ADITYA ENGINEERING COLLEGE (A)

Aditya Nagar, ADB Road - Surampalem

LESSON PLAN

Academic Year 2018-19

Year & Sem. : II B.Tech.- II Sem.

Branch : EEE

Subject : CONTROL SYSTEMS

Date	Topic to be covered	Mode of Teaching	No. of Periods
I WEEK 19-11-2018 to 24-11-2018	**21-11-2018 - Eid Miladun Nabi**		
	UNIT-1:Concepts of Control Systems	Video Demonistration	1
	Open Loop and closed loop control systems and their differences	PPT	2
	Different examples of control systems	PPT	1
II WEEK 26-11-2018 to 01-11-2018	Classification of control systems	PPT	1
	Feed-Back Characteristics	PPT	2
	Effects of feedback	Flipped Classroom	1
III WEEK 03-12-2018 to 08-12-2018	Mathematical models– Differential equations	PPT	2
	Impulse Response and transfer functions	PPT	1
	Translational and Rotational mechanical systems	Chalk and talk	1
IV WEEK 10-12-2018 to 15-12-2018	Impulse Response and transfer functions	PPT	1
	Translational and Rotational mechanical systems	Chalk and talk	1
	UNIT-2:Transfer Function of DC Servo motor Transfer Function of AC	Chalk and talk	2
V WEEK 17-12-2018 to 22-12-2018	Servo motor	Inquiry-Based Learning	1
	Synchro transmitter and Receiver	Chalk and talk	2
	Block diagram representation of systems considering electrical systems as examples	Chalk and talk	1
VI WEEK 24-12-2018 to 29-12-2018	**25-12-2018 - Christmas**		
	Block diagram algebra– Representation by Signal flow graph	PPT	1
	Signal flow graph - Reduction using masons gain formula	PPT	2
	Problems	Assignment	1
VII WEEK 31-12-2018 to 05-01-2019	**01-01-2019 - New Year**		
	UNIT 3: Standard test signals	Seminar	2
	Time response of first order systems	Chalk and talk	1
	Characteristic Equation of Feedback control systems	PPT	1
VIII WEEK 07-01-2019 to 12-01-2019	Transient response of second order systems	PPT	2
	Time domain specifications	PPT	1
	Problems	Assignment	1
IX WEEK 14-01-2019 to 19-01-2019	**14-01-2019 to 16-01-2019 - Pongal Holidays**		
	17-01-2019 to 23-01-2019 - I Mid Exams		
X WEEK 21-01-2019 to 26-01-2019	**26-01-2019- Republic Day**		
	Steady state response - Steady state errors	PPT	3

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Date	Topic to be covered	Mode of Teaching	No. of Periods
XI WEEK 28-01-2019 to 02-02-2019	Error constants	PPT	1
	Effects of proportional derivative,	Seminar	1
	Proportional integral systems	PPT	1
	UNIT-4: The concept of stability	PPT	1
XII WEEK 04-02-2019 to 09-02-2019	Routh's stability criterion	PPT	1
	Qualitative stability andconditional stability	Flipped Classroom	2
	Limitations of Routh's stability	PPT	1
XIII WEEK 11-02-2019 to 16-02-2019	Root Locus Technique: The root locus concept	PPT	1
	Construction of root loci	PPT	1
	Effects of adding poles and zeros to G(s)H(s) on the root loci	Practical Demonstration	1
	Problems	Assignment	1
XIV WEEK 18-02-2019 to 23-02-2019	UNIT-5: Introduction to Frequency domain specifications	PPT	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 25-02-2019 to 02-03-2019	UNIT-6: Compensation techniques– Lag, Lead,	Chalk and talk	1
	Lead-Lag Controllers design in frequency Domain	PPT	1
	PID Controllers	PPT	1
	State Space Analysis of Continuous Systems Concepts of state,	PPT	1
XVI WEEK 04-03-2019 to 09-03-2019	**04-03-2019 - Maha Sivarathri**		
	State variables and state model	PPT	1
	Diagonalization Solving the Time invariant state Equations-	PPT	1
	State Transition Matrix and it's Properties	PPT	1
XVII WEEK 11-03-2019 to 16-03-2019	Problems	PPT	1
	Problems	Chalk and talk	1
	Concepts of Controllability and Observability	Chalk and talk	1
	Problems	Chalk and talk	1
XVIII WEEK 18-03-2019 to 23-03-2019	**21-03-2019 - Holi**		
	Problems	Assignment	1
	Revision	PPT	2
	Revision	PPT	1
XIX WEEK 25-03-2019 to 30-03-2019	**II Mid Exams**		
		Total number of classes	54

Course Coordinator

Head of the Department

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