

Lesson plan

Name of the faculty : Mr. Manoj Bansal

Discipline : Electrical & Electronics Engineering

Semester : 7th

Subject : Electric Drives and Control (EE-403-F)

Lesson Plan Duration : 15 weeks (From August, 2020 to November 2020)

Work Load (Lecture/ Practical) per week (in hours): Lecture-02, Practical-01

Week	Theory		Laboratory	
	Lecture day	Topic	Lab Week	Experiment Name
1 st	1 st	ELECTRICAL DRIVES: Introduction	1 st	NO LAB FOR THIS SUBJECT
	2 nd	Classification, advantages		
2 nd	1 st	Characteristics of Electric Motors	2 nd	
	2 nd	choice of electrical drive machines		
3 rd	1 st	status of ac and dc drives	3 rd	
	2 nd	CONTROL OF ELECTRICAL DRIVES: Modes of operation		
4 th	1 st	closed loop control of drives	4 th	
	2 nd	sensing of current and speed, Microprocessor based control of electric drives		
5 th	1 st	DYNAMICS OF ELECTRICAL DRIVES: Fundamental torque equations	5 th	
	2 nd	multi-quadrant operation, equivalent values of drive parameters		
6 th	1 st	load torque components, types of loads	6 th	
	2 nd	SELECTION OF MOTOR POWER RATING: Heating and cooling		
7 th		Sessional Examination-I		

8 th	1 st	determination of motor rating	8 th	
	2 nd	continuous, short time and intermittent duty rating		
9 th	1 st	load equalization and determination of moment of inertia of the flywheel	9 th	
	2 nd	DC MOTOR DRIVES: Starting, Acceleration control		
10 th	1 st	braking, transient analysis	10 th	
	2 nd	Converter fed dc drive & chopper fed dc drive		
11 th	1 st	PMBLDC & PMSAC DRIVES: Permanent Magnet Brushless D C drive		
	2 nd	Permanent Magnet Sine-fed drives		
12 th	1 st	Switched Reluctance Machine Drives		
	2 nd	INDUCTION MOTOR DRIVES: Starting, Acceleration control		
13 th	1 st	braking, transient analysis		
	2 nd	Static control techniques		
14 th	1 st	stator frequency control		
	2 nd	stator voltage control, rotor resistance control		
15 th	1 st	Static Scherbius system		
	2 nd	static Kramer system, vector control		
16 th		Sessional-II + Activity		

Faculty Signature

