Course Type	Course Code	Name of the Course	L	T	P	Credits
DP	NEEC506	Advanced Control System Lab	0	0	3	1.5

Course Objective

- The objective of this lab is to introduce postgraduate students to the practical aspects of advanced control system.

Learning Outcomes

Upon successful completion of this course, students will develop:

- an ability to deal with advanced control system techniques.
- an idea about the working of different advanced control concepts.

Unit No.	Topics to be Covered	Contact Hours	Learning Outcome
1	Experiments on control study of inverted pendulum	2x4	Students will learn working of real life control of inverted pendulum
2	Experiments on control system using MATLAB/SIMULINK	2x4	Students will learn various aspects of control system
3	Experiments on AVR using MATLAB/ SIMULINK	2x4	Students will learn various aspects of automatic voltage regulation (AVR)
4	Experiments on LFC using MATLAB/ SIMULINK	2x3	Students will learn various aspects of load frequency control (LFC)
5	Experiments on process control using MATLAB/ SIMULINK	2x3	Students will learn various aspects of process control
6	Practice and review	6	------
	Total Contact Hours	**42**	

Text Books:

1. K. Ogata, Modern control engineering, Pearson Prentice Hall
2. M. GopaL, Digital control and state variable methods, TMH

Reference Books:

1. R. T. Stefani, B Shahian, C J Savant Jr., G H Hostetter, Design of Feedback Systems, Oxford University Press
2. S. H. Zak, Systems and Control, Oxford University Press.