

1.	Title of the course	Electric Drives
2.	Course number	EE4022
3.	Status of the course	Elective
4.	Structure of credits	3-0-0-3
5.	Offered to	UG
6.	New course/modification to	New course
7.	To be offered by	Department of Electrical Engineering
8.	To take effect from	July 2020
9.	Prerequisite	CoT for UG
10.	Whether approved by the Department	Yes
11.	<b>Course Objective(s):</b> To introduce the interaction of load with different AC and DC machines under steady state perspective. To introduce different speed control techniques employed in industrial motor drives.	
12.	<b>Course Content:</b> Methods of DC motor control, non-regenerative controlled rectifiers, fully controlled converters, field control, chopper regulators; Induction motor control systems, control of effective rotor resistance, recovery of slip energy, variable frequency control of AC motors, current source inverter fed induction motor drive, forced commutated inverter fed drives; Self-controlled synchronous motor drives and traction drives.	
13.	<b>Textbook(s):</b> 1. Kothari D P and Nagrath I J, <i>Electric Machines</i> , 5th Edition, McGraw Hill (2017). 2. Leonhard W, <i>Control of Electric Drives</i> , 1st Edition, Springer (1985).	
14.	<b>Reference(s):</b> 1. Umans S D, <i>Electric Machinery</i> , 7th Edition, McGraw Hill (2020). 2. Vas P, <i>Vector Control of AC Machines</i> , 1st Edition, Oxford University Press (1990).	