice meter.
4. Determination of friction factor for a given pipe line
5. Impact of jets on Vanes.
6. Performance Test on Pelton Wheel.
7. Performance Test on Kaplan Turbine.
8. Performance Test on Single Stage Centrifugal Pump.
9. Performance Test on Reciprocating Pump.
10. Turbine flow meter.
11. Caliberation of v notch

12. Caliberation of mouthpiece apparatus

Schedule of Experiments (Section –B)

BATCH-1

Date	Experiment (Batch)					
	Ex - 1	**Ex – 2**	**Ex – 3**	**Ex – 4**	**Ex – 5**	**Ex – 6**
27-1-16	**Demonstration of all experiments, CEOs and COs of the Laboratory (SE – 1 to 11)**					
3-2-2016	A1	A2	A3	A4	A5	A6
10-2-2016	A2	A3	A4	A5	A6	A1
16-2-2016	A3	A4	A5	A6	A1	A2
23-02-2016	A4	A5	A6	A1	A2	A3
02-3-2016	A5	A6	A1	A2	A3	A4
9-3-16	A6	A1	A2	A3	A4	A5
23-3-16	A1	A2	A3	A4	A5	A6
30-3-16	A2	A3	A4	A5	A6	A1
6-4-16	A3	A4	A5	A6	A1	A2
13-4-16	A4	A5	A6	A1	A2	A3
20-4-16	A5	A6	A1	A2	A3	A4
27-4-16	A6	A1	A2	A3	A4	A5
11-5-16	**INTERNAL EXAMINATION**					

BATCH-2

Date	Experiment (Batch)					
	Ex - 1	**Ex – 2**	**Ex – 3**	**Ex – 4**	**Ex – 5**	**Ex – 6**
29-1-16	**Demonstration of all experiments, CEOs and COs of the Laboratory**					
5-2-16	B1	B2	B3	B4	B5	B6
12-2-16	B2	B3	B4	B5	B6	B1
19-2-16	B3	B4	B5	B6	B1	B2
26-2-16	B4	B5	B6	B1	B2	B3
4-3-16	B5	B6	B1	B2	B3	B4
9-3-16	B6	B1	B2	B3	B4	B5
23-3-16	B1	B2	B3	B4	B5	B6
30-3-16	B2	B3	B4	B5	B6	B1
6-4-16	B3	B4	B5	B6	B1	B2
13-4-16	B4	B5	B6	B1	B2	B3
20-4-16	B5	B6	B1	B2	B3	B4
27-4-16	B6	B1	B2	B3	B4	B5
11-5-16	**INTERNAL EXAMINATION**					

LESSON PLAN

Course Name: T207 – FLUID POWER ENGINEERING **Programme: B.Tech (Section – A)**
SEM: V **Department: Mechanical Engineering**

S No.	Tentative Date	Topics to be covered	Actual Date	No. of classes	Content Delivery Methods
1		**UNIT - I**		1	DM1/DM6
2	22/06/2015	**Impact of Water Jets:** Introduction to fluid power engineering		1	DM1/DM6
3	23/06/2015	Hydrodynamic force of Jets on Stationary vanes		1	DM1/DM6
4	24/06/2015	Hydrodynamic force of Jets on Moving Flat vanes		1	DM1/DM6 & DM 5
5	27/06/2015	Hydrodynamic force of Jets on Inclined vanes		1	DM1/DM6
6	29/06/2015	Hydrodynamic force of Jets on Curved Vanes		1	DM1/DM6
7	29/06/2015	Tutorial		1	DM2 / DM 3
8	30/06/2015	Jet Striking Centrally on Curved Vanes		1	DM1/DM6 & DM 5
9	02/07/2015	Jet Striking Centrally on Curved Vanes Tip-Velocity Triangles at Inlet and Outlet -		1	DM1/DM6
	02/07/2015	Expressions for Work done and Efficiency			
10	04/07/2015	Angular Momentum Principle		1	DM1/DM6 & DM 5
11	07/07/2015	Tutorial		1	DM1/DM6 & DM 5
12	07/07/2015	Applications to Radial Flow Turbines		1	DM2 / DM 3
13	08/07/2015	Jet Propulsion of Ships		1	DM1/DM6 & DM 5
14	9/07/2015	**UNIT - II** Introduction to Hydraulic Turbines		1	DM1/DM6 & DM 5
15	10/07/2015	**Hydraulic Turbines**: - Classification of Water Turbines		1	DM1/DM6
16	12/07/2015	Tutorial		1	DM1/DM6
17	14/07/2015	Introduction to Pelton Wheel		1	DM1/DM6
18	15/07/2015	Pelton Wheel – Work done and Working Proportions		1	DM2 / DM 3
19	16/07/2015	Introduction to Francis turbine		1	DM1/DM6
20	20/07/2015	Working of Francis turbine		1	DM1/DM6
	20/07/2015	Tutorial			
21	21/07/2015	Introduction to Kaplan and Propeller Turbines		1	DM1/DM6
22	22/07/2015	Working of Kaplan and Propeller Turbines		1	DM1/DM6

23	24/07/2015	Introduction to Draft Tubes		1	DM2 / DM 3
24	27/07/2015	Draft Tubes Types - Theory		1	DM1/DM6
25	27/07/2015	Tutorial		1	DM1/DM6
26	29/07/2015	Governing of Turbines		1	DM1/DM6
27	30/07/2015	Surge Tanks.		1	DM1/DM6
	30/07/2015	**Performance of Turbines:** Performance Under Unit Head-			
28	3/08/2015	Unit Quantities		1	DM2 / DM 3
29	04/08/2015	Tutorial		1	DM1/DM6
30	05/08/2015	Performance Under Specific conditions – Specific Speed -		1	DM1/DM6
31	06/08/2015	Performance Characteristic Curves –		1	DM1/DM6
	07/08/2015	Cavitation			
32	07/08/2015	Selection of Turbines		1	DM1/DM6
33	18/08/2015	**UNIT- III :** Introduction to Reciprocating Pumps		1	DM2 / DM 3
34	19/08/2015	Working of Reciprocating Pumps:		1	DM1/DM6
35	20/08/2015	Main components and working of a Reciprocating pump- Types		1	DM2 / DM 3
36	21/08/2015	Work done by Reciprocating pump-		1	DM1/DM6
37	23/08/2015	Tutorial		1	DM1/DM6
38	25/08/2015	Single Acting & Double Acting Pump		1	DM1/DM6
	26/08/2015	Coefficient of Discharge – Slip			
39	26/08/2015	Percentage Slip And Negative Slip-		1	DM1/DM6
40	28/08/2015	Indicator diagram		1	DM1/DM6
41	31/08/2015	Tutorial		1	DM1/DM6
42	02/09/2015	Effect of Acceleration Of Piston On Velocity &Pressure in suction and delivery pipes		1	DM1/DM6
43	03/09/2015	Air vessels – Rate of flow into and from air vessels		1	DM1/DM6
44	04/09/2015	**UNIT - IV :** Introduction to		1	DM1/DM6
45	05/09/2015	Types Component parts and Working of **Centrifugal Pumps:**		1	DM2 / DM 3
46	07/09/2015	Tutorial		1	DM1/DM6
47	08/09/2015	**Centrifugal Pumps:** Work done by the		1	DM1/DM6

		Impeller			
48	09/09/2015	Manometric head –Losses and Efficiencies		1	DM1/DM6
49	10/09/2015	Effect of Vane Angle on Manometric Efficiency		1	DM1/DM6
50	12/09/2015	Effect of Finite number of vanes of the Impeller on Head and Efficiency –		1	DM1/DM6
51	14/09/2015	Tutorial		1	DM2 / DM 3
52	15/09/2015	Minimum Starting Speed		1	DM1/DM6
53	16/09/2015	Loss of Head due to reduced or increased flow		1	DM1/DM6
54	18/09/2015	Diameters of impeller and pipes-		1	DM1/DM6
55	22/09/2015	Specific Speed		1	DM1/DM6
56	22/09/2015	Tutorial		1	DM1/DM6
57	23/09/2015	Multistage Pumps – Pumps in parallel – – NPSH		1	DM2 / DM 3
58	24/09/2015	Cavitations Centrifugal Pumps		1	DM1/DM6
59	27/09/2015	**UNIT--V:**Introduction to Hydraulic Devices		1	DM1/DM6
60	28/09/2015	Hydraulic Accumulator		1	DM2 / DM 3
61	29/09/2015	Tutorial		1	DM1/DM6
62	01/10/2015	Hydraulic Intensifier-		1	DM1/DM6
63	05/10/2015	Hydraulic Ram-		1	DM2 / DM 3
64	06/10/2015	Hydraulic Press		1	DM1/DM6
65	07/10/2015	Tutorial		1	DM1/DM6
66	08/10/2015	Working of Hydraulic Lift		1	DM1/DM6
67	09/10/2015	Working of Hydraulic Crane		1	DM1/DM6
68	12/10/2015	Working of Hydraulic Couplings		1	DM1/DM6
69	13/10/2015	Working of Torque Converters		1	DM2 / DM 3
70	14/10/2015	Tutorial		1	DM1/DM6
71	14/10/2015	Working of Air Lift Pump		1	DM1/DM6
72	15/10/2015	REPETATION		1	DM1/DM6
73	15/10/2015	REPETATION		1	DM1/DM6
74	16/10/2015	REPETATION		1	DM1/DM6
Total				**74**	
Total number of classes required to complete the syllabus				**71**	

	LESSON PLAN
Course Name: T207 – FLUID POWER ENGINEERING **SEM: V**	**Programme: B.Tech (Section – A)** **Department: Mechanical Engineering**

Total number of classes available as per Schedule	**74**

NOTE: DELIVERY METHODS (DM):
DM1: Lecture interspersed with discussions/BB
DM2: Tutorial
DM3: Lecture with a Quiz
DM4: Assignment/Test
DM5: Demonstration (laboratory, field visit)
DM6: Presentations/PPT

At the End of the course, students attained the **Course Outcomes: CO1, CO2, CO3, CO4, CO5** & sample proofs are enclosed in Course file.
CO1: To learn various manufacturing processes.
CO2: To understand basic concepts of centroid, center of gravity and moment of inertia.
CO3: To understand the basic concepts and laws of thermodynamics.
CO4: To learn types of fuels and lubricants.
CO5: To understand the working of IC engines, steam turbines and gas turbines

TEXT BOOK

Hydraulic Machine /Fluid mechanics including Hydraulics Machines / Modi & Seth – standard book house.

REFERENCES

1. Elements of Hydraulic Machines and Fluidics / Jagdish Lal
2. Hydraulic Turbines / Nechleba M
3. Introduction to Fluid Mechanics and Fluid Machines, Som,S.R, & Biswas, Tata McGraw Hill,1998
4. Agarwal, S.K., Fluid Mechanics and Machinery, Tata Mc Graw Hill Co., 1997.

Signature			
	Name of the Faculty	**Name of Course Co-ordinator**	**HOD**
	S.Rami Reddy	**Dr.P.V.Chandra Sekhar Rao**	**Dr.K.Appa Rao**

LESSON PLAN

Course Code& Course Name: T221-INDUSTRIAL MANAGEMENT **SEM:** V

Programme: B.Tech **Department: ME**

SEC-A

S No.	Tentative Date	Topics to be covered	Actual date	No of classes	Content Delivery Methods
UNIT-I INTRODUCTION OF MANAGEMENT					
1.	**23-06-15**	Management Introduction		1	DM1
2.	**24-06-15**	Definition, Nature		1	DM1
3.	**25-06-15**	Importance of management		1	DM1
4.	**26-06-15**	Functions		1	DM1
5.	**27-06-15**	Taylor's scientific management theory		1	DM1
6.	**30-06-15**	Fayal's principles of management		1	DM2
7.	**01-07-15**	Tutorials		1	DM1
8.	**02-07-15**	Contribution of Elton mayo		1	DM1
9.	**03-07-15**	MASLOW theory		1	DM1
10.	**04-07-15**	Herzberg, douglas, MC Gregor, basic concepts of Orgn.		1	DM1
11.	**07-07-15**	tutorials		1	DM2
12.	**08-07-15**	Basic concept of organization :Authority Responsibility		1	DM1
13.	**09-07-15**	Delegation of Authority and span of control		1	DM1
14.	**10-07-15**	Departmentation and Decentralization		1	DM1
15.	**14-07-15**	tutorials		1	DM2
16.	**15-07-15**	Orgn.structure Line and staff organization		1	DM1
17.	**16-07-15**	Line and staff organization		1	DM1
18.	**17-07-15**	Functional organization		1	DM1
19.	**21-07-15**	Committee Matrix organization		1	DM1
20.	**22-07-15**	Tutorials		1	DM2
UNIT II: Operations Management					
21.	**24-07-15**	Operations Management introduction		1	DM1
22.	**25-07-15**	Plant location Factors influencing location		1	DM1
23.	**28-07-15**	Principles and types of plant layouts		1	DM1
24.	**29-07-15**	Methods of production : job batch and mass production		1	DM1
25.	**30-07-15**	Work study		1	DM1
26.	**31-07-15**	Basic procedure involved in method study		1	DM1
27.	**01-08-15**	Work measurement		1	DM1
28.	**04-08-15**	tutorial		1	DM2
UNIT III:QUALITY AND MATERIAL MANAGEMENT					
29.	**06-08-15**	quality and materials management		1	DM1
30.	**07-08-15**	Statistical quality control Meaning		1	DM1
31.	**18-08-15**	Variables and attributes		1	DM1
32.	**19-08-15**	X chart R Chart		1	DM1

LESSON PLAN

Course Code& Course Name: T221-INDUSTRIAL MANAGEMENT **SEM:** V

Programme: B.Tech **Department: ME**

SEC-A

33.	**20-08-15**	problems		1	DM1
34.	**21-08-15**	C Chart PC hart		1	DM1
35.	**22-08-15**	problems		1	DM1
36.	**25-08-15**	Acceptance sampling Sampling plans		1	DM1
37.	**26-08-15** **27-08-15**	Deming's contribution to quality		1	DM1
38.	**28-08-15**	Materials management : objectives		1	DM1
39.	**29-08-15**	Need for inventory control		1	DM1
40.	**01-09-15**	Tutorials		1	DM2
41.	**02-09-15**	Purchase procedure		1	DM1
42.	**03-09-15**	Store records		1	DM1
43.	**23-06-15**	EOQ		1	DM1
44.	**24-06-15**	problems		1	DM1
45.	**25-06-15**	ABC analysis		1	DM1
46.	**26-06-15**	Stock levels		1	DM1
47.	**27-06-15**	Stock level problems		1	DM1
UNIT IV: HUMAN RESOURCES MANAGEMNT					
48.	**04-09-15**	Concepts of HRM		1	DM1
49.	**05-09-15**	Concept of hrm		1	DM1
50.	**08-09-15**	Basic functions of HR manager		1	DM1
51.	**09-09-15**	Basic functions of HR manager		1	DM1
52.	**10-09-15**	Man power planning		1	DM1
53.	**11-09-15**	Selection		1	DM1
54.	**15-09-15**	Recruitment		1	DM1
55.	**16-09-15**	Training and development Placement		1	DM1
56.	**18-09-15**	Wage and salary admn		1	DM1
57.	**19-09-15**	Promotion		1	DM1
58.	**22-09-15**	Transfers Separation performance. Appraisal		1	DM1
59.	**23-09-15**	Job evaluation		1	DM1
60.	**25-09-15**	merit ranking Tutorials		1	DM1
61.	**26-09-15**	Tutorials		1	DM2
UNIT V:PROJECT MANAGEMENT					
62.	**30-09-15**	Early techniques in project management		1	DM1
63.	**01-10-15**	Network analysis Programme evaluation and review technique (PERT)		1	DM1
64.	**03-10-15**	Critical path method		1	DM1
65.	**06-10-15**	Identifying critical path		1	DM1
66.	**07-10-15**	Problems		1	DM1
67.	**08-10-15**	Tutorial		1	DM2
68.	**09-10-15**	Probability of completing project within time		1	DM1
69.	**13-10-15**	problems		1	DM1
70.	**14-10-15**	problems		1	DM1
71.	**15-10-15**	Project crashing		1	DM1

72.	**16-10-15**	Problems		1	DM1
73.	**04-09-15**	Problems		1	DM1
74.	**05-09-15**	Problems		1	DM1
75.	**08-09-15**	Revision		1	DM1
76.	**09-09-15**	Revison		1	
77.	**10-09-15**	II MID EXAM		1	
			Total	77	
Total number of classes required to complete the syllabus					68
Total number of classes available as per Schedule					77

NOTE: DELIVERY METHODS (DM):

DM1: Lecture interspersed with discussions/BB,
DM2: Tutorial'
DM3: Lecture with a quiz,
DM4: Assignment/Test,
DM5: Demonstration (laboratory, fieldvisit),
DM6: Presentations/PPT

At the End of the course, students attained the **Course Outcomes: CO1, CO2, CO3, CO4, CO5** & sample proofs are enclosed in Course file.

CO1: Apply management principles to the particle situations to be in a position to know which type of business organization structure suits
CO2: Able to make decision making relating to the problems in operations and production activities there by improving the productivity by proper utilisation input factors by designing the better working methods and with better work study techniques.
CO3: Able to improve quality of working through SQC techniques and also in a position to reduce the investment in materials through better control of inventory
CO4: Able to manage people in working environment with the practices of HRM across corporate businesses
CO5:Able to use PERT & CPM techniques in effective project management to identify critical path and try to complete projects on time as well as reducing the project durations if need arises.

Signature			
	Name of the Faculty	**Name of Course Co-ordinator**	**HOD**
	U.RAMBABU	V.KISHORE REDDY	Dr.V.SREEHARI

LESSON PLAN

Course Name: T207 – Machine Design-I **Programme: B.Tech (Section – A)**
SEM: V **Department: Mechanical Engineering**

S No.	Tentative Date	Topics to be covered	Actual Date	No. of classes	Content Delivery Methods
1	**23-06-15**	**Introduction to Machine Design**		1	DM1/DM6
2	**24-06-15**	**Basic procedure of machine design**		1	DM1/DM6
3	**25-06-15**	**Basic requirements of machine design**		1	DM1/DM6
4	**26-06-15**	**Design of machine elements, Design analysis and synthesis**		1	DM1/DM6 & DM 5
5	**27-06-15**	**Interchangeability**		1	DM1/DM6
6	**30-06-15**	**Limits & Fits**		1	DM1/DM6
7	**01-07-15**	**Introduction to Indian standards, Selection of Preferred sizes**		1	DM2 / DM 3
8	**02-07-15**	**Problems**		1	DM1/DM6 & DM 5
9	**03-07-15**	**Tutorial**		1	DM1/DM6
10	**04-07-15**	**Modes of failure, Factor of safety, Stresses, stresses due to BM**			
11	**07-07-15**	**Stresses due to TM, Eccentric axial moment**		1	DM1/DM6 & DM 5
12	**08-07-15**	**Problems**		1	DM1/DM6 & DM 5
13	**09-07-15**	**Theories of elastic failure, Maximum principal stress theory**		1	DM2 / DM 3
14	**10-07-15**	**Maximum shear stress theory, Distortion energy theory**		1	DM1/DM6 & DM 5
15	**14-07-15**	**Problems**		1	DM1/DM6 & DM 5
16	**15-07-15**	**Tutorial**		1	DM1/DM6
17	**16-07-15**	**Stress concentration, Stress concentration factors**		1	DM1/DM6
18	**17-07-15**	**Reduction of stress concentration , Notch sensitivity**		1	DM1/DM6
19	**21-07-15**	**Fluctuating stresses, Fatigue failure**		1	DM2 / DM 3
20	**22-07-15**	**Endurance limit, Rotating beam machine, S-N curve**		1	DM1/DM6
21	**23-07-15**	**Approximate estimation, Reversed stresses**		1	DM1/DM6
22	**24-07-15**	**Tutorial**			
23	**25-07-15**	**Gerber equation, Goodman and Soderberg lines**		1	DM1/DM6
24	**28-07-15**	**Design for finite life and infinite life**		1	DM1/DM6
25	**29-07-15**	**Problems**		1	DM2 / DM 3
26	**30-07-15**	**Problems**		1	DM1/DM6
27	**31-07-15**	**Impact stresses**		1	DM1/DM6
28	**01-08-15**	**Tutorial**		1	DM1/DM6
29	**04-08-15**	**Threaded joints, Terminology of screw threads**		1	DM1/DM6
30	**05-08-15**	**Materials and manufacture, Bolted joints**			
31	**06-08-15**	**Simple analysis, Eccentrically loaded bolted joints in shear**		1	DM2 / DM 3
32	**07-08-15**	**Tutorial**		1	DM1/DM6
33	**18-08-15**	**Bolts of uniform strength**		1	DM1/DM6

34	**19-08-15**	**Welded joints, Butt joints, Fillet joints**		1	DM1/DM6
35	**20-08-15**	**Strength of butt joints, Strength of parallel and transverse fillet welds**			
36	**21-08-15**	**Max. shear stress in parallel and transverse fillet welds**		1	DM1/DM6
37	**22-08-15**	**Axially loaded un symmetrically welded joints**		1	DM2 / DM 3
38	**25-08-15**	**Welded joint subjected to BM**		1	DM1/DM6
39	**26-08-15 27-08-15**	**problems**		1	DM2 / DM 3
40	**28-08-15**	**Tutorial**		1	DM1/DM6
41	**29-08-15**	**Power screw screws, forms of thread, multiple threaded screws, terminology**		1	DM1/DM6
42	**01-09-15**	**Torque requirement for lifting and lowering loads, self locking screw**			
43	**02-09-15**	**Efficiency of square threaded screw**		1	DM1/DM6
44	**03-09-15**	**Efficiency of self locking screw, design of screw and nut, design of screw jack& problems**		1	DM1/DM6
45	**04-09-15**	**Tutorial**		1	DM1/DM6
46	**05-09-15**	**Types of keys, design of square and flat keys**		1	DM1/DM6
47	**08-09-15**	**Problems**		1	DM1/DM6
48	**09-09-15**	**Cotter joints, Socket and spigot cotter joint,**		1	DM1/DM6
49	**10-09-15**	**Failures and problems**		1	DM2 / DM 3
50	**11-09-15**	**Knuckle joint, failures and problems**		1	DM1/DM6
51	**15-09-15**	**Tutorial**		1	DM1/DM6
52	**16-09-15**	**Shafts, Transmission shafts, shaft design on strength basis**		1	DM1/DM6
53	**18-09-15**	**Shaft design on torsional rigidity basis**		1	DM1/DM6
54	**19-09-15**	**ASME code for shaft design**		1	DM1/DM6
55	**22-09-15**	**Design of shafts and problems**		1	DM2 / DM 3
56	**23-09-15**	**Design of shafts and problems**		1	DM1/DM6
57	**25-09-15**	**Design of hollow shafts on strength and rigidity basis and problems**		1	DM1/DM6
58	**26-09-15**	**Tutorial**		1	DM1/DM6
59	**29-09-15**	**Shaft couplings, requirements, Rigid couplings**		1	DM1/DM6
60	**30-09-15**	**Muff coupling design and problems**		1	DM1/DM6
61	**01-10-15**	**Clamp coupling design and problems**		1	DM2 / DM 3
62	**03-10-15**	**Flange coupling design and problems**		1	DM1/DM6
63	**06-10-15**	**Bushed pin flexible coupling design**		1	DM1/DM6
64	**07-10-15**	**Problems**		1	DM2 / DM 3
65	**08-10-15**	**Problems**		1	DM1/DM6
66	**09-10-15**	**Tutorial**		1	DM1/DM6
67	**13-10-15**	**Beyond syllabus**		1	DM2 / DM 3
68	**14-10-15**	**Beyond syllabus**		1	DM1/DM6
69	**15-10-15**	**Beyond syllabus**		1	DM1/DM6
70	**16-10-15**	**Beyond syllabus**		1	DM1/DM6

71	**17-10-15**	**Beyond syllabus**		1	DM1/DM6
Total				**71**	
Total number of classes required to complete the syllabus				**66**	
Total number of classes available as per Schedule				**71**	

NOTE: DELIVERY METHODS (DM):
DM1: Lecture interspersed with discussions/BB
DM2: Tutorial
DM3: Lecture with a Quiz
DM4: Assignment/Test
DM5: Demonstration (laboratory, field visit)
DM6: Presentations/PPT

At the End of the course, students attained the **Course Outcomes: CO1, CO2, CO3, CO4, CO5** & sample proofs are enclosed in Course file.

CO1: Formulate and analyze stresses and strains in machine elements and structures subjected to different loads.
CO2: Evaluate the stress distribution and analyze the failure criterion of mechanical parts under static and fatigue loads
CO3:Design temporary and permanent joints.
CO4: Analyze and design power transmission shafts supporting various elements in industry
CO5: Design shaft couplings for various engineering applications

	Instructor	**Course Co-ordinator**	**Module Co-Ordinator**	**HOD**
Signature				

LESSON PLAN

Course Name: T251 - METROLOGY **Programme: B.Tech (Section – A)**
SEM: VII **Department: Mechanical**

S No.	Tentative Date	Topics to be covered	Actual Date	No. of classes	Content Delivery Methods
UNIT-I: LINEAR, ANGULAR AND FLAT SURFACE MEASUREMENT					
1	23-06-2015	**Introduction**		1	DM1/DM6
2	24-06-2015	**Linear Measurement:** Standards of measurements		1	DM1/DM6
3	25-06-2015	Line and end Standard		1	DM1/DM6
4	27-06-2015	Slip gauges		1	DM1/DM6
5	27-06-2015	**Tutorial 1**		1	DM2/DM3
6	30-06-2015	Dial indicator		1	DM2/DM3
7	01-07-2015	Micrometers		1	DM1/DM6
8	02-07-2015	**Angular Measurement:** Bevel protractor		1	DM1/DM6 & DM4
9	04-07-2015	Angle slip gauges		1	DM1/DM6
10	04-07-2015	**Tutorial 2**		1	DM2/DM3
11	07-07-2015	spirit levels		1	DM2/DM3
12	08-07-2015	Sine bar		1	DM1/DM6
13	09-07-2015	Rollers and spheres used to determine the tapers		1	DM1/DM6 & DM4
14	11-07-2015	**Flat Surface Measurement:**		1	DM1/DM6
15	11-07-2015	**Tutorial 3**		1	DM2/DM3
16	14-07-2015	Basic principle of straight edge		1	DM2/DM3
17	15-07-2015	Surface plates		1	DM1/DM6
18	16-07-2015	**Optical Measuring Instruments:**		1	DM1/DM6
19	21-07-2015	Tool maker's microscope		1	DM1/DM6
20	22-07-2015	Collimators		1	DM1/DM6
21	23-07-2015	Optical projector		1	DM1/DM6 & DM4
22	25-07-2015	Optical flats and their uses		1	DM2/DM3
23	25-07-2015	interferometer		1	DM1/DM6
24	28-07-2015	**Tutorial 4**		1	DM2/DM3
25	29-07-2015	**Comparators:** Basic principle and applications		1	DM1/DM6
26	30-07-2015	Mechanical Comparators		1	DM1/DM6 & DM4
27	01-08-2015	Electrical Comparators		1	DM1/DM6 & DM4
28	01-08-2015	Electronic comparators.		1	DM2/DM3
29	04-08-2015	**Tutorial 5**		1	DM2/DM3
30	05-08-2015	pneumatic comparators		1	DM1/DM6 & DM4
31	06-08-2015	**Limits and Fits:** Introduction, normal size		1	DM1/DM6 & DM4
32	08-08-2015	Tolerance limits, deviations, allowance & fits		1	DM1/DM6
33	08-08-2015	Unilateral and bilateral tolerance system		1	DM1/DM6 & DM4
34	11-08-2015	Hole and shaft basis systems		1	DM2/DM3
35	12-08-2015	Interchangeability and selective assembly		1	DM1/DM6 & DM4
36	13-08-2015	**Tutorial 6**		1	DM2/DM3
	17-08-2015 to 22-08-2015	**I Mid Examinations**			
37	25-08-2015	Indian standard Institution system		1	DM1/DM6
38	26-08-2015	**Limit Gauges:** Introduction		1	DM1/DM6 & DM4
39	27-08-2015	Taylor's principle		1	DM2/DM3

40	29-08-2015	Design of Go and No Go gauges		1	DM1/DM6 & DM4
41	29-08-2015	**Tutorial 7**		1	DM2/DM3
42	01-09-2015	Plug, ring and snap gauges		1	DM1/DM6 & DM4
43	02-09-2015	Profile and position gauges		1	DM1/DM6 & DM4
44	03-09-2015	**Surface Texture:** Factors effecting surface roughness		1	DM1/DM6
45	08-09-2015	Reasons for controlling surface texture, Differences between surface roughness and surface waviness		1	DM2/DM3
46	09-09-2015	Numerical assessment of surface finish - CLA		1	DM1/DM6 & DM4
47	10-09-2015	R.M.S Values – Ra values and Rz values		1	DM1/DM6
48	12-09-2015	**Tutorial 8**		1	DM2/DM3
49	12-09-2015	Basic principle of profile meter and Talysurf		1	DM1/DM6
50	15-09-2015	ISI symbols for indication of surface finish		1	DM1/DM6 & DM4
51	16-09-2015	**Screw Thread Measurement:** Screw thread terminology		1	DM2/DM3
52	19-09-2015	Errors in screw threads		1	DM1/DM6 & DM4
53	19-09-2015	**Tutorial 9**		1	DM2/DM3
54	22-09-2015	Measurement of various elements of screw threads		1	DM1/DM6
55	23-09-2015	Major diameter, minor diameter, effective diameter		1	DM1/DM6
56	26-09-2015	Pitch flank angle and thread form		1	DM1/DM6 & DM4
57	26-09-2015	**Tutorial 10**		1	DM2/DM3
58	29-09-2015	**Machine Tool alignment Tests:** Requirements of machine tool alignment tests		1	DM1/DM6 & DM4
59	30-09-2015	Alignment tests on lathe		1	DM1/DM6
60	01-10-2015	Alignment tests on lathe		1	DM1/DM6 & DM4
61	03-10-2015	Alignment tests on milling		1	DM1/DM6 & DM4
62	03-10-2015	Alignment tests on milling		1	DM1/DM6
63	06-10-2015	Alignment tests on Drilling machine		1	DM2/DM3
64	07-10-2015	**Gear Measurement:** Gear measuring instruments		1	DM1/DM6 & DM4
65	08-10-2015	**Tutorial 11**		1	DM2/DM3
66	10-10-2015	Gear tooth profile measurement		1	DM1/DM6 & DM4
67	10-10-2015	Measurement of diameter, pitch		1	DM1/DM6
68	13-10-2015	Measurement of pressure angle and tooth thickness		1	DM1/DM6
69	14-10-2015	Parkinson's gear tester		1	DM2/DM3
70	15-10-2015	**Coordinate Measuring Machines:**		1	DM1/DM6 & DM4
71	17-10-2015	Basic principle, types and applications of CMM.		1	DM1/DM6 & DM4
72	17-10-2015	**Tutorial 12**		1	DM2/DM3
	19-10-2015 to 24-10-2015	**DASARA HOLIDAYS**			
73	27-102015	Beyond Syllabus		1	DM1/DM6

					& DM4
74	28-10-2015	Beyond Syllabus		1	DM1/DM6 & DM4
75	29-10-2015	Revision		1	DM2/DM3
76	31-102015	Revision		1	DM1/DM6 & DM4
77	31-10-2015	Revision		1	DM2/DM3
	02-11-2015 to 07-11-2015	**II Mid Examinations**			
	09-11-2015 to 18-11-2015	**Preparation and Practicals**			
	19-11-2015 to 03-12-2015	**End Examinations**			
Total					77
Total number of classes required to complete the syllabus					**72**
Total number of classes available as per Schedule					**77**

NOTE: DELIVERY METHODS (DM):
DM1: Lecture interspersed with discussions/BB
DM2: Tutorial
DM3: Lecture with a Quiz
DM4: Assignment/Test
DM5: Demonstration (laboratory, field visit)
DM6: Presentations/PPT

At the End of the course, students attained the **Course Outcomes: CO1, CO2, CO3, CO4, CO5** & sample proofs are enclosed in Course file.

CO1: Design & use effectively the instruments for measurements of linear, angular & flat surface Measurement.
CO2: Design & use effectively the Optical measuring instruments and Comparators.
CO3: Apply the concepts of Limits and Fits in designing Gauges.
CO4: Analyze measuring systems of surface roughness and screw thread measurement.
CO5: Analyze measuring systems of Gear Measurement and perform alignment/acceptance test effectively.

TEXT BOOK

Engineering Metrology / R.K. Jain / Khanna Publishers.

REFERENCES

1. Engineering Metrology / I C Gupta./ Danpath Rai
2. A text book of Metrology /M. Mahajan/ Dhanpat Rai & Co

Signature			
	Name of the Faculty	**Name of Course Co-ordinator**	**HOD**
	V.Sridhara Reddy	**Dr.S.Pichi Reddy**	**Dr.K.Appa Rao**

LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING

(Autonomous)

L.B.Reddy Nagar, Mylavaram – 521 230.Andhra Pradesh, INDIA

Affiliated to JNTUK, Kakinada & Approved by AICTE New Delhi

Accredited by NBA, New Delhi & certified by ISO 9001:2015

DEPARTMENT OF **MECHANICAL** ENGINEERING

DATE	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12
10-08-2015	SM Demo	SM Demo	SM Demo	SM Demo	SM Demo	SM Demo	M Demo	M Demo	M Demo	M Demo	M Demo	M Demo
17-08-2015	M Demo	M Demo	M Demo	M Demo	M Demo	M Demo	SM Demo	SM Demo	SM Demo	SM Demo	SM Demo	SM Demo
24-08-2015	MT1	MT1	MT2	MT2	MT3	MT3	M1	M2	M3	M4	M5	M6
31-08-2015	M1	M2	M3	M4	M5	M6	MT1	MT1	MT2	MT2	MT3	MT3
07-09-2015	MT2	MT2	MT3	MT3	MT1	MT1	M2	M3	M4	M5	M6	M1
14-09-2015	M2	M3	M4	M5	M6	M1	MT2	MT2	MT3	MT3	MT1	MT1
21-09-2015	MT3	MT3	MT1	MT1	MT2	MT2	M3	M4	M5	M6	M1	M2
05-10-2015	M3	M4	M5	M6	M1	M2	MT3	MT3	MT1	MT1	MT2	MT2
12-10-2015	MT4	MT4	MT5	MT5	MT6	MT6	M4	M5	M6	M1	M2	M3
26-10-2015	M4	M5	M6	M1	M2	M3	MT4	MT4	MT5	MT5	MT6	MT6
02-11-2015	MT5	MT5	MT6	MT6	MT4	MT4	M5	M6	M1	M2	M3	M4
09-11-2015	M5	M6	M1	M2	M3	M4	MT5	MT5	MT6	MT6	MT4	MT4
16-11-2015	MT6	MT6	MT4	MT4	MT5	MT5	M6	M1	M2	M3	M4	M5
23-11-2015	M6	M1	M2	M3	M4	M5	MT6	MT6	MT4	MT4	MT5	MT5
30-11-2015	Repetation	Repetation	Repetation	Repetation	Repetation	Repetation	Repetation	Repetation	Repeta...	Repeta...	Repeta...	Repeta...
07-12-2015	I.Exam	I.Exam	I.Exam	I.Exam	I.Exam	I.Exam	I.Exam	I.Exam	I.Exam	I.Exam	I.Exam	I.Exam

Faculty In-Charge **HOD**

LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING

(Autonomous)

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DEPARTMENT OF **MECHANICAL** ENGINEERING

DATE	A13	A14	A15	A16	A17	A18	A19	A20	A21	A22	A23	A24
13-08-2015	SM Demo	SM Demo	SM Demo	SM Demo	SM Demo	SM Demo	M Demo	M Demo	M Demo	M Demo	M Demo	M Demo
20-08-2015	M Demo	M Demo	M Demo	M Demo	M Demo	M Demo	SM Demo	SM Demo	SM Demo	SM Demo	SM Demo	SM Demo
27-08-2015	SM1	SM2	SM3	SM4	SM5	SM6	M1	M2	M3	M4	M5	M6
03-09-2015	M1	M2	M3	M4	M5	M6	SM1	SM2	SM3	SM4	SM5	SM6
10-09-2015	SM2	SM3	SM4	SM5	SM6	SM1	M2	M3	M4	M5	M6	M1
17-09-2015	M2	M3	M4	M5	M6	M1	SM2	SM3	SM4	SM5	SM6	SM1
24-09-2015	SM3	SM4	SM5	SM6	SM1	SM2	M3	M4	M5	M6	M1	M2
08-10-2015	M3	M4	M5	M6	M1	M2	SM3	SM4	SM5	SM6	SM1	SM2
15-10-2015	SM4	SM5	SM6	SM1	SM2	SM3	M4	M5	M6	M1	M2	M3
29-10-2015	M4	M5	M6	M1	M2	M3	SM4	SM5	SM6	SM1	SM2	SM3
05-11-2015	SM5	SM6	SM1	SM2	SM3	SM4	M5	M6	M1	M2	M3	M4
12-11-2015	M5	M6	M1	M2	M3	M4	SM5	SM6	SM1	SM2	SM3	SM4
19-11-2015	SM6	SM1	SM2	SM3	SM4	SM5	M6	M1	M2	M3	M4	M5
26-11-2015	M6	M1	M2	M3	M4	M5	SM6	SM1	SM2	SM3	SM4	SM5
03-12-2015	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending
10-12-2015	Exam	Exam	Exam	Exam	Exam	Exam	Exam	Exam	Exam	Exam	Exam	Exam

Faculty In-Charge **HOD**

LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING

(Autonomous)

L.B.Reddy Nagar, Mylavaram – 521 230.Andhra Pradesh, INDIA

Affiliated to JNTUK, Kakinada & Approved by AICTE New Delhi

Accredited by NBA, New Delhi & certified by ISO 9001:2015

DEPARTMENT OF **MECHANICAL** ENGINEERING

Lab Batch Details

Batch	Register No.s	Batch	Register No.s	Batch	Register No.s	Batch	Register No.s
A1	14761A0301-303	**A7**	14761A0321-323	**A13**	14761A0339-341	**A19**	14761A0358-360
A2	14761A0304-308	**A8**	14761A0324-326	**A14**	14761A0342-344	**A20**	15765A0301-303
A3	14761A0309-311	**A9**	14761A0327-329	**A15**	14761A0345-347	**A21**	15765A0304-306
A4	14761A0312-314	**A10**	14761A0330-332	**A16**	14761A0348-350	**A22**	15765A0307-309
A5	14761A0315-317	**A11**	14761A0333-335	**A17**	14761A0351-353	**A23**	15765A0310-312
A6	14761A0318-320	**A12**	14761A0336-338	**A18**	14761A0354-357	**A24**	15765A0313-314

Faculty In-Charge **HOD**

LESSON PLAN

Course Code& Course Name : THERMAL ENGINEERING(T-328) **SEM :** V
Programme : B.Tech **Department :** ME
A.Y: 2015-16 **Section : A/S**

S No.	Tentative Date	Topics to be covered	Actual Date	Num. of classes	Content Delivery Methods
		UNIT-I			
1	22/6/15	Introduction to the vapour power cycles		1	DM1
2	23/6/15	Formation of steam and its properties		1	DM1
3	24/6/15	Carnot vapour power cycle		1	DM1
4	25/6/15	Rankine cycle efficiency using p-v, t-s and h-s diagram		1	DM1
5	26/6/15	Numerical problems		1	DM1
6	29/6/15	Numerical problems		1	DM1
7	30/6/15	**TUTORIAL-1**		1	DM1
8	1/7/15	Actual rankine cycle		1	DM1
9	2/7/15	Reheating cycle		1	DM1
10	3/7/15	Regeneration cycle		1	DM1
11	6/7/15	Open and closed feed water heaters		1	DM1
12	7/7/15	**TUTORIAL-2**		1	DM1
13	8/7/15	Fuels and combustion introduction		1	DM2
14	9/7/15	Chemical reaction equations for solid and gaseous fuels		1	DM1
15	10/7/15	Adiabatic flame temperature		1	DM1
16	13/7/15	Stoichiometry of fuel and air		1	DM1
17	14/7/15	Mass basis to volume basis		1	DM1
18	15/7/15	**TUTORIAL-3**		1	DM2
		UNIT-II			
19	16/7/15	Boilers - introduction		1	DM1
20	17/7/15	Fire tube boilers		1	DM1
21	20/7/15	Water tube boilers		1	DM1
22	21/7/15	Boiler mountings		1	DM1
23	22/7/15	Boiler accessories		1	DM1
24	24/7/15	Boiler draught introduction		1	DM1
25	27/7/15	Natural draft system		1	DM1
26	28/7/15	Height of chimney derivation		1	DM1
27	29/7/15	Condition for maximum discharge		1	DM1
28	30/7/15	Artificial draft forced, induced		1	DM1
29	31/7/15	**TUTORIAL-4**		1	DM2
		UNIT-III			
30	3/8/15	Introduction to nozzles		1	DM1
31	4/8/15	Classification and flow of nozzles		1	DM1
32	5/8/15	Thermodynamic analysis		1	DM1
33	6/8/15	Velocity of nozzle at exit		1	DM1
34	7/8/15	Condition for maximum discharge		1	DM1
35	18/8/15	Critical pressure ratio		1	DM1
36	19/8/15	**TUTORIAL-5**		1	DM1
36	20/8/15	Ideal and actual expansion		1	DM1
37	21/8/15	Supersaturated in nozzles		1	DM1
38	24/8/15	Degree of super cooling and super		1	DM2

		saturation			
39	25/8/15	Wilson line		1	DM1
40	26/8/15	Nozzle dimensions		1	DM1
41	27/8/15	**TUTORIAL-6**		1	DM1
		UNIT- IV			
42	28/8/15	Introduction to steam turbines		1	DM1
43	31/9/15	Impulse turbine and its parts		1	DM1
44	01/9/15	Velocity diagram		1	DM1
45	02/9/15	Effect of friction and Power developed		1	DM1
46	03/9/15	**TUTORIAL-7**		1	DM1
47	04/9/15	Blade, stage efficiencies and Condition for maximum efficiency		1	DM2
48	07/9/15	De-laval turbine and its features		1	DM1
49	9/9/15	Compounding of turbines		1	DM1
50	10/9/15	Velocity, pressure and combined compounding of steam turbines		1	DM1
51	11/9/15	**TUTORIAL-8**		1	DM1
52	14/9/15	Combined velocity triangle for a velocity compounded impulse turbine		1	DM1
53	15/9/15	Reaction turbine -introduction		1	DM1
54	16/9/15	Degree of reaction(Parsons)		1	DM2
55	18/9/15	Maximum efficiency		1	DM1
56	21/9/15	Steam condensers		1	DM1
57	22/9/15	Vacuum and condenser efficiency		1	DM1
58	23/9/15	**TUTORIAL-9**		1	DM1
		UNIT-V			
59	24/9/15	Compressors- introduction		1	DM1
60	25/9/15	Reciprocating compressors- principle of operation		1	DM2
61	28/9/15	Work required, free air delivery			
62	29/9/15	Isothermal, volumetric efficiency		1	DM1
63	30/9/15	Condition for minimum work		1	DM1
64	1/10/15	**TUTORIAL-10**		1	DM1
65	5/10/15	Effect of clearance volume		1	DM1
66	6/10/15	Multistage compression		1	DM1
67	7/10/15	Roots blower, Vanes compressor		1	DM2
68	8/10/15	Efficiency considerations		1	DM1
69	9/10/15	Centrifugal compressors		1	DM1
70	12/10/15	Energy transfer, velocity diagram		1	DM1
71	13/10/15	Axial flow compressors and degree of reaction		1	DM1
72	14/10/15	velocity triangles, energy transfer		1	DM1
73	15/10/15	Revision		1	DM1
74	16/10/15	Revision		1	DM1
75	17/10/15	Revision		1	DM1
Total number of classes required to complete the syllabus					**72**
Total number of classes available as per Schedule					**75**

LESSON PLAN	
Course Code& Course Name : THERMAL ENGINEERING(T-328)	**SEM :** V
Programme : B.Tech	**Department :** ME
A.Y: 2015-16	**Section : A/S**

NOTE: DELIVERY METHODS : **DM1**: Lecture interspersed with discussions/BB, **DM2:** Tutorial, **DM3:** Lecture with a quiz, **DM4**: Assignment/Test, **DM5**: Demonstration (laboratory, field visit), **DM6:** Presentations/PPT

At the End of the course, students attained the **Course Outcomes: CO1, CO2, CO3, CO4, CO5** & sample proofs are enclosed in Course file.

Signature					
	Instructor	**Course Co-ordinator**	**Module Co-ordinator**	**Program Co-ordinator**	**HOD**
	A.V.Krishna Reddy	Dr.P.VIJAYA KUMAR	Dr.P.VIJAYA KUMAR	Dr.S.PICHI REDDY	Dr. K. APPA RAO

LESSON PLAN

Course Code& Course Name: T170-DYNAMICS OF MACHINES **SEM:** V

Programme: B.Tech **Department:** ME (B Section)

Academic Year: 2015-16

S No.	Tentative Date	Topics to be covered	Actual Date	Num. of classes	Content Delivery Methods
FRICTION & CLUTCHES					
1.	22.06.15	Introduction to Dynamics of Machines		1	DM1
2.	23.06.15	Inclined Plane-Body is at rest,		1	DM1
3.	24.06.15	Inclined Plane-Body moves up the plane		1	DM1
4.	25.06.15	Inclined Plane-Body moves down the plane		1	DM1
5.	26.06.15	Friction of screw & nut		1	DM1
6.	29.06.15	Tutorial-I		1	DM2
7.	30.06.15	Collar & Pivot Bearings		1	DM1
8.	01.07.15	Uniform Pressure condition in collar & Pivot		1	DM1
9.	02.07.15	Uniform wear condition in collar & Pivot		1	DM1
10.	03.07.15	Tutorial-II		1	DM2
11.	06.07.15	Lubricated Surfaces-Boundary Friction & Film Lubrication		1	DM1
12.	07.07.15	Friction Clutches Introduction		1	DM1
13.	08.07.15	Single Plate Clutch & problem		1	DM1
14.	09.07.15	Multi Plate Clutch & problem		1	DM1
15.	10.07.15	Cone & Centrifugal Clutches		1	DM1
16.	13.07.15	Tutorial-III		1	DM2
BRAKES AND DYNAMOMETERS & PRECESSION					
17.	14.07.15	Brakes Introduction, Single block brakes		1	DM1
18.	15.07.15	Band Brakes		1	DM1
19	16.07.15	band & Block brakes		1	DM1
20	17.07.15	Internal Expanding Shoe Brake		1	DM1
21	20.07.15	Tutorial-IV		1	DM2
22	21.07.15	Dynamometers Introduction Prony Brake Dynamometers & Rope Brake Dynamometers		1	DM1
23	22.07.15	Belt Transmission, Epi cyclic Train & Torsion Dynamometers		1	DM1
24	23.07.15	Introduction to Precission & Gyroscopic effect		1	DM1
25	24.07.15	Angular acceleration of a disc in precission Active & Reactive Gyroscopic couples		1	DM1
26	27.07.15	Stability of Aeroplanes		1	DM1
27	28.07.15	Tutorial-V		1	DM2
28	29.07.15	Steering,Pitching & Rolling motions in ship Gyroscopic effect on ship		1	DM1

LESSON PLAN

Course Code& Course Name: T170-DYNAMICS OF MACHINES **SEM:** V

Programme: B.Tech **Department:** ME (B Section)

Academic Year: 2015-16

29	30.07.15	Stability of Four Wheelers		1	DM1
30	31.07.15	Problem		1	DM1
31	03.08.15	Tutorial-VI		1	DM2
32	04.08.15	Stability of Two Wheelers		1	DM1
33	05.08.15	Static & Dynamic Force analysis		1	DM1
34	06.08.15	Problems		1	DM1
35	07.08.15	Revision		1	DM1
36	10.08.15	Mid-I Exams		1	DM4
37	11.08.15	Mid-I Exams		1	DM4
38	12.08.15	Mid-I Exams		1	DM4
39	13.08.15	Mid-I Exams		1	DM4
40	14.08.15	Mid-I Exams		1	DM4
41	17.08.15	Mid-I Exams		1	DM4
TURNING MOMENT DIAGRAMS & FLYWHEELS					
42	18.08.15	Turning moment		1	DM1
43	19.08.15	Inertia torque		1	DM1
44	20.08.15	connecting rod angular velocity & acceleration		1	DM1
45	21.08.15	Problem		1	DM1
46	24.08.15	Tutorial-VII		1	DM2
47	25.08.15	crank effort & torque diagrams Fluctuation of energy		1	DM1
48	26.08.15	Flywheels & their design		1	DM1
49	27.08.15	Problem		1	DM1
50	28.08.15	Tutorial-VIII		1	DM2
GOVERNORS & VIBRATIONS					
51	31.08.15	Governors Introduction		1	DM1
52	01.09.15	Watt Governor & Porter Governor		1	DM1
53	02.09.15	Proel Governor		1	DM1
54	03.09.15	Problems		1	DM1
55	04.09.15	hartnell Governor		1	DM1
56	07.09.15	Tutorial-IX		1	DM2
57	08.09.15	Sensitivity, Isochronism & Hunting		1	DM1
58	09.09.15	Types of vibrations		1	DM1
59	10.09.15	basic features of vibrating systems		1	DM1
60	11.09.15	degrees of freedom		1	DM1
61	14.09.15	Free longitudinal vibrations equilibrium method		1	DM1
62	15.09.15	Energy method		1	DM1
63	16.09.15	Rayleigh method		1	DM1
64	18.09.15	Problems		1	DM1
65	21.09.15	Tutorial-X		1	DM2
BALANCING					
66	22.09.15	Balancing of rotating masses analytical & Graphical methods		1	DM1
67	23.09.15	static & dynamic balancing		1	DM1
68	25.09.15	Problems		1	DM1
69	28.09.15	Problems		1	DM1
70	29.09.15	Tutorial-XI		1	DM2

71	30.09.15	balancing of reciprocating masses		1	DM1
72	01.10.15	Primary & secondary & higher balancing of reciprocating masses		1	DM1
73	05.10.15	Unbalanced forces & couples		1	DM1
74	06.10.15	Problems		1	DM1
75	07.10.15	Locomotive balancing hammer blow, swaying couple& variation of tractive forces		1	DM1
76	08.10.15	Problem		1	DM1
77	09.10.15	Tutorial-XII		1	DM2
78	12.10.15	beyond syllabus		1	DM1
79	13.10.15	beyond syllabus		1	DM1
80	14.10.15	beyond syllabus		1	DM1
81	15.10.15	revision		1	DM1
82	16.10.15	revision		1	DM1
83	26.10.15	Mid-II Exams		1	DM4
84	27.10.15	Mid-II Exams		1	DM4
85	28.10.15	Mid-II Exams		1	DM4
86	29.10.15	Mid-II Exams		1	DM4
87	30.10.15	Mid-II Exams		1	DM4
			Total	87	
Total number of classes required to complete the syllabus					**65**
Total number of classes available as per Schedule					**87**

NOTE: DELIVERY METHODS : **DM1**: Lecture interspersed with discussions/BB, **DM2:** Tutorial, **DM3:** Lecture with a quiz, **DM4**: Assignment/Test, **DM5**: Demonstration (laboratory, field visit), **DM6:** Presentations/PPT

Signature			
	Name of the Faculty	**Name of Course Co-ordinator**	**HOD**
	K.V.VISWANADH	K.V.VISWANADH	DR.K.APPARAO

LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING (AUTONOMOUS)
DEPARTMENT OF MECHANICAL ENGINEERING
(Accredited by NBA under Tier – I)

Laboratory Code	**: L 146**	**Lab: FLUID MECHANICS &HYDRAULIC MACHUNERY LAB**	
Class	**: B. Tech – V Semester (Section – B)**	**A.Y.**	**: 2015-16 (Mech Engg)**
Lab/Practicals	**: 3 hrs/ Week**	**Continuous Internal Assessment**	**: 25**
Credits	**: 02**	**Semester End Examination**	**: 50**
Name of the Faculty	: B VIJAYABHASKAR REDDY/K.SOMASEKHAR		

Batches (Section – B)

Total No. of students	**: 14761A0301 – 305**		
	14761A0308-355		
	14761A0357-360		
	15765A0301-314		
	TOTAL	**=**	**71**
Batch A1	**: 14761A0301-305**	**=**	**06**
Batch A2	**: 14761A0308 – 313**	**=**	**06**
Batch A3	**: 14761A0314 – 319**	**=**	**06**
Batch A4	**:14761A0320 – 325**	**=**	**06**
Batch A5	**:14761A0326 – 331**	**=**	**06**
Batch A6	**:14761A0332 – 338**	**=**	**06**
Batch B1	**: 14761A0339 – 344**	**=**	**06**
Batch B2	**: 14761A0345 – 350**	**=**	**06**
Batch B3	**: 14761A0351 – 357**	**=**	**06**
Batch B4	**:14761A0358 – 15765A0303**	**=**	**05**
Batch B5	**:15765A0304 – 309**	**=**	**06**
Batch B6	**:15761A0310 – 315**	**=**	**06**

LIST OF EXPERIMENTS

1. Verification of Bernoulli's Theorem
2. Calibration of Venturi meter
3. Calibration of Orifice meter.
4. Determination of friction factor for a given pipe line
5. Impact of jets on Vanes.
6. Performance Test on Pelton Wheel.
7. Performance Test on Kaplan Turbine.
8. Performance Test on Single Stage Centrifugal Pump.
9. Performance Test on Reciprocating Pump.
10. Turbine flow meter.

11. Caliberation of v notch

12. Caliberation of mouthpiece apparatus

Schedule of Experiments (Section –A)

BATCH-1

Date	Experiment (Batch)					
	Ex - 1	Ex – 2	Ex – 3	Ex – 4	Ex – 5	Ex – 6
1-2-2016	Demonstration of all experiments, CEOs and COs of the Laboratory (SE – 1 to 11)					
8-2-2016	A1	A2	A3	A4	A5	A6
15-2-2016	A2	A3	A4	A5	A6	A1
22-2-2016	A3	A4	A5	A6	A1	A2
29-2-2016	A4	A5	A6	A1	A2	A3
9-3-2016	A5	A6	A1	A2	A3	A4
21-3-2016	A6	A1	A2	A3	A4	A5
28-3-2016	A1	A2	A3	A4	A5	A6
4-4-2016	A2	A3	A4	A5	A6	A1
11-4-2016	A3	A4	A5	A6	A1	A2
18-4-2016	A4	A5	A6	A1	A2	A3
25-4-2016	A5	A6	A1	A2	A3	A4
2-5-2016	A6	A1	A2	A3	A4	A5
9-5-2016	INTERNAL EXAMINATION					

BATCH-2

Date	Experiment (Batch)					
	Ex - 1	Ex – 2	Ex – 3	Ex – 4	Ex – 5	Ex – 6
28-1-2016	Demonstration of all experiments, CEOs and COs of the Laboratory					
4-2-2016	B1	B2	B3	B4	B5	B6
11-2-2016	B2	B3	B4	B5	B6	B1
18-2-2016	B3	B4	B5	B6	B1	B2
25-2-2016	B4	B5	B6	B1	B2	B3
3-3-2016	B5	B6	B1	B2	B3	B4
10-3-2016	B6	B1	B2	B3	B4	B5
24-3-2016	B1	B2	B3	B4	B5	B6
31-3-2016	B2	B3	B4	B5	B6	B1
7-4-2016	B3	B4	B5	B6	B1	B2
14-4-2016	B4	B5	B6	B1	B2	B3
25-4-2016	B5	B6	B1	B2	B3	B4
28-4-2016	B6	B1	B2	B3	B4	B5
5-5-2016	INTERNAL EXAMINATION					

Lab incharge

LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING (AUTONOMOUS)
DEPARTMENT OF MECHANICAL ENGINEERING
(Accredited by NBA under Tier – I)

Laboratory Code	**: L 146**	**Lab: FLUID MECHANICS &HYDRAULIC MACHUNERY LAB**	
Class	**: B. Tech – V Semester (Section – B)**	**A.Y.**	**: 2016-17 (Mech Engg)**
Lab/Practicals	**: 3 hrs/ Week**	**Continuous Internal Assessment**	**: 25**
Credits	**: 02**	**Semester End Examination**	**: 50**
Name of the Faculty	: S RAMI REDDY/B VIJAYABHASKAR REDDY		

Batches (Section – B)

Total No. of students	**: 15761A0359 – 399**		
	15765A03A1 – 3B4, 16765A0316-329	**=**	**69**
Batch A1	**: 15761A0359 – 364**	**=**	**06**
Batch A2	**: 15761A0365 – 370**	**=**	**06**
Batch A3	**: 15761A0371 – 376**	**=**	**06**
Batch A4	**:15761A0377 – 382**	**=**	**06**
Batch A5	**:15761A0383 – 388**	**=**	**06**
Batch A6	**:15761A0389 – 394**	**=**	**06**
Batch B1	**: 15761A0395 – 3A0**	**=**	**06**
Batch B2	**: 15761A03A1-3A6**	**=**	**06**
Batch B3	**: 15761A03A7 – 3B1**	**=**	**06**
Batch B4	**:15761A03B2 – 16765A0318**	**=**	**06**
Batch B5	**:16765A0319 – 324**	**=**	**06**
Batch B6	**:16765A0325 – 329**	**=**	**06**

LIST OF EXPERIMENTS

1. Verification of Bernoulli's Theorem
2. Calibration of Venturi meter
3. Calibration of Orifice meter.
4. Determination of friction factor for a given pipe line
5. Impact of jets on Vanes.
6. Performance Test on Pelton Wheel.
7. Performance Test on Kaplan Turbine.
8. Performance Test on Single Stage Centrifugal Pump.
9. Performance Test on Reciprocating Pump.
10. Turbine flow meter.
11. Caliberation of v notch

12. Caliberation of mouthpiece apparatus

Schedule of Experiments (Section –B)

BATCH-1

Date	Experiment (Batch)					
	Ex - 1	**Ex – 2**	**Ex – 3**	**Ex – 4**	**Ex – 5**	**Ex – 6**
27-1-16	**Demonstration of all experiments, CEOs and COs of the Laboratory (SE – 1 to 11)**					
3-2-2016	A1	A2	A3	A4	A5	A6
10-2-2016	A2	A3	A4	A5	A6	A1
16-2-2016	A3	A4	A5	A6	A1	A2
23-02-2016	A4	A5	A6	A1	A2	A3
02-3-2016	A5	A6	A1	A2	A3	A4
9-3-16	A6	A1	A2	A3	A4	A5
23-3-16	A1	A2	A3	A4	A5	A6
30-3-16	A2	A3	A4	A5	A6	A1
6-4-16	A3	A4	A5	A6	A1	A2
13-4-16	A4	A5	A6	A1	A2	A3
20-4-16	A5	A6	A1	A2	A3	A4
27-4-16	A6	A1	A2	A3	A4	A5
11-5-16	**INTERNAL EXAMINATION**					

BATCH-2

Date	Experiment (Batch)					
	Ex - 1	**Ex – 2**	**Ex – 3**	**Ex – 4**	**Ex – 5**	**Ex – 6**
29-1-16	**Demonstration of all experiments, CEOs and COs of the Laboratory**					
5-2-16	B1	B2	B3	B4	B5	B6
12-2-16	B2	B3	B4	B5	B6	B1
19-2-16	B3	B4	B5	B6	B1	B2
26-2-16	B4	B5	B6	B1	B2	B3
4-3-16	B5	B6	B1	B2	B3	B4
9-3-16	B6	B1	B2	B3	B4	B5
23-3-16	B1	B2	B3	B4	B5	B6
30-3-16	B2	B3	B4	B5	B6	B1
6-4-16	B3	B4	B5	B6	B1	B2
13-4-16	B4	B5	B6	B1	B2	B3
20-4-16	B5	B6	B1	B2	B3	B4
27-4-16	B6	B1	B2	B3	B4	B5
11-5-16	**INTERNAL EXAMINATION**					

LESSON PLAN

Course Name: T207 – FLUID POWER ENGINEERING **Programme: B.Tech (Section – B)**
SEM: V **Department: Mechanical Engineering**

S No.	Tentative Date	Topics to be covered	Actual Date	No. of classes	Content Delivery Methods
1		**UNIT - I**		1	DM1/DM6
2	22/06/2015	**Impact of Water Jets:** Introduction to fluid power engineering		1	DM1/DM6
3	23/06/2015	Hydrodynamic force of Jets on Stationary vanes		1	DM1/DM6
4	24/06/2015	Hydrodynamic force of Jets on Moving Flat vanes		1	DM1/DM6 & DM 5
5	26/06/2015	Hydrodynamic force of Jets on Inclined vanes		1	DM1/DM6
6	27/06/2015	Hydrodynamic force of Jets on Curved Vanes		1	DM1/DM6
7	29/06/2015	Tutorial		1	DM2 / DM 3
8	30/06/2015	Jet Striking Centrally on Curved Vanes		1	DM1/DM6 & DM 5
9	01/07/2015	Jet Striking Centrally on Curved Vanes Tip-Velocity Triangles at Inlet and Outlet -		1	DM1/DM6
	03/07/2015	Expressions for Work done and Efficiency			
10	04/07/2015	Angular Momentum Principle		1	DM1/DM6 & DM 5
11	06/07/2015	Tutorial		1	DM1/DM6 & DM 5
12	07/07/2015	Applications to Radial Flow Turbines		1	DM2 / DM 3
13	08/07/2015	Jet Propulsion of Ships		1	DM1/DM6 & DM 5
14	10/07/2015	**UNIT - II** Introduction to Hydraulic Turbines		1	DM1/DM6 & DM 5
15	11/07/2015	**Hydraulic Turbines**: - Classification of Water Turbines		1	DM1/DM6
16	13/07/2015	Tutorial		1	DM1/DM6
17	14/07/2015	Introduction to Pelton Wheel		1	DM1/DM6
18	15/07/2015	Pelton Wheel – Work done and Working Proportions		1	DM2 / DM 3
19	17/07/2015	Introduction to Francis turbine		1	DM1/DM6
20	20/07/2015	Working of Francis turbine		1	DM1/DM6
	21/07/2015	Tutorial			
21	22/07/2015	Introduction to Kaplan and Propeller Turbines		1	DM1/DM6
22	24/07/2015	Working of Kaplan and Propeller Turbines		1	DM1/DM6

23	25/07/2015	Introduction to Draft Tubes		1	DM2 / DM 3
24	27/07/2015	Draft Tubes Types - Theory		1	DM1/DM6
25	28/07/2015	Tutorial		1	DM1/DM6
26	29/07/2015	Governing of Turbines		1	DM1/DM6
27	31/07/2015	Surge Tanks.		1	DM1/DM6
	01/08/2015	**Performance of Turbines:** Performance Under Unit Head-			
28	03/08/2015	Unit Quantities		1	DM2 / DM 3
29	04/08/2015	Tutorial		1	DM1/DM6
30	05/08/2015	Performance Under Specific conditions – Specific Speed -		1	DM1/DM6
31	07/08/2015	Performance Characteristic Curves –		1	DM1/DM6
	08/08/2015	Cavitation			
32	18/08/2015	Selection of Turbines		1	DM1/DM6
33	19/08/2015	**UNIT- III :** Introduction to Reciprocating Pumps		1	DM2 / DM 3
34	21/08/2015	Working of Reciprocating Pumps:		1	DM1/DM6
35	22/08/2015	Main components and working of a Reciprocating pump- Types		1	DM2 / DM 3
36	24/08/2015	Work done by Reciprocating pump-		1	DM1/DM6
37	25/08/2015	Tutorial		1	DM1/DM6
38	26/08/2015	Single Acting & Double Acting Pump		1	DM1/DM6
	28/08/2015	Coefficient of Discharge – Slip			
39	29/08/2015	Percentage Slip And Negative Slip-		1	DM1/DM6
40	31/08/2015	Indicator diagram		1	DM1/DM6
41	01/09/2015	Tutorial		1	DM1/DM6
42	02/09/2015	Effect of Acceleration Of Piston On Velocity &Pressure in suction and delivery pipes		1	DM1/DM6
43	04/09/2015	Air vessels – Rate of flow into and from air vessels		1	DM1/DM6
44	05/09/2015	**UNIT - IV :** Introduction to		1	DM1/DM6
45	07/09/2015	Types Component parts and Working of **Centrifugal Pumps:**		1	DM2 / DM 3
46	08/09/2015	Tutorial		1	DM1/DM6

47	09/09/2015	**Centrifugal Pumps:** Work done by the Impeller		1	DM1/DM6
48	11/09/2015	Manometric head –Losses and Efficiencies		1	DM1/DM6
49	12/09/2015	Effect of Vane Angle on Manometric Efficiency		1	DM1/DM6
50	14/09/2015	Effect of Finite number of vanes of the Impeller on Head and Efficiency –		1	DM1/DM6
51	15/09/2015	Tutorial		1	DM2 / DM 3
52	16/09/2015	Minimum Starting Speed		1	DM1/DM6
53	18/09/2015	Loss of Head due to reduced or increased flow		1	DM1/DM6
54	19/09/2015	Diameters of impeller and pipes-		1	DM1/DM6
55	21/09/2015	Specific Speed		1	DM1/DM6
56	22/09/2015	Tutorial		1	DM1/DM6
57	23/09/2015	Multistage Pumps – Pumps in parallel – – NPSH		1	DM2 / DM 3
58	25/09/2015	Cavitations Centrifugal Pumps		1	DM1/DM6
59	26/09/2015	**UNIT--V:**Introduction to Hydraulic Devices		1	DM1/DM6
60	28/09/2015	Hydraulic Accumulator		1	DM2 / DM 3
61	30/09/2015	Tutorial		1	DM1/DM6
62	03/10/2015	Hydraulic Intensifier, Hydraulic Ram-		1	DM1/DM6
63	05/10/2015	Hydraulic Press, Working of Hydraulic Lift, Working of Hydraulic Crane		1	DM2 / DM 3
64	06/10/2015	Working of Hydraulic Couplings		1	DM1/DM6
65	07/10/2015	Tutorial		1	DM1/DM6
66	09/10/2015	Working of Torque Converters, Working of Air Lift Pump		1	DM1/DM6
67	10/10/2015	REPETATION		1	DM1/DM6
68	12/10/2015	REPETATION		1	DM1/DM6
69	13/10/2015	REPETATION		1	DM2 / DM 3
70	16/10/2015	REPETATION		1	DM1/DM6
71	17/10/2015	REPETATION		1	DM1/DM6
Total				**71**	
Total number of classes required to complete the syllabus				**66**	
Total number of classes available as per Schedule				**71**	

NOTE: DELIVERY METHODS (DM):

DM1: Lecture interspersed with discussions/BB
DM2: Tutorial
DM3: Lecture with a Quiz
DM4: Assignment/Test
DM5: Demonstration (laboratory, field visit)
DM6: Presentations/PPT

At the End of the course, students attained the **Course Outcomes: CO1, CO2, CO3, CO4, CO5** & sample proofs are enclosed in Course file.
CO1: To learn various manufacturing processes.
CO2: To understand basic concepts of centroid, center of gravity and moment of inertia.
CO3: To understand the basic concepts and laws of thermodynamics.
CO4: To learn types of fuels and lubricants.
CO5: To understand the working of IC engines, steam turbines and gas turbines

TEXT BOOK

Hydraulic Machine /Fluid mechanics including Hydraulics Machines / Modi & Seth – standard book house.

REFERENCES

1. Elements of Hydraulic Machines and Fluidics / Jagdish Lal
2. Hydraulic Turbines / Nechleba M
3. Introduction to Fluid Mechanics and Fluid Machines, Som,S.R, & Biswas, Tata McGraw Hill,1998
4. Agarwal, S.K., Fluid Mechanics and Machinery, Tata Mc Graw Hill Co., 1997.

Signature			
	Name of the Faculty	**Name of Course Co-ordinator**	**HOD**
	V.Ranjith kumar	**Dr.P.V.Chandra Sekhar Rao**	**Dr.K.Appa Rao**

LESSON PLAN

Course Code& Course Name: T221-INDUSTRIAL MANAGEMENT **SEM:** V

Programme: B.Tech **Department: ME**

SEC-B

S No.	Tentative Date	Topics to be covered	Actual date	No of classes	Content Delivery Methods
UNIT-I INTRODUCTION OF MANAGEMENT					
1.	**23-06-15**	Management Introduction		1	DM1
2.	**24-06-15**	Definition, Nature		1	DM1
3.	**25-06-15**	Importance of management		1	DM1
4.	**26-06-15**	Functions		1	DM1
5.	**27-06-15**	Taylor's scientific management theory		1	DM1
6.	**30-06-15**	Fayal's principles of management		1	DM2
7.	**01-07-15**	Tutorials		1	DM1
8.	**02-07-15**	Contribution of Elton mayo		1	DM1
9.	**03-07-15**	MASLOW theory		1	DM1
10.	**04-07-15**	Herzberg, douglas, MC Gregor, basic concepts of Orgn.		1	DM1
11.	**07-07-15**	tutorials		1	DM2
12.	**08-07-15**	Basic concept of organization :Authority Responsibility		1	DM1
13.	**09-07-15**	Delegation of Authority and span of control		1	DM1
14.	**10-07-15**	Departmentation and Decentralization		1	DM1
15.	**14-07-15**	tutorials		1	DM2
16.	**15-07-15**	Orgn.structure Line and staff organization		1	DM1
17.	**16-07-15**	Line and staff organization		1	DM1
18.	**17-07-15**	Functional organization		1	DM1
19.	**21-07-15**	Committee Matrix organization		1	DM1
20.	**22-07-15**	Tutorials		1	DM2
UNIT II: Operations Management					
21.	**24-07-15**	Operations Management introduction		1	DM1
22.	**25-07-15**	Plant location Factors influencing location		1	DM1
23.	**28-07-15**	Principles and types of plant layouts		1	DM1
24.	**29-07-15**	Methods of production : job batch and mass production		1	DM1
25.	**30-07-15**	Work study		1	DM1
26.	**31-07-15**	Basic procedure involved in method study		1	DM1
27.	**01-08-15**	Work measurement		1	DM1
28.	**04-08-15**	tutorial		1	DM2
UNIT III:QUALITY AND MATERIAL MANAGEMENT					
29.	**06-08-15**	quality and materials management		1	DM1
30.	**07-08-15**	Statistical quality control Meaning		1	DM1
31.	**18-08-15**	Variables and attributes		1	DM1
32.	**19-08-15**	X chart R Chart		1	DM1
33.	**20-08-15**	problems		1	DM1
34.	**21-08-15**	C Chart PC hart		1	DM1

LESSON PLAN

Course Code& Course Name: T221-INDUSTRIAL MANAGEMENT **SEM:** V

Programme: B.Tech **Department: ME**

SEC-B

35.	**22-08-15**	problems		1	DM1
36.	**25-08-15**	Acceptance sampling Sampling plans		1	DM1
37.	**26-08-15** **27-08-15**	Deming's contribution to quality		1	DM1
38.	**28-08-15**	Materials management : objectives		1	DM1
39.	**29-08-15**	Need for inventory control		1	DM1
40.	**01-09-15**	Tutorials		1	DM2
41.	**02-09-15**	Purchase procedure		1	DM1
42.	**03-09-15**	Store records		1	DM1
43.	**04-09-15**	EOQ		1	DM1
44.	**05-09-15**	problems		1	DM1
45.	**08-09-15**	ABC analysis		1	DM1
46.	**09-09-15**	Stock levels		1	DM1
47.	**10-09-15**	Stock level problems		1	DM1
		UNIT IV: HUMAN RESOURCES MANAGEMNT			
48.	**15-09-15**	Concepts of HRM		1	DM1
49.	**16-09-15**	Concept of hrm		1	DM1
50.	**18-09-15**	Basic functions of HR manager		1	DM1
51.	**19-09-15**	Basic functions of HR manager		1	DM1
52.	**22-09-15**	Man power planning		1	DM1
53.	**23-09-15**	Selection		1	DM1
54.	**25-09-15**	Recruitment		1	DM1
55.	**26-09-15**	Training and development Placement		1	DM1
56.	**29-09-15**	Wage and salary administration		1	DM1
57.	**30-09-15**	Promotion		1	DM1
58.	**01-10-15**	Transfers Separation performance. Appraisal		1	DM1
59.	**03-10-15**	Job evaluation		1	DM1
60.	**06-10-15**	merit ranking Tutorials		1	DM1
61.	**07-10-15**	Tutorials		1	DM2
		UNIT V:PROJECT MANAGEMENT			
62.	**09-10-15**	Early techniques in project management		1	DM1
63.	**13-10-15**	Network analysis Programme evaluation and review technique (PERT)		1	DM1
64.	**14-10-15**	Critical path method		1	DM1
65.	**15-10-15**	Identifying critical path		1	DM1
66.	**16-10-15**	Problems		1	DM1
67.	**17-10-15**	Tutorial		1	DM2
68.	**23-06-15**	Probability of completing project within time		1	DM1
69.	**24-06-15**	problems		1	DM1
70.	**25-06-15**	problems		1	DM1
71.	**26-06-15**	Project crashing		1	DM1
72.	**27-06-15**	Problems		1	DM1
73.	**30-06-15**	Problems		1	DM1
74.	**01-07-15**	II MID EXAM		1	
			Total	74	

	LESSON PLAN
	Course Code& Course Name: T221-INDUSTRIAL MANAGEMENT **SEM:** V **Programme:** B.Tech **Department: ME** **SEC-B**

Total number of classes required to complete the syllabus	65
Total number of classes available as per Schedule	74

NOTE: DELIVERY METHODS (DM):

DM1: Lecture interspersed with discussions/BB,
DM2: Tutorial'
DM3: Lecture with a quiz,
DM4: Assignment/Test,
DM5: Demonstration (laboratory, fieldvisit),
DM6: Presentations/PPT

At the End of the course, students attained the **Course Outcomes: CO1, CO2, CO3, CO4, CO5** & sample proofs are enclosed in Course file.

CO1: Apply management principles to the particle situations to be in a position to know which type of business organization structure suits
CO2: Able to make decision making relating to the problems in operations and production activities there by improving the productivity by proper utilisation input factors by designing the better working methods and with better work study techniques.
CO3: Able to improve quality of working through SQC techniques and also in a position to reduce the investment in materials through better control of inventory
CO4: Able to manage people in working environment with the practices of HRM across corporate businesses
CO5:Able to use PERT & CPM techniques in effective project management to identify critical path and try to complete projects on time as well as reducing the project durations if need arises.

Signature			
	Name of the Faculty	**Name of Course Co-ordinator**	**HOD**
	U.RAMBABU	V.KISHORE REDDY	Dr.V.SREEHARI

LESSON PLAN

Course Name: T252 – MACHINE TOOLS **Programme: B.Tech (Section – B)**
SEM: V **Department: Mechanical Engineering**

S No.	Tentative Date	Topics to be covered	Actual Date	No. of classes	Content Delivery Methods
		UNIT-I:			
1	**22-06-15**	Introduction to Machine Tools		1	DM1/DM6
2	**24-06-15**	Introduction to Unit-I and II		1	DM1/DM6
3	**25-06-15**	Introduction to Unit-III and IV		1	DM1/DM6
4	**26-06-15**	Introduction to Unit-V		1	DM1/DM6
5	**27-06-15**	Metal cutting: introduction		1	DM2/DM3
6	**29-06-15**	Elements of cutting process		1	DM2/DM3
7	**01-07-15**	Methods of metal cutting		1	DM1/DM6
8	**02-07-15**	Clasification of cutting tools and Geometry of single point cutting tool		1	DM1/DM6 & DM3
9	**03-07-15**	**Tutorial-I**		1	DM2/DM4
10	**04-07-15**	chip formation and types of chips and chip breakers		1	DM1/DM3
11	**06-07-15**	Merchant circle Diagram		1	DM1/DM3
12	**08-07-15**	Measurment of forces and work done in metal cutting		1	DM1/DM6
13	**09-07-15**	Metal cutting Theories		1	DM1/DM6
14	**10-07-15**	**Tutorial-II**		1	DM2/DM4
15	**13-07-15**	Tool life and Tool failure		1	DM1/DM3
16	**15-07-15**	Cutting tool materials		1	DM1/DM3
17	**16-07-15**	Cutting fluids		1	DM1/DM6
18	**17-07-15**	**Tutorial-III**		1	DM2/DM4
		Unit-II			
19	**20-07-15**	Lathe: introduction and Working principle of lathe		1	DM1/DM6
20	**22-07-15**	Specification of Lathe and Types of Lathe		1	DM1/DM6
21	**23-07-15**	Work holding and tool holding Devices		1	DM1/DM6
22	**24-07-15**	lathe tools and Accessories box tools		1	DM1/DM3
23	**25-07-15**	**Tutorial-IV**		1	DM2/DM4
24	**27-07-15**	Principles of working		1	DM1/DM3
25	**29-07-15**	Principal parts		1	DM1/DM6

26	**30-07-15**	Specification classification		1	DM1/DM6
27	**31-07-15**	operations performed		1	DM1/DM6
28	**01-08-15**	machining time calculations		1	DM1/DM3
29	**03-08-15**	**Tutorial-V**		1	DM2/DM4
	Unit-III				
30	**05-08-15**	Drilling and Boring Machines		1	DM1/DM6
31	**06-08-15**	Principles of working		1	DM1/DM6
32	**07-08-15**	Shaping, Slotting and Planing Machines		1	DM1/DM6
33	**19-08-15**	**Tutorial-VI**		1	DM2/DM4
34	**20-08-15**	Specifications		1	DM1/DM3
35	**21-08-15**	types, operations performed		1	DM1/DM6
36	**22-08-15**	tool holding devices		1	DM1/DM3
37	**24-08-15**	twist drill			DM1/DM6
38	**26-08-15**	**Tutorial-VII**		1	DM2/DM4
39	**27-08-15**	Boring machines		1	DM1/DM6
40	**28-08-15**	Fine boring machines		1	DM1/DM3
41	**29-08-15**	Jig Boring. Deep hole drilling machine.		1	DM1/DM6
42	**31-08-15**	Principles of working		1	DM1/DM3
43	**02-09-15**	**Tutorial-VIII**		1	DM2/ DM4
	Unit-IV				
44	**03-09-15**	Specifications		1	DM1/DM6
45	**04-09-15**	Principal features of horizontal		1	DM1/DM3
46	**05-09-15**	vertical and universal milling machines		1	DM1/DM6
47	**07-09-15**	Machining operations		1	DM1/DM6
48	**09-09-15**	Geometry of milling cutters		1	DM1/DM3
49	**10-09-15**	**Tutorial-IX**		1	DM2/DM4
50	**11-09-15**	Milling cutters		1	DM1/DM6
51	**14-09-15**	Methods of indexing		1	DM1/DM3

52	**16-09-15**	Accessories to milling machines		1	DM1/DM6
53	**18-09-15**	Grinding Machines		1	DM1/DM3
54	**19-09-15**	Fundamentals		1	DM1/DM6
55	**21-09-15**	Theory of grinding		1	DM1/DM6
56	**23-09-15**	Classification of grinding machine		1	DM1/DM6
57	**25-09-15**	Cylindrical and surface grinding machine		1	DM1/DM6
58	**26-09-15**	Tool and cutter grinding machine		1	DM1/DM6
59	**28-09-15**	special types of grinding machines.		1	DM1/DM6
60	**30-09-15**	**Tutorial-X**		1	DM2/ DM4
61	**01-10-15**	Different types of abrasives		1	DM1/DM6
62	**03-10-15**	bonds specification of grinding wheel		1	DM1/DM3
63	**05-10-15**	selection of grinding wheel		1	DM1/DM6
	Unit-V				
64	**07-10-15**	Lapping, Honing		1	DM1/DM3
65	**08-10-15**	Broaching Machines, **Tutorial-XI**		1	DM1/DM6
66	**09-10-15**	Comparison to grinding		1	DM1/DM6
67	**12-10-15**	lapping and honing.		1	DM2/DM4
68	**14-10-15**	Constructional features of speed and feed units		1	DM1/DM3
69	**15-10-15**	machining time calculations		1	DM1/DM6
70	**16-10-15**	Principles of Design of Jigs and Fixtures:		1	DM1/DM6
71	**17-10-15**	**Tutorial-XII**		1	DM2/DM3
		End Examinations			
Total				71	
Total number of classes required to complete the syllabus				**71**	
Total number of classes available as per Schedule				**71**	

NOTE: DELIVERY METHODS (DM):
DM1: Lecture interspersed with discussions/BB
DM2: Tutorial
DM3: Lecture with a Quiz
DM4: Assignment/Test
DM5: Demonstration (laboratory, field visit)
DM6: Presentations/PPT

At the End of the course, students attained the **Course Outcomes: CO1, CO2, CO3, CO4, CO5** & sample proofs are enclosed in Course file.

CO1: Apply the knowledge of metal cutting theory and analyze the cutting forces acting on the machine tool.

CO2: Describe the lathe, its operations, work and tool holding devices.

CO3: Understand and explain the shaping, slotting, planning, drilling and boring machines.

CO4: Describe and discriminate the milling and grinding processes and machines.

CO5: Understand the concept of honing, lapping and broaching machines. Apply the basic principles in designing jigs and fixtures.

TEXT BOOK

Production Technology by R.K. Jain and S.C. Gupta.

REFERENCES

1. Workshop Technology – B.S.Raghu Vamshi – Vol II
2. Production Technology by H.M.T. (Hindustan Machine Tools).

Signature			
	Name of the Faculty	**Name of Course Co-ordinator**	**HOD**
	Dr.S.Pichi Reddy	**Dr.S.Pichi Reddy**	**Dr.K.Appa Rao**

LESSON PLAN

Course Name: T239 – Machine Design-I **Programme:** B.Tech (Section – B)
SEM: V **Department:** Mechanical Engineering

S No.	Tentative Date	Topics to be covered	Actual Date	No. of classes	Content Delivery Methods
1	**22-06-15**	**Introduction to Machine Design**		1	DM1/DM6
2	**24-06-15**	**Basic procedure of machine design**		1	DM1/DM6
3	**25-06-15**	**Basic requirements of machine design**		1	DM1/DM6
4	**26-06-15**	**Design of machine elements, Design analysis and synthesis**		1	DM1/DM6 & DM 5
5	**27-06-15**	**Interchangeability**		1	DM1/DM6
6	**29-06-15**	**Limits & Fits**		1	DM1/DM6
7	**01-07-15**	**Introduction to Indian standards, Selection of Preferred sizes**		1	DM2 / DM 3
8	**02-07-15**	**Problems**		1	DM1/DM6 & DM 5
9	**03-07-15**	**Tutorial**		1	DM1/DM6
10	**04-07-15**	**Modes of failure, Factor of safety, Stresses, stresses due to BM**			
11	**06-07-15**	**Stresses due to TM, Eccentric axial moment**		1	DM1/DM6 & DM 5
12	**08-07-15**	**Problems**		1	DM1/DM6 & DM 5
13	**09-07-15**	**Theories of elastic failure, Maximum principal stress theory**		1	DM2 / DM 3
14	**10-07-15**	**Maximum shear stress theory, Distortion energy theory**		1	DM1/DM6 & DM 5
15	**13-07-15**	**Problems**		1	DM1/DM6 & DM 5
16	**15-07-15**	**Tutorial**		1	DM1/DM6
17	**16-07-15**	**Stress concentration, Stress concentration factors**		1	DM1/DM6
18	**17-07-15**	**Reduction of stress concentration , Notch sensitivity**		1	DM1/DM6
19	**20-07-15**	**Fluctuating stresses, Fatigue failure**		1	DM2 / DM 3
20	**22-07-15**	**Endurance limit, Rotating beam machine, S-N curve**		1	DM1/DM6
21	**23-07-15**	**Approximate estimation, Reversed stresses**		1	DM1/DM6
22	**24-07-15**	**Tutorial**			
23	**25-07-15**	**Gerber equation, Goodman and Soderberg lines**		1	DM1/DM6
24	**27-07-15**	**Design for finite life and infinite life**		1	DM1/DM6
25	**29-07-15**	**Problems**		1	DM2 / DM 3
26	**30-07-15**	**Problems**		1	DM1/DM6
27	**31-07-15**	**Impact stresses**		1	DM1/DM6
28	**01-08-15**	**Tutorial**		1	DM1/DM6
29	**03-08-15**	**Threaded joints, Terminology of screw threads**		1	DM1/DM6
30	**05-08-15**	**Materials and manufacture, Bolted joints**			
31	**06-08-15**	**Simple analysis, Eccentrically loaded bolted joints in shear**		1	DM2 / DM 3
32	**07-08-15**	**Tutorial**		1	DM1/DM6
33	**18-08-15**	**Bolts of uniform strength**		1	DM1/DM6

34	19-08-15	Welded joints, Butt joints, Fillet joints		1	DM1/DM6
35	20-08-15	Strength of butt joints, Strength of parallel and transverse fillet welds			
36	21-08-15	Max. shear stress in parallel and transverse fillet welds		1	DM1/DM6
37	22-08-15	Axially loaded un symmetrically welded joints		1	DM2 / DM 3
38	24-08-15	Welded joint subjected to BM		1	DM1/DM6
39	26-08-15 27-08-15	problems		1	DM2 / DM 3
40	28-08-15	Tutorial		1	DM1/DM6
41	29-08-15	Power screw screws, forms of thread, multiple threaded screws, terminology		1	DM1/DM6
42	01-09-15	Torque requirement for lifting and lowering loads, self locking screw			
43	02-09-15	Efficiency of square threaded screw		1	DM1/DM6
44	03-09-15	Efficiency of self locking screw, design of screw and nut, design of screw jack& problems		1	DM1/DM6
45	04-09-15	Tutorial		1	DM1/DM6
46	05-09-15	Types of keys, design of square and flat keys		1	DM1/DM6
47	07-09-15	Problems		1	DM1/DM6
48	09-09-15	Cotter joints, Socket and spigot cotter joint,		1	DM1/DM6
49	10-09-15	Failures and problems		1	DM2 / DM 3
50	11-09-15	Knuckle joint, failures and problems		1	DM1/DM6
51	14-09-15	Tutorial		1	DM1/DM6
52	16-09-15	Shafts, Transmission shafts, shaft design on strength basis		1	DM1/DM6
53	18-09-15	Shaft design on torsional rigidity basis		1	DM1/DM6
54	19-09-15	ASME code for shaft design		1	DM1/DM6
55	21-09-15	Design of shafts and problems		1	DM2 / DM 3
56	23-09-15	Design of shafts and problems		1	DM1/DM6
57	25-09-15	Design of hollow shafts on strength and rigidity basis and problems		1	DM1/DM6
58	26-09-15	Tutorial		1	DM1/DM6
59	28-09-15	Shaft couplings, requirements, Rigid couplings		1	DM1/DM6
60	30-09-15	Muff coupling design and problems		1	DM1/DM6
61	01-10-15	Clamp coupling design and problems		1	DM2 / DM 3
62	03-10-15	Flange coupling design and problems		1	DM1/DM6
63	05-10-15	Bushed pin flexible coupling design		1	DM1/DM6
64	07-10-15	Problems		1	DM2 / DM 3
65	08-10-15	Problems		1	DM1/DM6
66	09-10-15	Tutorial		1	DM1/DM6
67	12-10-15	Beyond syllabus		1	DM2 / DM 3
68	14-10-15	Beyond syllabus		1	DM1/DM6
69	15-10-15	Beyond syllabus		1	DM1/DM6

70	**16-10-15**	**Beyond syllabus**		1	DM1/DM6
71	**17-10-15**	**Beyond syllabus**		1	DM1/DM6
Total				**71**	
Total number of classes required to complete the syllabus				**66**	
Total number of classes available as per Schedule				**71**	

NOTE: DELIVERY METHODS (DM):
DM1: Lecture interspersed with discussions/BB
DM2: Tutorial
DM3: Lecture with a Quiz
DM4: Assignment/Test
DM5: Demonstration (laboratory, field visit)
DM6: Presentations/PPT

At the End of the course, students attained the **Course Outcomes: CO1, CO2, CO3, CO4, CO5** & sample proofs are enclosed in Course file.

CO1: Formulate and analyze stresses and strains in machine elements and structures subjected to different loads.
CO2: Evaluate the stress distribution and analyze the failure criterion of mechanical parts under static and fatigue loads
CO3:Design temporary and permanent joints.
CO4: Analyze and design power transmission shafts supporting various elements in industry
CO5: Design shaft couplings for various engineering applications

	Instructor	**Course Co-ordinator**	**Module Co- ordinator**	**HOD**
Signature				

LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING

(Autonomous)

L.B.Reddy Nagar, Mylavaram – 521 230.Andhra Pradesh, INDIA
Affiliated to JNTUK, Kakinada & Approved by AICTE New Delhi
Accredited by NBA, New Delhi & certified by ISO 9001:2015
DEPARTMENT OF **MECHANICAL** ENGINEERING

DATE	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12
20-06-16	SM Demo	SM Demo	SM Demo	SM Demo	SM Demo	SM Demo	M Demo	M Demo	M Demo	M Demo	M Demo	M Demo
27-06-16	M Demo	M Demo	M Demo	M Demo	M Demo	M Demo	SM Demo	SM Demo	SM Demo	SM Demo	SM Demo	SM Demo
04-07-16	MT1	MT1	MT2	MT2	MT3	MT3	M1	M2	M3	M4	M5	M6
11-07-16	M1	M2	M3	M4	M5	M6	MT1	MT1	MT2	MT2	MT3	MT3
18-07-16	MT2	MT2	MT3	MT3	MT1	MT1	M2	M3	M4	M5	M6	M1
25-07-16	M2	M3	M4	M5	M6	M1	MT2	MT2	MT3	MT3	MT1	MT1
01-08-16	MT3	MT3	MT1	MT1	MT2	MT2	M3	M4	M5	M6	M1	M2
22-08-16	M3	M4	M5	M6	M1	M2	MT3	MT3	MT1	MT1	MT2	MT2
29-08-16	MT4	MT4	MT5	MT5	MT6	MT6	M4	M5	M6	M1	M2	M3
05-09-16	M4	M5	M6	M1	M2	M3	MT4	MT4	MT5	MT5	MT6	MT6
12-09-16	MT5	MT5	MT6	MT6	MT4	MT4	M5	M6	M1	M2	M3	M4
19-09-16	M5	M6	M1	M2	M3	M4	MT5	MT5	MT6	MT6	MT4	MT4
26-09-16	MT6	MT6	MT4	MT4	MT5	MT5	M6	M1	M2	M3	M4	M5
03-10-16	M6	M1	M2	M3	M4	M5	MT6	MT6	MT4	MT4	MT5	MT5
17-10-16	Repetation	Repetation	Repetation	Repetation	Repetation	Repetation	Repetation	Repetation	Repeta...	Repeta...	Repeta...	Repeta...
24-10-16	Repetation	Repetation	Repetation	Repetation	Repetation	Repetation	Repetation	Repetation	Repeta...	Repeta...	Repeta...	Repeta...
31-10-16	I.Exam	I.Exam	I.Exam	I.Exam	I.Exam	I.Exam	I.Exam	I.Exam	I.Exam	I.Exam	I.Exam	I.Exam

Faculty In-Charge **HOD**

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DEPARTMENT OF **MECHANICAL** ENGINEERING

DATE	A13	A14	A15	A16	A17	A18	A19	A20	A21	A22	A23	A24
23-06-16	SM Demo	SM Demo	SM Demo	SM Demo	SM Demo	SM Demo	M Demo	M Demo	M Demo	M Demo	M Demo	M Demo
30-06-16	M Demo	M Demo	M Demo	M Demo	M Demo	M Demo	SM Demo	SM Demo	SM Demo	SM Demo	SM Demo	SM Demo
07-07-16	MT1	MT1	MT2	MT2	MT3	MT3	M1	M2	M3	M4	M5	M6
14-07-16	M1	M2	M3	M4	M5	M6	MT1	MT1	MT2	MT2	MT3	MT3
21-07-16	MT2	MT2	MT3	MT3	MT1	MT1	M2	M3	M4	M5	M6	M1
28-07-16	M2	M3	M4	M5	M6	M1	MT2	MT2	MT3	MT3	MT1	MT1
04-08-16	MT3	MT3	MT1	MT1	MT2	MT2	M3	M4	M5	M6	M1	M2
18-08-16	M3	M4	M5	M6	M1	M2	MT3	MT3	MT1	MT1	MT2	MT2
25-08-16	MT4	MT4	MT5	MT5	MT6	MT6	M4	M5	M6	M1	M2	M3
01-09-16	M4	M5	M6	M1	M2	M3	MT4	MT4	MT5	MT5	MT6	MT6
08-09-16	MT5	MT5	MT6	MT6	MT4	MT4	M5	M6	M1	M2	M3	M4
15-09-16	M5	M6	M1	M2	M3	M4	MT5	MT5	MT6	MT6	MT4	MT4
22-09-16	MT6	MT6	MT4	MT4	MT5	MT5	M6	M1	M2	M3	M4	M5
29-09-16	M6	M1	M2	M3	M4	M5	MT6	MT6	MT4	MT4	MT5	MT5
06-10-16	Repetation	Repetation	Repetation	Repetation	Repetation	Repetation	Repetation	Repetation	Repeta...	Repeta...	Repeta...	Repeta...
20-10-16	Repetation	Repetation	Repetation	Repetation	Repetation	Repetation	Repetation	Repetation	Repeta...	Repeta...	Repeta...	Repeta...
27-10-16	I.Exam	I.Exam	I.Exam	I.Exam	I.Exam	I.Exam	I.Exam	I.Exam	I.Exam	I.Exam	I.Exam	I.Exam

Faculty In-Charge **HOD**

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LAB BATCH DETAILS

Batch	Register No.s	Batch	Register No.s	Batch	Register No.s	Batch	Register No.s
A1	15761A0301-303	**A7**	15761A0319-321	**A13**	15761A0336-338	**A19**	15761A0354-356
A2	15761A0304-306	**A8**	15761A0322-324	**A14**	15761A0339-341	**A20**	15761A0357-358,16765A0301
A3	15761A0307-309	**A9**	15761A0325-327	**A15**	15761A0342-344	**A21**	16765A0302-304
A4	15761A0310-312	**A10**	15761A0328-330	**A16**	15761A0345-347	**A22**	16765A0305-307
A5	15761A0313-315	**A11**	15761A0331-333	**A17**	15761A0348-350	**A23**	15765A0308-310
A6	15761A0316-318	**A12**	15761A0334-335	**A18**	15761A0351-353	**A24**	16765A0311-312

Faculty In-Charge **HOD**