Faculty of Electrical Engineering

B.E. Electrical and Electronics Engineering

(R 2021) Semester – II

Course Code: EE3271 Course Title: Electric Circuits Laboratory		
Sl. No.	**Description of Equipment**	**Required numbers (for batch of 30 students)**
1	10 Nos of PC loaded with Pspice/ Matlab/e-Sim / Scilab/ Equivalent Software Package	Minimum 10 Users
2	Printer	1
3	Regulated Power Supply (0-30V)	15 Nos
4	Function Generator (MHz Range)	5 Nos
5	Oscilloscope (20 MHz)	10 Nos
6	Digital Storage Oscilloscope (20 MHz)	2 Nos
7	AC/DC – Voltmeters of required rating	10 Nos
8	AC/DC -Ammeters of required rating	10 Nos
9	Multimeters	10 Nos
10	Decade Resistance Box, Decade Inductance Box, Decade Capacitance Box	6 Nos each.
11	Single Phase Wattmeter of suitable rating	5 Nos
12	Circuit Connection Boards -	20 Nos
13	Connecting Wires	Necessary Quantity
14	Three phase star& delta connected load / Single phase load bank of suitable rating	3 Nos
15	Necessary Quantities of Resistors, Inductors, Capacitors of various capacities (Quarter Watt to 10 Watt)	

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(R 2021) Semester – III

Course Code: EC3311

Course Title: ELECTRONIC DEVICES AND CIRCUITS LABORATORY

Sl.No.	Description of Equipment	Required numbers (for batch of 30 students)
1.	Semiconductor devices like Diode, Zener Diode, NPN Transistors, JFET, UJT, Photo diode, Photo Transistor	10
2.	Resistors, Capacitors and inductors	10
3.	Necessary digital IC 8	10
4.	Function Generators	10
5.	Regulated 3 output Power Supply 5, ± 15V	10
6.	CRO	10
7.	Storage Oscilloscope	1
8.	Bread boards	10

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(R 2021) Semester – III

Course Code: EE3311 **Course Title: ELECTRICAL MACHINES LABORATORY - I**		
Sl.No.	**Description of Equipment**	**Required numbers (for batch of 30 students)**
1.	DC Shunt Motor with Loading Arrangement	3
2.	DC Shunt Motor Coupled With Three phase Alternator	1
3.	Single Phase Transformer	4
4.	DC Series Motor with Loading Arrangement	1
5.	DC Compound motor with loading arrangement	1
6.	DC Shunt Motor Coupled With DC Compound Generator	2
7.	DC Shunt Motor Coupled With DC Shunt Generator	1
8.	Tachometer -Digital/Analog	8
9.	Single Phase Auto Transformer	2
10.	Three Phase Auto Transformer	1
11.	Single Phase Resistive Loading Bank	2
12.	Three Phase Resistive Loading Bank	2
13.	Rheostats	As per the requirement for the machines

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(R 2021) Semester – III

Course Code: CS3362 Course Title: C PROGRAMMING AND DATA STRUCTURES LABORATORY		
Sl. No.	**Description of Equipment**	**Required numbers (for batch of 30 students**
1.	INTEL based desktop PC with min. 8GB RAM and 500 GB HDD, 17" or higher TFT Monitor, Keyboard and mouse	30
2.	Windows 10 or higher operating system / Linux Ubuntu 20 or higher	30
3.	Standalone desktops PC	15 Nos.

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(R 2021) Semester – IV

Course Code: EE3411	**Course Title: ELECTRICAL MACHINES LABORATORY – II**	
Sl. No.	**Description of Equipment**	**Required numbers (for batch of 30 students)**
1.	DC Shunt Motor Coupled With Three phase Salient Pole Alternator	1
2.	DC Shunt Motor Coupled With Three phase non-salient pole Alternator	3
3.	DC Shunt Motor Coupled With Three phase Slip ring Induction motor	1
4.	Three Phase Induction Motor with Loading Arrangement	2
5.	Single Phase Induction Motor with Loading Arrangement	2
6.	Tachometer -Digital/Analog	8
7.	Single Phase Auto Transformer	2
8.	Three Phase Auto Transformer	3
9.	Single Phase Resistive Loading Bank	2
10.	Three Phase Resistive Loading Bank	2
11.	Capacitor Bank	1
12	Three phase inductive load	1
13.	Rheostats	As per the requirement for the machines

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(R 2021) Semester – IV

Course Code: EE3412	**Course Title: LINEAR AND DIGITAL CIRCUITS LABORATORY**	
Sl. No.	**Description of Equipment**	**Required numbers (for batch of 30 students)**
1.	Regulated Power supply +12/-12V,5V	15 nos.
2.	Cathode Ray Oscilloscope (CRO) 50 Mhz	10 nos.
3.	Digital Multimeter	10 nos.
4.	Function Generator	5 nos.
5.	Analog and Digital IC Tester	2 nos. each
Consumables:		
6.	Bread Board	Sufficient number
7.	IC 741/ICNE555/566/565	Sufficient number
8.	Digital IC Types	Sufficient number
9.	LED	Sufficient number
10.	LM317	Sufficient number
11.	LM723	Sufficient number
12.	ICSG3524/SG3525	Sufficient number
13.	Transistor	Sufficient number
14.	Diodes, IN4001, BY126	Sufficient number

15.	Zener diodes	Sufficient number
16.	Potentiometer	Sufficient number
17.	Step-down Transformer 230V/12-0-12V	Sufficient number
18.	Capacitor	Sufficient number
19.	Resistors ¼ Watt Assorted	Sufficient number
20.	Single strand wire	Sufficient number

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(R 2021) Semester – IV

Course Code: EE3413
Course Title: MICROPROCESSOR AND MICROCONTROLLER LABORATORY

Sl. No.	Description of Equipment	Required numbers (for batch of 30 students)
1.	8085 Trainer kit with power supply	15 nos.
2.	8051 Microcontroller trainer kit with power supply	15 nos.
3.	ADC and DAC Interface boards	5 nos.
4.	Stepper motor interface board	5 nos.
5.	Traffic light interface board	5 nos.
6.	Software tool for 8085,8051,PIC assemblers loaded in computers	5 nos. PC with software license.

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(R 2021) Semester – V

Course Code: EE3512 **Course Title: CONTROL AND INSTRUMENTATION LABORATORY**		
Sl. No.	**Description of Equipment**	**Required numbers (for batch of 30 students)**
1.	Desktop	30 Nos.
2.	Mat Lab Latest Version	30 User

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(R 2021) Semester – V

Course Code: EE3511

Course Title: POWER ELECTRONICS LABORATORY

Sl. No.	Description of Equipment	Required numbers (for batch of 30 students)
1.	Bread board	15 Nos.
2.	SCR, TRIAC, IGBT, MOSFET	10 Nos. each
3.	Single phase Semi converter	2 Nos.
4.	Single phase Full converter	2 Nos.
5.	Step down chopper	1 No.
6.	Step up chopper	1 No.
7.	Single phase PWM Inverter	2 Nos.
8.	Three phase PWM Inverter	2 Nos.
9.	Buck converter	1 No.
10.	Buck Boost converter	1 No.
11.	Boost Converter	1 No.
12.	AC Voltage Controller	1 No.
13.	Voltmeter, Ammeter	10 Nos.
14.	Regulated DC power supply	10 Nos.

15.	Patchchords	20 Nos.
16.	Multimeter	10 Nos.
17.	CRO	10 Nos.
18	Computer	10 Nos.

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(R 2021) Semester – VI

Course Code: EE3611	**Course Title: POWER SYSTEM LABORATORY**	
Sl.No.	**Description of Equipment**	**Required numbers (for batch of 30 students)**
1	Personal Computers (Intel Core i5 or i7, 500 GB, 8 GB RAM)	30
2	Laser Printer	1
3	Dot matrix Printer	1
4	Server (Intel Core i7, 2 TB, 8 GB RAM or higher) (High Speed Processor)	1
5	Software: EMTP / ETAP / CYME / MIPOWER / any Power system simulation software	5
6	Compilers: C / C++ / Matlab	30