

## **SPECIAL LABS BEYOND THE CURRICULUM**

ECE Department is conducting **Special Lab Sessions Beyond The Curriculum** For All II B.Tech. ECE Students. This lab is aimed at introducing hardware design and assembling concepts which is vital for all electronic engineers. As a part of the lab PCB design and development, implementing a hardware circuit using this PCB is done. Each student is paid individual attention by the respective faculty during the lab session and is encouraged to work independently.

### **Schedule:**

<b>S.NO.</b>	<b>SECTION</b>	<b>DAY</b>	<b>TIME</b>
1	II ECE A	WEDNESDAY	1.50PM-2.40PM
2	II ECE B	THURSDAY	1.50PM-2.40PM
3	II ECE C	TUESDAY	1.50PM-2.40PM
4	II ECE D	MONDAY	1.50PM-2.40PM

## **LIST OF THE PROJECTS**

### **ALONGWITH THE FACULTY-IN-CHARGE**

**Mr.Y. Ajay Kumar Asst. Professor**

<b>S. NO.</b>	<b>PROJECT NAME</b>
1	WATER LEVEL ALARM USING 555 TIMER
2	SMOKE DETECTOR ALARM C K T
3	REMOTE CONTROLLED LAMP LIGHT
4	HIGH POWER 6-LED FLASH LIGHT
5	FIRE ALARM CIRCUIT USING THERMISTOR
6	SIMPLE BUGLAR ALARM CIRCUIT
7	CIRCUIT DIAGRAM FOR AC TO DC INVERTER
8	AUTOMATIC EMERGENCY LAMP
9	DESIGN OF INVERTER USING 555 TIMER
10	LOW COST FIRE ALARM CIRCUIT
11	PROTECT YOUR HOME FROM LASER BEANS
12	FM TRANSMITTER
13	1000 WATT POWER AMPLIFIER (AUDIO AMPLIFIER)
14	SMOKE DETECTOR USING LM 358
15	IR SENSOR CONTROLLING HOME APPLIANCES

**Mrs. J. Manga, Asst. Professor**

<b>S NO</b>	<b>PROJECT TITLE</b>
1	Water level indicator
2	Intruder alarm
3	Ding Dong bell sound generator
4	Mobile phone detectr using op-amp
5	Door openinig alarm using hall sensor
6	Motion detector using NE555 timer
7	Wireless mouse charger
8	Faradays guitar
9	FM receive r
10	Toy piono
11	Tilt sensor switch circuit
12	Police sire circuit
13	LED dimmer
14	Metal detector circuit
15	USB LED lamp circuit
16	Mobile incoming call indicator
17	IR based security alarm
18	Infrared sensor
19	Clap switch
20	Mosquito repellent circuit
21	Automatic night light
22	Electronic eye
23	Burgular alarm
24	Rain alarm
25	Mobile jammer
26	Panic alarm
27	Fridge door opened sound generator circuit
28	Sound operating LED
29	Remote control tester
30	auto intensity control of LED lights
31	Audio amplifier
32	Security alarm using LASER
33	Protect your room with your own LASER security system

**Mr.T.Chandrashekar, Asst. Professor & Mrs. A. Jyothi Asst. Professor**

<b>S NO</b>	<b>PROJECT TITLE</b>
1	Infrared object counter
2	Voltage doubler using 555 IC
3	Automatic washbasin tap controller
4	Transistor Tester
5	Highpower LED Flash Light Ckt for 1.5 v battery
6	Zener diode as voltage regulator
7	Christmas light using LEDS
8	Robotic eye using IR sensors (Infrared LEDS)
9	AM Transmitter circuit.
10	Simple radio using operational amplifier.
11	Aircraft radio circuit.
12	Low cost AM circuit.
13	Single chip FM radio circuit.
14	FM Radio jammer.
15	Wien-bridge oscillator.
16	Phase shift oscillator.
17	Tuned base oscillator.
18	Tuned collector oscillator.
19	Battery level indicator.
20	Voltmeter circuit using LED.
21	Charger circuit for SMF batteries.
22	Integrator circuit using operational amplifier.
23	Function generator circuit.
24	Sample and Hold circuit.
25	Fridge door alarm.
26	Electronic mosquito repeller.
27	Three phase rectifier using 20L6P45.
28	Variable power supply using 7805.
29	Metal Detector
30	Flashing Lights
31	Mobile Phone Detector
32	DC to AC inverter
33	OPAMP IC tester
34	Carrier generator
35	Electronic Doorbell using counter
36	RF detector Circuit
37	OP-AM LED Flasher
38	Puff to Aff LED
39	Lie detector Circuit

40	Audio Amplifier
41	Eye detector
42	Audio generator is controller by light
43	Solar battery charger circuit
44	12V Dc to 220V AC convertor
45	555 IC tester
46	150Watt power Amplifier
47	Electronic Toy Piano using 555 Timer
48	Mobile Jammer Circuit

**Mr. K.V.Subba Rao, Asst. Professor**

S NO	PROJECT TITLE	ABOUT THE PROJECT
1	Fire alarm	To detect the fire ,used in crackers company
2	Polarity Detector	Detector Polarity of the electric Component
3	Continuity Checker	Checks the continuity of the CKT
4	Automatic Water level controller motor driver CKT	To fill water tank automatically by driving the motor
5	Over Voltage indicator	It indicates the over voltage in the CKT
6	BCD to 7 segment display	Displays binary code in 7 segment display.Useful in digital devices
7	220V AC to 12VDC convertor	Converts 220V.A.C to 12v.D.C supply
8	Police Siren	The Siren CKT produces Large Volume
9	Gas detector	detects the LPG Gas leakage
10	Remote tester	This is a simple remote controller tester circuit
11	AND gate	Performs logic AND gate operation
12	Voltage Doubler	Doubles the given AC voltage to DC voltage without IC
13	Flasher with beeps	CKT uses a beeper it gives beeps
14	FM transmitter	Transmits FM signals
15	Voltage level convertor	Converts 15V D.C to 9V D.C
16	Battery operated heater	Heater CKT operated from 12v battery
17	Transistor As a switch	Transistor Is used as a switch
18	12v DC -220 v A C	Converts 12V D C to 220 V A C
19	Coin toss Simulator CKT Micro Ammeter	
20	Traffic Signals	Traffic Signal Green , Red , Yellow are glown
21	Simple Emergency lamp	The lamp lights on power failure
22	Voltage level indicators	Indicates the Water level
23	Water Level indicators	Indicates the water level in the tank

24	Touch Switch	On touching the plate the buzzer is rings
25	10 minutes timer	Ten minutes time timer based on 555 time. The time of timer can be varied by varying the potentiometer
26	PWM LED light dimmer circuit	The brightness of LEDS rased by principle of PWM.By varying the pulse width of square wave,possible to control the brightness of LED
27	LED driver CKT	It is 3W or 5W LED driver CKT
28	LEAD ACID battery charger	It charges the battery IC LM317 and transistor BC 548 are used
29	Digital Voltmetre	Digital voltmeter is assebled IC L7107.The voltage is dispalyed digitally
30	1 watt audio amplifier	audio amplifier having capacity of 1Watt
31	Door bell	using 555 IC s (2) a door bell is designed

**Mr. P. Umesh, Asst. Professor**

<b>S NO</b>	<b>PROJECT NAME</b>
1	VOLTAGE DUBBLER USING 555 TIMER
2	FIRE ALARM
3	BIKE SIGNAL INDICATOR
4	DARKNESS DETECTOR
5	AUTOMATIC STREET LIGHT CONTROLLER
6	METAL DETECTOR
7	CLAP SWTICH
8	SECURITY ALARM
9	FM BUZZER
10	FAN CONTROLLER
11	BUZZER CKT
12	TRAFFIC LIGHT CNTROLLER
13	CROSSING SWITCHING CKT
14	LED FLASHER
15	IR BASED LIGHT CONTROLLER
16	ELECTRONIC LETTER BOX
17	POLICE LIGHT USING 555
18	M-BRIDGE CKT
19	SIMPLE AUDIO AMPLIFIER
20	IC TESTER
21	TOUCH SWITCH
22	SMOKE ALARM
23	WATER LEVEL INDICATOR
24	RAIN ALARM

25	SIGNAL JAMMER
26	CONTINUITY TESTER