Faculty of Electrical Engineering

M.E. Power Electronics and Drives

(R 2021) Semester – I

Course Code: PX4161 Course Title: Power Converters Laboratory		
Sl. No.	**Description of Equipment**	**Required numbers (for batch of 25 students)**
1	Arduino or Micro Controller or PIC microcontroller alongwith interfacing cable	5 Nos
2	CRO	5 Nos
3	Regulated Power Supply (0-30V, 2A)	5 Nos
4	Digital Multimeter	5 Nos
5	Personal Computers	25 Nos
6	Software (Any software related to Power Electronics & Drives)	5 License users
7	Printer	1 No.
Consumables (as per the requirement)		
9	IR2110	
10	Resistors	
11	Capacitors	
12	Diodes	
13	Single strand wires	

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The following equipment/Consumables will be required to conduct the experiments of 25 students.

Course Code: PX4111 Course Title: Analog and Digital Controllers for PE Converters Laboratory		
MAJOR MEASURING EQUIPMENT REQUIREMENT:		
Sl. No.	**Description of Equipment**	**Required numbers (for batch of 25 students)**
1.	Power supply (0-5 V; 10A, 0-30V, 10A)	12 number
2.	DSOs (2/4 channel)	12 numbers
3.	Desktop multimeters	12 numbers
4.	Function generator	4 numbers
5.	Microcontroller Evaluation board (C2000 family/DSPIC/ARM)	12 numbers
6.	Desktop/Laptops	12 numbers
CONSUMABLES REQUIREMENT		
1.	Resistors, capacitors	
2.	Opamp ICs	
3.	555 timer ICs	
4.	Ferrite core, copper wires (Inductor Design)	
5.	General purpose PCBs/Breadboards	
6.	Soldering rod, flux	

Degree: PG	Name of the Course: M.E. POWER ELECTRONICS AND DRIVES	
Course Code: PX4211 Course Title: POWER ELECTRONICS AND DRIVES LABORATORY (R 2021) Semester: II		
Sl. No.	**Description of Equipment**	**Required numbers (for 25 students)**
1.	Fully controlled Converter fed DC motor	1 no
2.	Half controlled Converter fed DC motor	1 no
3.	Chopper fed DC motor	1 no
4.	V/f control of Three-Phase Induction motor	1 no
5.	AC voltage Controller based speed control of induction motor.	1 no
6.	DSP based speed control of SRM motor	1 no
7.	three-phase Synchronous Generator set up to conduct voltage regulation	1 no
8.	Micro controller based speed control of Stepper motor.	1 no
9.	Digital storage oscilloscopes	5 nos
10.	Computers	10 nos
11.	Simulation software with minimum 5 user license	

Degree: PG	Name of the Course: M.E. POWER ELECTRONICS AND DRIVES	
Course Code: PX4212 **Course Title: DESIGN LABORATORY FOR POWER ELECTRONICS SYSTEMS** **(R 2021)Semester: II**		
Sl. No.	**Description of Equipment**	**Required numbers (for 25 students)**
1.	Computers	15
2.	Simulation software	10 user license
3.	PCB board	10 Nos.
4.	Inductors, capacitors and transformers for 100 W converter	10 Nos. each