YMCA Universitv of Science & Technology, Faridabad

Term: B.Tech. EIC/ VI Semester.				
Course	**Industrial Process Control (EIC-310)**		**Faculty Name: Lalit Rai**	
Course Objectlve:	To familarized the student with., technology of process control industry perspective			
Unit		Topic	No,of hrs. Assigned	Books Chapters taken from
1	1.1	Introduction to process control system, control loop study-Generalisation with load-changes at arbitrary points in the loop	3	1
	1.2	offset and its analysis,modeling consideration for control purposes, degree of freedom and process controllers,	3	1,c
	1.3	formulating the scope at modeling for process control.dynamic behaviour of first order lag system,process with variable time constant and gain.	3	1
	1.4	Dynamic behaviour of 1st order lag system,process with variable time, Dynamic behaviour of first order lag system-multicapacity process,constant and gain.	3	b
	1.5	real time process,inverse response process,inytroduction to feedback control and effects P,I& D controllers.	3	1,b
2	2. 1	Outline of the design problems,selection of type of feedback controller	3	1,b,c
	2.2	Time-integral performance criterion	2	1
	2.3	process reaction curve and frequency response characteristic,Ziegler-Nichole rule,effect of dead-time,	3	1
	2.4	dead time compensator inverse response compensator.	3	1,b
3	3.1	Cascade,split-range feedforward,	3	1
4	4.1	Interaction of control loops,relative gain array and selection of the loops,	3	1
	4.1	design of non-interacting current loop.	3	1
5	5.1	Introduction to digital computer control of processes.	3	a
	5.2	Design of control system for complete plant.	3	a
Total lectures			41	
Text book	1. Chemical process control; George Stephanopoulos;PHI			
Reference Books	a. Digital computer process control;C.L.Smith;Intext Educational publisher			
	b. Process control: F.G.Shinskey; McGraw Hill			
	c. Process instrument and control handbook: D.M.Considins; McGraw Hill			