



III Year-II Semester		L	T	P	C
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CONTROL SYSTEMS LAB (R1631027)					

Prerequisite Course:

Control systems

CourseDescriptionandObjectives:

To analyze the performance of different controllers

CourseOutcomes:

Upon completion of the course, the student will be able to achieve the following outcomes.

Cos	CourseOutcomes	POs
1	Able to analyze the performance and working Magnetic amplifier, D.C and A.C. servo motors and synchronous motors	6
2	Able to design P,PI,PD and PID controllers	7
3	Able to design lag, lead and lag–lead compensators	10
4	Able to control the temperature using PID controller	4
5	Able to determine the transfer function of D.C.motor	6
6	Able to control the position of D.C servo motor performance	6

Syllabus:

Any 10 of the Following Experiments are to be conducted

- 1.Time response of Second order system
2. Characteristics of Synchros
3. Programmable logic controller – characteristics of stepper motor
4. Effect of feedback on DC servo motor
5. Effect of P, PD, PI, PID Controller on a second order systems
6. Lag and lead compensation – Magnitude and phase plot
7. DC position control system
8. Transfer function of DC motor
9. Temperature controller using PID
10. Characteristics of magnetic amplifiers
11. Characteristics of AC servo motor
12. Characteristics of DC servo motor
13. Potentiometer as an error detector

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R-16 Syllabus for EEE.JNTUK