DRONACHARYA
College of Engineering

KHENTAWAS, FARRUKHNAGAR, GURGAON, HR

Department: ELECTRICAL & ELECTRONICS ENGINEERING

Academic Session: 2017-18 (Jan-June 2018)

Lesson Plan for the Semester started w.e.f 08.01.2018

Subject with code: Control System Engineering(304-F) **Semester VI**

Name of Faculty with designation : Mrs. Dimple Saproo(Associate Professor)

Month	Date & Day	Sem-Class	Unit	Topic/Chapter covered	Academic activity	Test / assignment
January	**08.01.2018 Monday**	**VI EEE**	A	System/Plant model, types of models, illustrative examples of plants and their inputs and outputs, controller, , regulating system, linear time-invariant (LTI) system, time-varying system, causal system, open loop control system, closed loop control system, illustra- tive examples of open-loop and feedback control systems, continuous time and sampled data control systems	.....	
January	**10.01.2018 Wednesday**	**VI EEE**	A	Servomechanism,Field Control &Armature Control		
January	**12.01.2018 Friday**	**VI EEE**	B	Block diagram algebra		**Assignment 1 given**
January	**15.01.2018 Monday**	**VI EEE**	B	Block diagram algebra, Numerical		
January	**17.01.2018 Wednesday**	**VI EEE**	B	Mason's gain formula & its application,		
January	**19.01.2018 Friday**	**VI EEE**	B	Mason's gain formula,Numericals		**Assignment 2 given**
January	**24.01.2018 (Wednesday)**	**VI EEE**		Test / Discussion on Question of Assignment1 &2		**Test**
January	**29.01.2018 Monday**	**VI EEE**	B	Characteristic equation, Derivation of transfer functions of electrical and electrome-chanical systems		
February	**02.02.2018 Friday**	**VI EEE**	B	Transfer functions of cascaded and non-loading cascaded elements.Introduction to state variable analysis and design		**Assignment 3 given**

Month	Date & Day	Sem-Class	Unit	Topic/Chapter covered	Academic activity	Test / assignment
February	**05.02.2018 Monday**	**VI EEE**	C	Typical test signals, time response of first order systems Step I/P		
February	**07.02.2018 Wednesday**	**VI EEE**	C	Time response of 2nd order system to step input,		
February	**09.02.2018 Friday**	**VI EEE**	C	Time response of 2nd order system to step input,rela- tionship between location of roots of characteristics equation, w and wn, time domain specifications of a general and an under-damped 2nd Steady state error and error constants,Hurwitz stability cri- terionorder system		**Assignment 4 given**
February	**19.02.2018 Monday**	**VI EEE**	A	Effects of feedback on sensi- tivity (to parameter variations), stability, external disturbance (noise), overall gain etc. Introductory remarks about non-linear control sys- tems.		
February	**21.02.2018 Wednesday**	**VI EEE**	C	Root locus concept,		
February	**23.02.2018 Friday**	**VI EEE**	C	Development of root loci for various systems, sta- bility considerations		**Assignment 5 given**
February	**26.02.2018 Monday**	**VI EEE**	3	Numericals of Root Locus,		
February	**28.02.2018 Wednesday**	**VI EEE**		Test / Discussion on Question of Assignment 3&4		**Test**
March	**05.03.2018 Monday**	**VI EEE**	D	Dominant closed loop poles, concept of stabilit, pole zero configuration and stability, Bode plots		
March	**07.03.2018 Wednesday**	**VI EEE**	D	Bode plots, stability, Gain-margin and Phase Margin, relative stability, frequency response specifications.		
March	**09.03.2018 Friday**	**VI EEE**	D	Numericals of Bode Plot		**Assignment 6 given**
March	**12.03.2018 Monday**	**VI EEE**	D	Numericals of Bode Plot		
March	**14.03.2018 Wednesday**	**VI EEE**	D	Nyquist		
March	**16.03.2018 Friday**	**VI EEE**	D	Nyquist & Discussion on Question of Assignment 5&6		**Assignment 7 given**

Month	Date & Day	Sem-Class	Unit	Topic/Chapter covered	Academic activity	Test / assignment
March	**26.03.2018 Monday**	**VI EEE**	D	Relationship between frequency response and time-response for 2nd order system, polar, Nyquist		
March	**28.03.2018 Wednesday**	**VI EEE**	D	Necessity of compensation, compensation networks, application of lag and lead compensation		
April	**02.04.2018 Monday**	**VI EEE**	D	basic modes of feedback control, proportional, integral and derivative controllers, illustrative examples.		**Assignment 8 given**
April	**04.04.2018 Wednesday**	**VI EEE**	D	Synchros, AC and DC techo-generators, servomotors, stepper motors, & their applications,		
April	**06.04.2018 Friday**	**VI EEE**	D	Stepper motors, & their applications, magnetic amplifier.		**Assignment 9 given**
April	**09.04.2018 Monday**	**VI EEE**		Revision		