

Lesson Planning for the Semester started w.e.f 8th Jan 2018

Name of the Institute : KIIT College of Engineering, Gurugram
 Name of the teacher with designation : Dr.Nidhi Rana, Assistant Professor,
 Department : ME
 Subject : Measurement & Instrumentation
 Branch/Semester : Mechanical Engg. SEM-VI

Month	Class/ Lectures	Chapter Covered	Topic	Academic Activity	Test/ Assignment
January	2	Section-A Instruments and Their Representation	Introduction to Instruments and Their Representation	• Workshop • Quiz	01 Test 01 Assignment
	2		Functional Elements of a Measurement System, Classification, Standards and Calibration		
	1		Concept of Accuracy, Precision, Resolution, Threshold, Sensitivity, Linearity, Hysteresis, Dead Band, Backlash		
	3		Formulation of Differential Equations for Dynamic Performance-		
	2		Response of First and Second Order Systems to Step, Ramp, Impulse and Harmonic Functions.		
February	1	Section-B Transducer Elements	Transducers: Introduction analog and digital	• Guest Lecture • Educational Visit	01 test 01 Assignment
	3		Different types of transducers and their working		
	2		Strain gage bridge circuits		
	2		Temperature Compensation, Balancing and Calibration, Ionization Transducers, Mechano Electronic Transducers,		
	1		Opto-Electrical Transducers, Photo Conductive Transducers, Photo Volatic Transducers, Digital Transducers, Frequency Domain Transducer, Vibrating String Transducer		
	1		Binary codes, Digital Encoders.		
March	2	Section-C Motion, Force and Torque Measurement	Various types of Relative motion Measuring Devices,	Seminar Industrial Trip	01 test 01 Assignment
	2		Hydraulic Load Cell, Pneumatic Load Cell, Elastic Force Devices, Separation of Force Components, Electro Mechanical Methods,		
	1		Strain Gage, Torque Transducer, Toque Meter.		
	1		Introduction to Intermediate, Indicating and Recording Elements		
	3		Introduction Amplifiers, Mechanical, Hydraulic, Pneumatic, Optical, Electrical Amplifying elements		
			Compensators, Differentiating and Integrating Elements		
	2				
April	3	Section-D: Pressure and Flow Measurement Temperature Measurement	Moderate Pressure Measurement Monometers, Elastic Transducer, Dynamic Effects of Connecting Tubing, High Pressure Transducer,	• Quiz Expert Lecture	01 test 01 Assignment
	3		Low Pressure Measurement, Calibration and Testing, Quantity Meters, Positive Displacement Meters, Flow Rate Meters, Variable Head Meters, Variable Area Meters, Rotameters, Pitot-Static Tube Meter, Drag Force Flow Meter,		
	2		Temperature measurements: Electric methods e.g. Electrical Resistance Thermometers, Semiconductor Resistance Sensors (Thermistors), Thermo-Electric Sensors,		
	2		Non Electrical Methods – Solid Rod Thermometer, Bimetallic Thermometer, Liquid-in-Glass thermometer, Pressure Thermometer		

Nidhi Rana
 Dr.Nidhi Rana, 13.12.2017

(Signature of the teacher concerned with date)