

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
DEPT.OF MECHANICAL ENGINEERING
LESSION PLAN

Subject Name & code: **METROLOGY**

Year: **III B. Tech.**

Branch / Semester: **ME-A_II-Semester**

A.Y: **2016 – 17**

Faculty Name: **Dr. C. J. RAO**

S. No	Period	Date	Topic	Unit No	Teaching Methodology	Remark
1	3	5-Dec-16	Introduction, Normal size, Tolerance limits	I	CR	
2	4	5-Dec-16	Deviations, Allowance,	I	CR	
3	2	7-Dec-16	Fits and their types, Unilateral and bilateral tolerance system	I	CR	
4	6	9-Dec-16	Hole and shaft basis systems	I	CR	
5	2	14-Dec-16	Interchangeability and selective assembly	I	CR	
6	6	16-Dec-16	Indian Standard Institution System, British Standard System	I	CR	
7	3	19-Dec-16	International Standard System for plain and screwed work.	I	CR	
8	4	19-Dec-16	General concept of measurement	II	CR	
9	2	21-Dec-16	Generalized measurement system, Units and standards	II	CR	
10	6	23-Dec-16	Measuring instruments	II	CR	
11	3	26-Dec-16	Linear Measuring Instruments	II	LCD	
12	4	26-Dec-16	Vernier, Micrometer – Interval measurement	II	LCD	
13	2	28-Dec-16	Slip gauges and classification	II	CR	
14	6	30-Dec-16	Interferometry	II	CR	
15	3	2-Jan-17	Optical flats	II	CR	
16	4	2-Jan-17	Comparators: Mechanical type, Applications	II	CR	
17	2	4-Jan-17	Comparators: Pneumatic and Electrical type, Applications	II	CR	
18	6	6-Jan-17	Angular Measuring Instruments	II	CR	
19	3	9-Jan-17	Sine bar, Optical bevel protractor	II	CR	
20	4	9-Jan-17	Angle decker – Taper measurements	II	CR	
21	2	11-Jan-17	LIMIT GAUGES: Taylor's principle	II	LCD	
22	2	18-Jan-17	Design of go and no-go gauges	II	CR	
23	3	23-Jan-17	plug ring, snap, gap	II	CR	
24	4	23-Jan-17	taper, profile and position gauges	II	CR	
25	2	25-Jan-17	OPTICAL MEASURING INSTRUMENTS: Toolmaker's microscope and its uses	III	LCD	
26	6	27-Jan-17	Collimators, Optical projector	III	CR	
27	3	30-Jan-17	Optical flats and their uses	III	CR	
28	4	30-Jan-17	interferometer	III	CR	
29	2	1-Feb-17	Measurement of flat surfaces	III	CR	

30	6	3-Feb-17	Instruments used, Straight edges	III	CR	
31	3	6-Feb-17	Surface plates	III	CR	
32	4	6-Feb-17	Optical flat and Auto collimator	III	CR	
33	2	8-Feb-17	SURFACE ROUGHNESS MEASUREMENT: Differences between surface roughness and surface waviness	IV	CR	
34	6	10-Feb-17	Numerical assessment of surface finish – CLA	IV	CR	
35	3	13-Feb-17	R, R.M.S Values	IV	CR	
36	4	13-Feb-17	Rz values	IV	LCD	
37	2	15-Feb-17	Methods of measurement of surface finish – Profilograph	IV	CR	
38	6	17-Feb-17	Talysurf	IV	CR	
39	3	20-Feb-17	ISI symbols for indication of surface finish	IV	CR	
40	4	20-Feb-17	MEASUREMENT THROUGH COMPARATORS: Mechanical comparators and their uses in mass production	IV	CR	
41	2	22-Feb-17	Electrical and Electronic comparators and their uses in mass production	IV	CR	
42	3	27-Feb-17	Pneumatic – Pneumatic comparators and their uses in mass production	IV	CR	
43	4	27-Feb-17	SCREW THREAD MEASUREMENT: Elements of measurement	V	LCD	
44	3	6-Mar-17	Errors in screw threads	V	LCD	
45	4	6-Mar-17	Measurement of effective diameter	V	CR	
46	2	8-Mar-17	Angle of thread and thread pitch, Profile thread gauges	V	CR	
47	6	10-Mar-17	MACHINE TOOL ALIGNMENT TESTS: Requirements of machine tool alignment tests	V	LCD	
48	2	15-Mar-17	Alignment tests on lathe, milling, drilling machine tools	V	CR	
49	6	17-Mar-17	Alignment tests on lathe, milling, drilling machine tools	V	CR	
50	3	20-Mar-17	Gear measuring instruments, Gear tooth profile measurement	V	CR	
51	4	20-Mar-17	Measurement of diameter, Pitch	V	CR	
52	2	22-Mar-17	Measurement of Pressure angle and tooth thickness.	V	LCD	
53	6	24-Mar-17	COORDINATE MEASURING MACHINES: Types of CMM	V	LCD	
54	3	27-Mar-17	Role of CMM, Applications of CMM.	V	LCD	