Faculty of Electrical Engineering

B.E. Instrumentation and Control Engineering

(R 2017) Semester – II

EE8261 ELECTRIC CIRCUITS LABORATORY

Requirements for a batch of 30 students

Sl. No.	Description of Equipment	Quantity required (R)	Quantity available (A)	Deficiency (R - A)
1.	Regulated Power Supply: 0 - 15 V D.C	10		
2.	Function Generator (1 MHz)	10		
3.	Single Phase Energy Meter	1		
4.	Oscilloscope (20 MHz).	10		
5.	Digital Storage Oscilloscope (20 MHz)	1		
6.	PC with Circuit Simulation Software	10		
7.	(e-Sim / Scilab/ Pspice / Matlab /other Equivalent software Package)	10		
8.	Printer	1		
9.	AC/DC - Voltmeters	10		
10.	Ammeters	10		
11.	Multi-meters	10		
12.	Single Phase Wattmeter	3		
13.	Decade Resistance Box, Decade Inductance Box, Decade Capacitance Box (Each).	6		
14.	Circuit Connection Boards	10		

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B.E. Instrumentation and Control Engineering

(R 2017) Semester – III

CS8383 OBJECT ORIENTED PROGRAMMING LABORATORY

Requirements for a batch of 30 students

Sl. No.	Description of Equipment	Quantity required (R)	Quantity available (A)	Deficiency (R - A)
1.	Systems with either Netbeans or Eclipse	30		

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(R 2017) Semester – III

EI8361 MEASUREMENTS AND TRANSDUCERS LABORATORY

Requirements for a batch of 30 students

Sl. No.	Description of Equipment	Quantity required (R)	Quantity available (A)	Deficiency (R - A)
1.	Measurement of Linear displacement using Potentiometer	1		
2.	Strain gauge and Load cell Characterisation and application	1		
3.	LVDT Characterisation and application	1		
4.	Hall effect Characterisation and application	1		
5.	Measurement of Angular displacement	1		
6.	Muffle furnace	1		
7.	Thermistor Characterisation and application	1		
8.	Various types Thermocouple and RTD Characterisation and application	1		
9.	Measurement of power and energy	1		
10.	Sufficient number power supply, Galvanometer, Bread board, Multimeter, Resistors, Decade	15		
11.	Sufficient number Capacitance box, Decade resistance box, Decade Inductance box, CRO	15		

Faculty of Electrical Engineering

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(R 2017) Semester – IV

EE8461 LINEAR AND DIGITAL INTEGRATED CIRCUITS LABORATORY

Requirements for a batch of 30 students

Sl. No.	Description of Equipment	Quantity required (R)	Quantity available (A)	Deficiency (R - A)
1.	Dual ,(0-30V) variable Power Supply	10		
2.	CRO (30MHz)	9		
3.	Digital Multimeter	10		
4.	Function Generator (1 MHz)	8		
5.	IC Tester (Analog)	2		
6.	Bread board	10		
7.	Computer (PSPICE installed)	1		
8.	IC 741/ IC NE555/566/565	10		
9.	Digital IC types	10		
10.	LED	10		
11.	LM317	10		
12.	LM723	10		
13.	ICSG3524 / SG3525	10		
14.	Transistor - 2N3391	10		
15.	Diodes (IN4001,BY126)	10		
16.	Zener diodes	10		
17.	Potentiometer	10		
18.	Step-down transformer (230V/12-0-12V)	10		
19.	Capacitor	10		
20.	Resistors 1/4 Watt Assorted	10		
21.	Single Strand Wire	10		

Faculty of Electrical Engineering

B.E. Instrumentation and Control Engineering

(R 2017) Semester – IV

EI8461 DEVICES AND MACHINES LABORATORY

Requirements for a batch of 30 students

Sl. No.	Description of Equipment	Quantity required (R)	Quantity available (A)	Deficiency (R - A)
1.	Circuit Simulation Software	5		
2.	(Pspice / Matlab /other Equivalent software Package) with PC	30		
3.	power supply	10		
4.	Galvanometer	10		
5.	Bread board	10		
6.	Multimeter	10		
7.	resistors	10		
8.	Decade Capacitance box	10		
9.	Decade resistance box	10		
10.	Decade Inductance box	10		
11.	CRO	10		
12.	Semiconductor devices like Diode, Zener Diode, NPN Transistors, JFET, and UJT	10		
13.	DC Shunt Motor with Loading Arrangement	3		
14.	Single Phase Transformer	3		
15.	Single Phase Induction Motor with Loading Arrangement	1		
16.	Single Phase Auto Transformer	3		
17.	Single Phase Resistive Loading Bank	2		
18.	Ammeters	2		
19.	Voltmeters, (or multimeters)	2		
20.	switches	2		
21.	tachometers	2		
22.	Wattmeters	2		

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(R 2017) Semester – V

EE8681 MICROPROCESSORS AND MICROCONTROLLERS LABORATORY

Requirements for a batch of 30 students

Sl. No.	Description of Equipment	Quantity required (R)	Quantity available (A)	Deficiency (R - A)
1.	8085 Microprocessor Trainer with Power Supply	15		
2.	8051 Micro Controller Trainer Kit with power supply	15		
3.	8255 Interface board	5		
4.	8251 Interface board	5		
5.	8259 Interface board	5		
6.	8279 Keyboard / Display Interface board	5		
7.	8254 timer counter	5		
8.	ADC and DAC card	5		
9.	AC & DC motor with Controllers	5		
10.	Traffic Light Control Systems	5		

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(R 2017) Semester – V

EI8561 INDUSTRIAL INSTRUMENTATION LABORATORY

Requirements for a batch of 30 students

Sl. No.	Description of Equipment	Quantity required (R)	Quantity available (A)	Deficiency (R - A)
1.	Orifice plate	1		
2.	Dead weight tester with pressure gauge	1		
3.	Torque trainer	1		
4.	Saybolt Viscometer	1		
5.	Vacuum gauge	1		
6.	DP transmitter	1		
7.	UV Visible spectrophotometer	1		
8.	pH meter	1		
9.	Conductivity meter	1		
10.	ECG trainer	1		
11.	Pulse rate trainer	1		
12.	Tacho meter	1		

Faculty of Electrical Engineering

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(R 2017) Semester – VI

CS8381 DATA STRUCTURES LABORATORY

Requirements for a batch of 30 students

Sl. No.	Description of Equipment	Quantity required (R)	Quantity available (A)	Deficiency (R - A)
1.	Systems with Linux Operating System with gnu compiler	30		

Faculty of Electrical Engineering

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(R 2017) Semester – VI

EI8661 PROCESS CONTROL LABORATORY

Requirements for a batch of 30 students

Sl. No.	Description of Equipment	Quantity required (R)	Quantity available (A)	Deficiency (R - A)
1.	Flow process station with all accessories	1		
2.	Analog / Digital PID control	2		
3.	Control valve trainer (with position for varying ΔP across the valve)	1		
4.	Flow meter	1		
5.	Level process station with all accessories	1		
6.	Temperature process station with all accessories	1		
7.	Pressure process station with all accessories	1		
8.	Personal computer	15		
9.	MATLAB software	Minimum 10 user license		

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(R 2017) Semester – VII

EI8761 INDUSTRIAL AUTOMATION LABORATORY

Requirements for a batch of 30 students

Sl. No.	Description of Equipment	Quantity required (R)	Quantity available (A)	Deficiency (R - A)
1.	Programmable Logic controller	5		
2.	Programmable Logic controller Software	10		
3.	DAQ card	2		
4.	Filling /Draining System	1		
5.	Traffic Light Controller	2		
6.	DC Motor	5		
7.	Personal computer	10		
8.	DCS along with Interface modules	1		
9.	Thermal Process	1		
10.	Level Process	1		
11.	Flow Process stations	1		
12.	Smart Transmitter	1		

Faculty of Electrical Engineering

B.E. Instrumentation and Control Engineering

(R 2017) Semester – VII

EI8762 INSTRUMENTATION SYSTEM DESIGN LABORATORY

Requirements for a batch of 30 students

Sl. No.	Description of Equipment	Quantity required (R)	Quantity available (A)	Deficiency (R - A)
1.	Sufficient number of Monolithic Instrumentation amplifier, Operational amplifiers, IC7805 and resistors, diodes, capacitors	15		
2.	Linear control valve, ON/OFF control valve, Air regulator, Rotameter, Pump	1 each		
3.	Sufficient number of IC 741, CRO, Bread board, Signal generator (PID) Microprocessor kit with ADC and DAC section	15		
4.	Any Process station (Temperature or Level) with Corresponding sensors, Data acquisition card, and Storage device (microcontroller/microprocessor)	1		
5.	Flow process station with DP transmitter	1		
6.	Loop analyzer	1		
7.	Thermocouple & RTD	Minimum 1		
8.	Bonded strain gauge, Loads	Minimum 1		
9.	orifice plate	Minimum 1		