

ADITYA ENGINEERING COLLEGE

Aditya Nagar, ADB Road - Surampalem

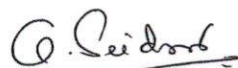
LESSON PLAN

Academic Year : 2017-18
 Year : 2017-18
 Branch : ECE
 Subject : CONTROL SYSTEMS

Date	Topic to be covered	Mode of Teaching	No. of Periods
I WEEK 12-06-2017 to 17-06-2017	UNIT-1: Concepts of Control Systems	PPT	1
	Open Loop and closed loop control systems and their differences	PPT	1
	Different examples of control systems	PPT	1
	Classification of control systems	PPT	1
II WEEK 19-06-2017 to 24-06-2017	Feed-Back Characteristics	Video Demonstration	1
	Effects of feedback	PPT	2
	Mathematical models– Differential equations	Brain Storming	1
III WEEK 26-06-2017 to 01-07-2017	26-06-2017- Ramzan(ID-UL-FITR)		
	Impulse Response and transfer functions	Inquiry-Based Learning	1
	Translational and Rotational mechanical systems	Chalk and talk	1
	Impulse Response and transfer functions	Flipped Classroom	1
IV WEEK 03-07-2017 to 08-07-2017	Translational and Rotational mechanical systems	Chalk and talk	1
	UNIT-2: Transfer Function of DC Servo motor Transfer Function of AC	Chalk and talk	1
	Servo motor	PPT	2
	Synchro transmitter and Receiver	Chalk and talk	1
V WEEK 10-07-2017 to 15-07-2017	Block diagram representation of systems considering electrical systems as examples	Chalk and talk	2
	Problems on Block diagram reduction	Assignment	2
VI WEEK 17-07-2017 to 22-07-2017	Block diagram reduction problems	Tutorial	2
	Block diagram algebra– Representation by Signal flow graph	PPT	2
VII WEEK 24-07-2017 to 29-07-2017	Signal flow graph - Reduction using Mason's gain formula	Chalk and talk	2
	UNIT 3: Standard test signals	Chalk and talk	2
VIII WEEK 31-07-2017 to 05-08-2017	Time response of first order systems	Simulation-based learning	2
	Characteristic Equation of Feedback control systems	Chalk and talk	2
IX WEEK 07-08-2017 to 12-08-2017	I Mid Exams		
X WEEK 14-08-2017 to 19-08-2017	14-08-2017 - Sri Krishna Astami		
	15-08-2017- Independence Day		
	Transient response of second order systems	Chalk and talk	1
	Time domain specifications	Chalk and talk	1

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25-08-2017 - Vinayaka Chavithi			
XI WEEK 21-08-2017 to 26-08-2017	Steady state response - Steady state errors	Chalk and talk	1
	Error constants	Chalk and talk	1
	Effects of proportional derivative,	Chalk and talk	1
	Proportional integral systems	Chalk and talk	1
02-09-2017 - Bakrid(ID-UL-AZHA)			
XII WEEK 28-08-2017 to 02-09-2017	UNIT-4: The concept of stability	Chalk and talk	1
	Routh's stability criterion	Chalk and talk	1
	Qualitative stability and conditional stability	Assignment	1
	Limitations of Routh's stability	Chalk and talk	1
XIII WEEK 04-09-2017 to 09-09-2017	Root Locus Technique: The root locus concept	Chalk and talk	1
	Construction of root loci	Chalk and talk	1
	Effects of adding poles and zeros to $G(s)H(s)$ on the root-loci	Chalk and talk	1
	Problems	Tutorial	1
XIV WEEK 11-09-2017 to 16-09-2017	UNIT-5: Introduction to Frequency domain specifications	Chalk and talk	1
	Frequency domain specifications and transfer function	Chalk and talk	1
	Phase margin and Gain margin-Stability Analysis	Chalk and talk	1
	Polar Plots, Nyquist Plots Stability Analysis	Chalk and talk	1
XV WEEK 18-09-2017 to 23-09-2017	UNIT-6: Compensation techniques- Lag, Lead,	Chalk and talk	1
	Lead-Lag Controllers design in frequency Domain	Chalk and talk	1
	PID Controllers	PPT	1
	State Space Analysis of Continuous Systems Concepts of state,	Chalk and talk	1
XVI WEEK 25-09-2017 to 30-09-2017	Dasara Holidays		
02-10-2017 - Mahatma Gandhi Jayanthi			
XVII WEEK 02-10-2017 to 07-10-2017	State variables and state model	Chalk and talk	1
	Diagonalization Solving the Time invariant state Equations-	Chalk and talk	1
	State Transition Matrix and it's Properties	Chalk and talk	1
	Concepts of Controllability and Observability	PPT	1
XVIII WEEK 09-10-2017 to 14-10-2017	II Mid Exams		
Total number of classes			58


Course Coordinator


Head of the Department
Head of the Department
Department of E.C.E.
Aditya Engineering College (A9)


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