COURSE PLAN

Lecture No.	Topics to be covered	Remarks
1	General concepts of Instrument, Measurement and Control	COMPLETED
2	Block diagram of instrumentation system – Role of each block in the measurement system	COMPLETED
3	Sensor, Transducer and Transmitter – Terminologies and explanation.	COMPLETED
4	Generalized Flow in a measurement system	COMPLETED
5	Control System Block diagram and explanation	COMPLETED
6	Different examples of control system	COMPLETED
7	Configuration of different Control system concepts	COMPLETED
8	Static Characteristics of Measuring Instruments: Accuracy, Error, Range and Span calculations	COMPLETED
9	Case studies: Introduction to instrumentation and control pressure control requirement	
10	Power Plant Instrumentation and Control	
11	Ultrasonic level sensor applications in Automobiles	
12	Pressure Measurement Case Studies	
13	Flow and Level Control in an irrigation system	
14	Virtual Instrumentation	
15	Introduction to codes and standards for Instrumentation and Control in Industries	
16	Application of Codes and Standards to an industry	
17	Project Design Requirements: **INITIALISATION PHASE:** User Requirements and Scope of Work, Design Scope, Estimates and Budgets	
18	Project Design Requirements: **FEASIBILITY PHASE:** Project Reports, Design Estimate/Proposal/Tender Design Feasibility Design Review	
19	Project Design Requirements: **DETAIL ENGINEERING PHASE:** Design Simulation, Equipment Types and Definition, Specifications, Enquiries, Adjudication, Contracts, Shop Floor Testing.	
20	Project Design Requirements: **CONSTRUCTION AND PROJECT CLOSURE PHASE:** Site Installation Commissioning As-Built Documentation Contracts Finalization Updating Departmental Database Internal Project Review Close Out Reports	
21	Technical Man power Pyramid and Place of Instrumentation and Control Engineers in Engineering Domain – Innovative Areas	
22	Relevance of ICE and Opportunities for training, placement and for higher studies	