

List of Lab Equipment

COMMUNICATION ENGINEERING LAB

S. No.	Name of Equipment / Device	Quantity
1.	CRO Dual Trace 0-250 MHz	1
2.	CRO 30 MHz	5
3.	415 10MHz Function Generator	2
4.	Servo Stabilizer	1
5.	402 70MHz 2 Channel Digital Storage Oscilloscope	5
6.	Trainer Kit Amplitude Modulation / Demodulation	1
7.	Trainer Kit Frequency Modulation / Demodulation	1
8.	Trainer Kit Pulse Position Modulation / Demodulation	1
9.	Trainer Kit Pulse Width Modulation / Demodulation	1
10.	Trainer Kit Pulse Amplitude Modulation / Demodulation	1
11.	Trainer Kit Sampling and Reconstruction	5
12.	Trainer Kit Time Division Multiplexing	5
13.	Trainer Kit Pulse Code Modulation Transmitter	5
14.	Trainer Kit Pulse Code Modulation Receiver	5
15.	Trainer Kit Delta , Adaptive Delta, Sigma Modulator / Demodulator	5
16.	Trainer Kit Data Formatting Carrier Modulator	5
17.	Trainer Kit Data Deformatting	5
18.	DSB/SSB AM Transmitter Trainer	5
19.	DSB/SSB AM Receiver Trainer	5

20.	Spectrum Analyzer 500 MHZ	1
21.	DSO Dual Trace 0-150 MHz	1
22.	Function Generator 2 MHz	5
23.	Frequency Counter 1 GHz	2
24.	Analog Lab Trainer Kit	2
25.	DSB Mod and Demod module	1
26.	SSB Mod and Demod module	1
27.	FM Mod and Demod module	1
28.	PAM, PPM, PWM Trainer Kit	5
29.	Digital Multimeter	2
30.	Power Supply (New)	5
31.	PC Based Multifunction Instrument (TINA LAB)	1
32.	DSO 60 MHz	1
33.	FDM Trainer Kit	3
34.	DSSS & FHSS CDMA Trainer Kit	1
35.	HBE ZIGBE X WI-FI Development System	1
36.	RF Lab	1
37.	Digital Electronics Experiment Modules to be Interface with PC Based Multifunction Instrument.	2
38.	Analog Electronics Experiment Modules to be Interface with PC Based Multifunction Instrument.	1
39.	GPS Trainer	2
40.	PID Controller Trainer Kit	4
41.	Potentiometric Error Detector Trainer Kit	2
42.	Study of Lead Lag Compensator Trainer Kit	2

43.	Synchro Transmitter / Receiver Trainer Kit	2
44.	Magnetic Amplifier Trainer Kit	2
45.	Speed Torque Characteristics of AC Servomotor Trainer Kit	2
46.	Speed Torque Characteristics of DC Servomotor Trainer Kit	2
47.	Light Intensity Control System Trainer Kit	2
48.	High Pass Trainer Filter Trainer Kit	2
49.	Passive Filter Trainer Kit	2
50.	RC Filter Trainer Kit	2
51.	Computer Systems (DELL) Intel Core i5	10
52.	Antenna Trainer	2
53.	Transmission Line Trainer	2
54.	Fiber optical communication trainer ST-2501	03
55.	Optical power meter ST-2551	03
56.	Fiber optical mux/demux trainer ST-2503	03
57.	SDR (Software defined radio laboratory)	01

MICROPROCESSOR LAB

S. No.	Name of Equipment / Device	Quantity
1.	ADSP-2100 Evaluation Board(202)	01
2.	Digital Signal Processing Trainer based on TMS-320C50	02
3.	Computer System for ADSP-2100 Evaluation Board	01
4.	System for Digital Signal Processing Trainer kit	01
5.	System for Digital Signal Processing Trainer kit	01
6.	Digital Signal Processing Starter kit	01
7.	Function Generator	01
8.	1GHZ Processor Notebook for DSP kit	01
9.	Data Logger	02
10.	8086 Microprocessor kits	10
11.	8085 Microprocessor kits	16
12.	A to D Converter Study card	08
13.	D to A Converter Study card	04
14.	8255 Study card	02
15.	8253 Study card	02
16.	8279 Study card	02
17.	Stepper motor control study card	06
18.	Keyboard simulator study card	02
19.	DC motor control card	08
20.	Parallel port base Universal Programmer	01
21.	8251 based microcontroller trainer kit	04

22.	Universal PROM Programmer	02
23.	EPROM Eraser	01
24.	Scanner (HP)	02
25.	HP Laserjet 6L Printer	01
26.	8515 microcontroller kit (AVR Microtrainer)	04
27.	IBM Desktop P-IV computer systems	15
28.	Vacuum Cleaner	01
29.	Logic Controller Interface	02
30.	4×4 matrix Hex Keyboard Interface card	02
31.	DAC and ADC and Temp. Sensor Interface cards	02
32.	Single chip MCU trainer board	05
33.	8051/251 single board computer/ evaluation board	01
34.	LCD monitor 18'5''	01
35.	HP 1136 multifunctional printer	01
36.	LCD Projector	01
37.	ADSP 2181 DSK board	02
38.	HP Laserjet M1136 printer	01
39.	Traffic Light Interface Module	06
40.	DC Motor interface module	06
41.	Stepper motor module	06
42.	MCB 2140-ED Keil NXP LPC 214X EVAL Board EDU	15
43.	MCB STM 32C-ED Keil STM 32C Eval Board EDU	15
44.	J-Tag Debugger	15
45.	MDK ARM Microcontroller DEV KIT EDU (License)(10	01

	USER)	
46	8 channel 12 bit ADC without MUX	02
47	Dual DAC Interface	02
48	LCD (16*2) Interface	02
49	Relay output Interface	02
50	Single chip MCU trainer based on 89C51ED2 with USB communication and user manual, power supply	05
51	MSP430F5529 USB LaunchPad Evaluation Kit	8
52	SimpleLink Wi-Fi CC3200 LaunchPad	4
53	MSP 430F5969 LaunchPad	8
54	MSP430 LaunchPad	5
55	Analog Starter Kit V 10	5
56	ASLK PRO	4
57	PMLK Kit	2
58	CC110L Booster pack	4
59	TIVA LaunchPad	10
60	Ez430RF-2500 MSP430 Wireless Development tools	2
61	MSP 430 LaunchPad	10
62	SimpleLink Wi-Fi CC3100 Booster Pack	4
63	SimpleLink TM CC2650 Wireless MCU LaunchPad Kit	2
64	Proteus Virtual Systems Modelling (VSM) Software	10 USERS

EDA LAB

S. No.	S. No.	Name of Equipment / Device	Quantity	
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	1.	HP dual core	6	
1.	2.	HP dual core Samsung TFT 22"	6	1
2.	3.	HP scanner 3500c Dell Dual Core system	1	1
	4.	1200 dpi/48 bit/ KVA/ online UPS		1
3.		Dell Dual Core system	1	
4.		Multimedia projector (Dell 4210 x)	1	
5.		Sony Audio DVD High definition quality HDMI 1080P,USB Rec. & Play , Smart operator	1	
6.		IBM P4 Model Net vista	8	
7.		FPGA Universal Kits	4	
8.		24 Port switch Dlink	2	
9.		HP laser 1005 multifunctional printer	1	
10.		FPGA/CPLD Universal Kits with LCD section JTAG Cable 7segment with Software	5	
11.		Dell window 8	8	
12		MATLAB R2015b Software	20 users	

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RESEARCH LAB

5.	Dell Optiplex 360	8
6.	IBM P4 Model Net vista	8
7.	HP Server 5 User	1
8.	Dell Optiplex 780	3
9.	Dell Server Power Edge T420 (5 User)	1
10.	24 port Dlink Switch	1
11.	Dell window 8	5

Software Available

S. No.

Software Name

- | | |
|---|---|
| 1 | EDX signal (1 user) |
| 2 | Opti system(5 users) |
| 3 | TCAD (5 users) |
| 4 | IE3D (1 user) |
| 5 | Standard NetSim Software 9.0-research version (5 users) |
| 6 | PhySim 1.0(10 users) |
| 7 | CADENCE VLSI suit (20 users) |
| 8 | Optispice (5 user) |

COMPUTATIONAL LAB

S. No.	Name Of Equipment / Device	Quantity
1.	DELL AIO Intel Core i5 computers	35
2.	FQC-09478 Window 10 Professional	35
3.	Sony LCD (VPL-EX310)) Projector	01
4.	APC Smart UPS (6000VA)	01
5.	Open Source Turbo C++	35
6.	Universal CPLD / FPGA Kit (Model-VPL-ET-CPLD)*	04
7.	ACTIVE – HDL Version8.25 (Software) *	10 users

* Recieved from EDA lab

MICROWAVE ENGINEERING LAB

S.No.	Name of Equipment/Device	Quantity
1.	Function Generator	03
2.	Signal Generator	04
3.	Dual Trace CRO 15MHz	05
4.	Digital Multi Meter with LCD Display	01
5.	Output power meter	01
6.	Analog Computer	01
7.	Automatic Slide Projector	01
8.	Over Head Projector	01

9.	Servo Stabilizer	01
10.	Regulated DC Power Supply	05
11.	Fixed Attenuator	03
12.	Klystron Power Supply	06
13.	Klystron Mount	06
14.	Standing Wave Indicator	06
15.	Gun Power Supply	01
16.	Klystron Tube	11
17.	Multi Hole Directional coupler	03
18.	Variable Attenuator	03
19.	Circulator	03
20.	Frequency Meter	02
21.	Slotted Section	03
22.	Probe with tuner	03
23.	Wave Guide Detector	06
24.	Slide Screw Tuner	02
25.	EH Tuner	02
26.	E Plain Tee	02
27.	H Plain Tee	02
28.	E Plain Bend	02
29.	H Plain Bend	02
30.	Match Termination	09
31.	Movable Short	06
32.	Pyramidal Wave Guide	03
33.	Twist	02
34.	Wave Guide Stand	20

35.	Cross Directional Coupler	02
36.	Coaxial to Wave Guide Adapter	02
37.	Circulator to Rectangular Wave Guide	02
38.	Microwave Guide Switch	01
39.	Pin Modulator	01
40.	Isolator	05
41.	D R Frequency Meter	05
42.	Magic Tee	02
43.	EH Tuner with Micro Meter Plunger	03
44.	Slide Termination	02
45.	Slide Screw Tuner	02
46.	Dielectric Cell	02
47.	Trainer Kit Frequency Shift Modulator	01
48.	Trainer Kit Boolean Expression	01
49.	Trainer Kit Adder Subtractor	05
50.	Trainer Kit Master Slab J.K. Flip Flop	05
51.	Trainer Kit 4 Bit binary updown Counter	05
52.	Trainer Kit Module N Counter	01
53.	Trainer Kit Logic gates expression	02
54.	Trainer Kit Multiplexer	02
55.	Trainer Kit Demultiplexer	01
56.	Trainer Kit D-Flip-Flop	02
57.	Trainer Kit Counter	01
58.	Digital Trainer Kit	03
59.	Microwave Bench with Gun power Supply	01
60.	Microwave Antenna test bench	01

61.	Vector Network Analyzer(VNA)	01
62.	Multiple power supply	06
63.	Shift register trainer	05
64.	Sync / Asynchronous counter	04
65.	MUX- DEMUX trainer	06
66.	Timer IC 555 kit	05
67.	PLL KIT	05
68.	4-bit binary to grey code converters (using logic gates)	05
69.	ME 702 flip-flops (using NAND gates & TTL IC's)	05
70.	Trainer kit for universal shift register ME 716	05
71.	Phase shift oscillator ME 664A	05
72.	MOD-10 synchronous counter (using D flip-flops)	05
73.	Kit for the usage of op-amp as Instrumentation amplifier	05
74.	Kit for the design of Low pass, High pass and Band pass 1 st order butterworth active filters using op-amps	05
75.	Kit for the usage of op-amp as sawtooth wave generator	05

ELECTRONIC DEVICES AND CIRCUIT LAB

Sr. No.	Description Of Equipment/ Devices	Quantity
1.	Transistor Characteristics	07
2.	Unijunction Transister	01
3.	SCR Characteristics	01
4.	Transistor coupled Amplifier	01
5.	Transistor Amplifier	04
6.	R-C Coupled Two stage Amplifier	06

7.	Class A-Amplifier	01
8.	Wein Bridge oscillator	12
9.	Multivibrator	01
10.	Kelvin Bridge Kit	08
11.	Maxwell's Bridge Kit	11
12.	Wheatstone Bridge	08
13.	Halfwave/FullwaveBridge Rectifier Kit	06
14.	T & π Filter	05
15.	Transistor Biasing ckt. Kit	01
16.	Transistor Emitter Follower ckt.Kit	02
17.	Common Source FET Amp. Kit	03
18.	Constant K- Filter Kit	04
19.	M-Drive Filter Kit	02
20.	Speed Control Using SCR Kit Complete with Motor	01
21.	LCR Meter	07
22.	IC Tester	01
23.	Digital Multi Meters	15
24.	30Mhz CRO (Scientific Model-HM 203 G)	09
25.	Function Generator (Scientific Model-HM 203 G)	09
26.	Digital power Supply (Scientific)	08
27	Wein Bridge (Frequency)	02
28	Wein Bridge (Capacitance)	02
29	Class A-Amplifier, Class B-Amplifier, Class AB-Amplifier	03
30.	Class A,B,C,PUSH-PULL-Amplifier	05
31.	Class C-Amplifier	07
32	Class B PUSH-PULL-Amplifier	04

33.	H parameter of Transistor	05
34.	RC Phase Shift oscillator	07
35.	Hartley Oscillator Kit	07
36.	FET Characteristics	07
37.	FET Amplifier	03
38.	Analog lab trainer kits	02
39.	BJT Characteristics	03
40.	Complementary Symmetry Class B PUSH-PULL-Amplifier	03
41.	Colpitts Oscillator Kit	03
42.	Zener Diode	06
43.	Schering Bridge	05
44.	LCR-Q Meter	06
45.	LCR Resonance	03
46.	Galvanometer 30-0-30	10
47.	Temperature Transducer Trainer (Thermistor, Thermocouple,RTD& IC temperature sensor) includes signal conditioning circuit	05
48.	Optical (Light) Transducer Trainer (Photovoltaic cell, Photoconductive, Pin photo diode, photo transistor) includes signal conditioning circuit	05
49.	Trainer to study input output characteristics of a potentiometer and to use two potentiometer as an error detector	05
50.	Trainer to study transmitter – receiver characteristics of a synchro set to use the set as control component	05
51.	Trainer to study the operation of a DC positional servo system	05
52.	Trainer to study the operation of a AC positional servo system	05
53.	Bread board	10
54.	CRO Probes	30
55.	Desauty&Schearing Bridge	03

56.	Potential Divider Transistor Circuit	05
57.	Multiple DC Power Supply	03

PROJECT LAB

Sr. No.	Description Of Equipment/ Devices	Quantity
1	EP 2006 Prototype M/C	01
2	Function Generator	09
3	30Mhz CRO	09
4	Mini Drilling Machine	01
5	Power Paci Bench Grinder	01

INDUSTRIAL SPONSORED ADVANCED COMMUNICATION LAB

Sr. No.	Description Of Equipment/ Devices	Quantity
1	GSM System (BTS 3900 A Cabinet)	1
2	Distributed Base System (DBS)	1
3	Digital Subscriber Line Access Multiplier (DSLAM)	1
4	Outdoor Wireless Broadband CPE & Indoor Wireless Broadband Router	1
5	CDMA System (BTS 3600 C cabinet)	1
6	ADSL Router Modem, SHDL Router	1
7	Copper Cable, Optical Fibre Cable	1
8	Optical Network Terminal (ONT)	1

TEXAS INSTRUMENTS INNOVATION CENTRE

Sr. No.	Description Of Equipment/ Devices	Quantity
1	MSP430F5529 USB LaunchPad Evaluation Kit	8
2	SimpleLink Wi-Fi CC3200 LaunchPad	4
3	MSP 430F5969 LaunchPad	8
4	MSP430 LaunchPad	5
5	Analog Starter Kit V 10	5
6	ASLK PRO	4
7	PMLK Kit	2
8	CC110L Booster pack	4
9	TIVA LaunchPad	10
10	Ez430RF-2500 MSP430 Wireless Development tools	2
11	MSP 430 LaunchPad	10
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13	SimpleLink TM CC2650 Wireless MCU LaunchPad Kit	2