ELECTRONIC CIRCUITS LAB

Lab-in-charge: Ms RETTY GEORGE

Lab Instructor: Ms JYOTHYLEKSHMI.S

Lab Courses:

2019 Curriculum

ODD Semester	EVEN Semester
Analog Integrated circuits and Simulation Lab ECL 331 (S5 ECE)	Analog Circuits and Simulation Lab ECL 202 (S4 ECE)
Basic Electrical and Electronics Engineering Workshop (ESL 130)	Basic Electrical and Electronics Engineering Workshop (ESL 130)

List of Experiments:

S. No.	Name of Experiments	Targeted POs, PSO
1	RC integrating and differentiating circuits (Transient analysis with different inputs and frequency response).	PO1, PO2, PO3,PO4,PO9,PO10, PO12,PSO1,PSO2
2	Clipping and Clamping circuits (Transient and transfer characteristics).	PO1, PO2, PO3,PO4,PO9,PO10, PO12,PSO1,PSO2
3	RC coupled CE amplifier-frequency response and characteristics.	PO1, PO2, PO3,PO4,PO9,PO10, PO12,PSO1,PSO2
4	Cascade amplifier-gain and frequency response.	PO1, PO2, PO3,PO4,PO9,PO10, PO12,PSO1,PSO2
5	Feedback amplifiers (current series, voltage series) gain and frequency response.	PO1, PO2, PO3,PO4,PO9,PO10, PO12,PSO1,PSO2
6	Low frequency oscillators-RC phase shift or Wien bridge.	PO1, PO2, PO3,PO4,PO9,PO10, PO12,PSO1,PSO2
7	Familiarization of Operational amplifiers-Inverting and Non inverting amplifiers, frequency response, Adder, Integrator, Comparators.	PO1, PO2, PO3,PO4,PO9,PO10, PO12,PSO1,PSO2
8	Measurement of Op Amp parameters.	PO1, PO2, PO3,PO4,PO9,PO10, PO12,PSO1,PSO2

9	Difference Amplifiers.	PO1, PO2, PO3,PO4,PO9,PO10, PO12,PSO1,PSO2
10	Schmitt trigger circuits using Op – Amps.	PO1, PO2, PO3,PO4,PO9,PO10, PO12,PSO1,PSO2
11	Astable and Monostable Multivibrator using Op –Amps.	PO1, PO2, PO3,PO4,PO9,PO10, PO12,PSO1,PSO2
12	Waveform generators using Op- Amps – Triangular and Saw tooth.	PO1, PO2, PO3,PO4,PO9,PO10, PO12,PSO1,PSO2
13	Wien bridge oscillator using Op- Amp	PO1, PO2, PO3,PO4,PO9,PO10, PO12,PSO1,PSO2
14	RC Phase shift Oscillator using Op –Amp.	PO1, PO2, PO3,PO4,PO9,PO10, PO12,PSO1,PSO2
15	Active Second order filters using Op- Amp.	PO1, PO2, PO3,PO4,PO9,PO10, PO12,PSO1,PSO2
16	Notch filters.	PO1, PO2, PO3,PO4,PO9,PO10, PO12,PSO1,PSO2
17	Precision rectifiers using Op –Amp.	PO1, PO2, PO3,PO4,PO9,PO10, PO12,PSO1,PSO2
18	Astable and Monostable Multivibrator using Timer IC 555	PO1, PO2, PO3,PO4,PO9,PO10, PO12,PSO1,PSO2
19	D/A convertors.	PO1, PO2, PO3,PO4,PO9,PO10, PO12,PSO1,PSO2
20	Study of PLL IC.	PO1, PO2, PO3,PO4,PO9,PO10, PO12,PSO1,PSO2
21	Familiarization/Identification of electronic components.	PO1, PO2, PO3,PO4,PO9,PO10, PO12,PSO1,PSO2
22	Familiarization/Application of testing instruments and commonly used tools.	PO1, PO2, PO3,PO4,PO9,PO10, PO12,PSO1,PSO2
23	Testing of electronic components using multimeter.	PO1, PO2, PO3,PO4,PO9,PO10, PO12,PSO1,PSO2
24	Inter-connection methods and soldering practice.	PO1, PO2, PO3,PO4,PO9,PO10, PO12,PSO1,PSO2
25	Printed circuits boards (PCB) processing methods, design and fabrication of a single PCB for a simple circuit with manual etching(ferric chloride) and drilling.	PO1, PO2, PO3,PO4,PO9,PO10, PO12,PSO1,PSO2

26	Assembling of electronic circuits using SMT station.	PO1, PO2, PO3,PO4,PO9,PO10, PO12,PSO1,PSO2
27	Assembling of electronic circuit on general purpose PCB, test and show the functioning. 1.Fixed voltage power supply with transformer, rectifier diode, capacitor filter, zener diode/ IC regulator. 2.Square wave generation using IC 555. 3. Sine wave generation using IC 741 OP- AMP. 4.RC Coupled amplifier with transistor BC 107.	PO1, PO2, PO3,PO4,PO9,PO10, PO12,PSO1,PSO2

Photos

Major Equipment:

S. No.	Name of Equipment
1	Cathode Ray Oscilloscope.
2	Function Generator.
3	Regulated Power Supply.
4	Digital Multimeter .
5	Analog Voltmeter
6	Analog Ammeter

ELECTRONICS ENGINEERING WORKSHOP

Lab-in-charge: Ms. Lekshmi Nair M

Lab Instructor: Ms. Lasitha V

Lab Courses:

2019 Curriculum

ODD Semester	EVEN Semester
Basic Electrical and Electronics Engineering Workshop (ESL 130) S1 AU	Basic Electrical and Electronics Engineering Workshop (ESL 130) S2 AI
(ESL 130) S1 CE	(ESL 130) S2 CS
(ESL 130) S1 EEE	
(ESL 130) S1 ME	
(ESL 130) S1 VLSI	

2024 Curriculum

ODD Semester	EVEN Semester
Basic Electrical and Electronics Engineering Workshop (ESL 106)	Basic Electrical and Electronics Engineering Workshop (ESL 106)

List of Experiments:

S. No.	Name of Experiments	Targeted POs, PSO
1	Familiarization/Identification of electronic components.	PO1, PO12, PSO1
2.	Familiarization/Application of testing instruments and commonly used tools.	PO1, PO12, PSO1
3	Testing of electronic components using multimeter.	PO1, PO12, PSO1
4	Inter-connection methods and soldering practice.	PO1,PO5,PSO1
5	Printed circuits boards (PCB) processing methods, design and fabrication of a single PCB for a simple circuit with manual etching(ferric chloride) and drilling.	PO1,PO5,PSO1
6	Assembling of electronic circuits using SMT station.	PO9,PO10,PO12
7	Assembling electronic circuit on general purpose PCB, test and show the functioning. 1.Fixed voltage power supply with transformer, rectifier diode, capacitor filter, zener diode/ IC regulator. 2.Square wave generation using IC 555. 3. Sine wave generation using IC 741 OP- AMP. 4.RC Coupled amplifier with transistor BC 107.	PO9,PO10,PO12

Photos:

Major Equipment:

S. No.	Name of Equipment
1	Cathode Ray Oscilloscope
2	Function Generator
3	Regulated Power Supply
4	Digital Multimeter
5	Analog Multimeter
6	Analog Voltmeter
7	Analog Ammeter

COMMUNICATION LAB

Lab-in-charge: Ms. Nithya M

Lab Instructor: Ms. Renjy P L

Lab Courses:

2019 Curriculum

ODD Semester	EVEN Semester
Analog Electronics Lab(EEL 203)	Communication Lab(ECL 332)

List of Experiments:

S. No.	Name of Experiments	Targeted POs, PSO
1	FM Generation and using PLL.	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
2	Generation and Detection of PCM Signals.	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
3	Generation and Detection of Delta modulated Signals.	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
4	Generation and Detection of BPSK .	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
5	Clipping and Clamping circuits.	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
6	RC integrating and differentiating circuits.	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
7	RC coupled CE amplifier using BJT in CE Configuration-frequency response and Measurement of gain and Band width.	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
8	JFET amplifier-Measurement of Gain, BW and plotting of frequency response.	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
9	Design and testing of simple Zener voltage Regulator.	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
10	Familiarization of Operational amplifiers-Inverting and Non inverting amplifiers, frequency response, Adder, Integrator, Comparators.	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
11	Precision rectifiers using Op –Amp.	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
12	RC Phase shift Oscillator using Op –Amp.	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2

13	Wien bridge oscillator using Op- Amp.	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
14	Waveform generators using Op- Amps – Square, Triangular and Saw tooth.	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
15	Basic Comparator and Schmitt trigger circuits using Op-amp.	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
16	Astable and Monostable Multivibrator using 555 IC	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2

Photos:

Major Equipment:

S. No.	Name of Equipment
1	Digital Storage Oscilloscope

2	Function Generator
3	Regulated Power Supply
4	Digital Multimeter
5	Universal IC Tester
6	Software –Defined Radio Dongle
7	ADALM –PLUTO SDR
8	FPGA Trainer Kit
9	Dsp kit

MICROWAVE LAB

Lab-in-charge: Ms.Nithya M

Lab Instructor:Ms. Renjy P L

Lab Courses:

2019 Curriculum

ODD Semester	EVEN Semester
ELECTROMAGNETICS LAB(ECL 411)	

List of Experiments:

S. No.	Name of Experiments	Targeted POs, PSO
1	Reflex Klystron Mode Characteristics.	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
2	Gunn Diode characteristics.	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
3	VSWR and Frequency measurement.	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
4	Verify the relation between Guide Wavelength, free space wave length and cut off wavelength for rectangular waveguide.	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
5	Unknown load impedance measurement.	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
6	Setting up of Fiber Optic Digital link.	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
7	Measurement of Numerical Aperture of Fiber.	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
8	Study of Losses in Optical Fiber.	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
9	Voltage vs.Current (V-I) Charecteristics of LED,	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
10	Voltage vs.Current (V-I) Charecteristics of Laser Diode.	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2

Photos:

Major Equipment:

S. No.	Name of Equipment
1	Klystron Microwave Bench Setup
2	Gunn diode Bench setup
3	Digital Storage Oscilloscope
4	Digital Multimeter
5	Analog and Digital Fiber Optic Trainer Kit
6	Laser diode Trainer Kit
7	Fiber Optic Power Meter
8	Antenna Trainer System

COMPUTER LAB 1

Lab-in-charge: Mr. Ajit Joseph

Lab Instructor: Renjy P .L.

Lab Courses:

2019 Curriculum

ODD Semester	EVEN Semester
Basic Electrical and Electronics Engineering Workshop (ESL 130)	Basic Electrical and Electronics Engineering Workshop (ESL 130)
Electromagnetics Lab(ECL 411)	Mini Project(ECD334) S6ECE
Scientific Computing Lab(ECL201)S3 ECE	Microcontroller Lab(ECL204)S4ECE
Digital Signal Processing Lab(ECL333) S5 ECE	
Microprocessor & Microcontroller lab (EEL331)S5 EEE	

List of Experiments:

S. No.	Name of Experiments	Targeted POs, PSO
1	Drawing of electronic circuit diagrams using EDA tool	PO1, PO2, PO3,PO4,PO5,PO9, PO10,PO12,PSO1,PSO2
2	Antenna Experiments. 1. Introduction of CST Microwave Studio. 2. Simulation of Dipole Antenna. 3. Simulation of Patch Antenna. 4. Simulation Antenna Array.	PO1, PO2, PO3,PO4,PO5,PO9, PO10,PO12,PSO1,PSO2
3	1. Familiarization of computing tool (PYTHON). 2. .Familiarization of scientific computing. 3. Realization of Arrays and Matrices. 4. Simple data visualisation. 5. Numerical differentiation and integration. 6. Solution of ordinary differential equation. 7. Simple data analysis with spread sheets. 8. Coin toss and level crossing problems.	PO1, PO2, PO3,PO4,PO5,PO9, PO10,PO12,PSO1,PSO2
4	1.Simulation of Signals(MAT LAB) Generation of Continuous Signals. 2. DFT and its properties. 3. DSP Kit familiarization. 4. Linear Convolution. 5. FFT algorithm and its implementation. 6. IFFT from FFT. 7.FIR filter design 8. Overlap save block Convolution. 9. Overlap add block Convolution.	PO1, PO2, PO3,PO4,PO5,PO9, PO10,PO12,PSO1,PSO2
5	Programs using Keil micro vision software	PO1, PO2, PO3,PO4,PO5,PO9, PO10,PO12,PSO1,PSO2
	1. To write an ALP program to add two eight bit numbers 2. To write a program to subtract two eight bit numbers. 3. To write a program to multiply two eight bit numbers.	PO1, PO2, PO3,PO4,PO5,PO9,

	4. To write a program to divide two eight bit numbers. 5. To write a program to sort N numbers in ascending order. 6. To write an assembly language program to transfer a block of data 7. to write an assembly language program to find the largest number in an array. 8. To write an 8051 assembly language program to convert a BCD number to ASCII. 9. Familiarization Arduino board 10. Arduino program to blink an LED with ON/OFF delays. 11. Arduino using voltage measurement and displaying using I2C LCD	PO10,PO12,PSO1,PSO2

Photos:

Major Equipment:

S. No.	Name of Equipment
1	INTEL CORE i3 PROCESSOR INTEL MOTHERBOARD RAM: 4GB DDR3 500GB SATA HDD PS2 KEYBOARD & USB MOUSE 15.6" LCD MONITOR

COMPUTER LAB 2

Lab-in-charge: Chaithanyadas Nithin

Lab Instructor: Jyothi Lekshmi S.

Lab Courses:

2019 Curriculum

ODD Semester	EVEN Semester
Analog Integrated circuits and Simulation Lab ECL 331 (S5 ECE)	Analog Circuits and Simulation Lab ECL 202 (S4 ECE)
Analog Electronics Lab(EEL 203)	Communication Lab(ECL 332)
Logic circuit design Lab ECL 203 (S3ECE)	Project(ECD416) S8ECE

List of Experiments:

S. No.	Name of Experiments	Targeted POs, PSO
1	Simulation Experiments using LT Spice 1. RC integrating and differentiating circuits (Transient analysis with different inputs and frequency response). 2. Clipping and Clamping circuits (Transient and transfer characteristics). 3. RC coupled CE amplifier-frequency response and characteristics. 4. Feedback amplifiers (current series, voltage series) gain and frequency response. 5. Low frequency oscillators-RC phase shift or Wien bridge. 6. Astable multivibrator using Timer IC 555. 7. Invering and Non Inverting amplifier using OP-Amp. 8. RC Phase shift Oscillator or Wien bridge oscillator using OP-Amp.	PO1, PO2, PO3,PO4,PO5,PO9, PO10,PO12,PSO1,PSO2
2	Simulation using Python 1. Performance of Waveform Coding Using PCM 2. Pulse shaping and matched filtering 3. Eye Diagram 4. Error performance of BPSK 5. Error performance of QPSK	PO1, PO2, PO3,PO4,PO5,PO9, PO10,PO12,PSO1,PSO2
3	Verilog Experiments 1.Familiarization of FPGA, Verilog Syntax, ModelSim- Installation Guidelines	PO1, PO2, PO3,PO4,PO5,PO9,

| 2.Basic gates and Universal gates
3.Adders & Subtractors
4.MUX and DEMUX
5.Flip flops & counters in Verilog | PO10,PO12,PSO1,PSO2 |

Major Equipment:

S. No.	Name of Equipment
1	INTEL CORE i5 PROCESSOR GIGABYTE MOTHERBOARD RAM: 4GB DDR3 500GB SATA HDD PS2 KEYBOARD & USB MOUSE 15.6" LED MONITOR

DIGITAL LAB

Lab-in-charge: Ms.Vrinda. V Gopal .T

Lab Instructor: Ms.Smitha. P.C

Lab Courses:

2019 Curriculum

ODD Semester	EVEN Semester
ECL 203 Logic Design Lab (S3 ECE)	CSL 202 Digital Lab (S4CSE)
ECL 203 Logic Design Lab (S3 EV)	EEL 202 Digital Electronics Lab (S4EEE)

List of Experiments:

S.No	Name of Experiments	Targeted POs,PSO
1	Familiarisation of digital IC trainer kit and gates	PO1, PO2, PO3,PO4,PO9,PO10,PO12, PSO1,PSO2
2	Realization of Boolean expression using basic & universal gates. (SOP and POS forms)	PO1, PO2, PO3,PO4,PO9,PO10,PO12, PSO1,PSO2
3	Verification of De Morgan's law.	PO1, PO2, PO3,PO4,PO9,PO10,PO12, PSO1,PSO2
4	Implementation of Adder & Subtractor	PO1, PO2, PO3,PO4,PO9,PO10,PO12, PSO1,PSO2
5	4-Bit adder/subtractor and BCD adder using IC 7483.	PO1, PO2, PO3,PO4,PO9,PO10,PO12, PSO1,PSO2
6	Realization of code converters using gates.	PO1, PO2, PO3,PO4,PO9,PO10,PO12, PSO1,PSO2

7	BCD to Seven segment decoder and display.	PO1, PO2, PO3,PO4,PO9,PO10,PO12, PSO1,PSO2
8	BCD to decimal decoder.	PO1, PO2, PO3,PO4,PO9,PO10,PO12, PSO1,PSO2
9	Realization of 2-bit binary comparator using gates.	PO1, PO2, PO3,PO4,PO9,PO10,PO12, PSO1,PSO2
10	Study of Multiplexers using gates.	PO1, PO2, PO3,PO4,PO9,PO10,PO12, PSO1,PSO2
11	Logic design using Multiplexer IC 74150.	PO1, PO2, PO3,PO4,PO9,PO10,PO12, PSO1,PSO2
12	Demultiplexers using gates and ICs	PO1, PO2, PO3,PO4,PO9,PO10,PO12, PSO1,PSO2
13	Study of synchronous counters.	PO1, PO2, PO3,PO4,PO9,PO10,PO12, PSO1,PSO2
14	Study of asynchronous counters.	PO1, PO2, PO3,PO4,PO9,PO10,PO12, PSO1,PSO2
15	Study of counters using ICs 7490 ,7492, 7493.	PO1, PO2, PO3,PO4,PO9,PO10,PO12, PSO1,PSO2
16	Study of flip flop ICs (7474,7473,7476)	PO1, PO2, PO3,PO4,PO9,PO10,PO12, PSO1,PSO2
17	Implementation of SR, D, T, JK, and Master Slave flip flops using NAND gates	PO1, PO2, PO3,PO4,PO9,PO10,PO12, PSO1,PSO2
18	Realization of 4- bit serial IN and serial OUT registers using flip flops.	PO1, PO2, PO3,PO4,PO9,PO10,PO12, PSO1,PSO2
19	Ring and Johnson counter using IC 7476.	PO1, PO2, PO3,PO4,PO9,PO10,PO12, PSO1,PSO2
20	Shift register, Ring and Johnson counter using IC 7495	PO1, PO2, PO3,PO4,PO9,PO10,PO12, PSO1,PSO2

Photos:

Major Equipment:

S.No	Name of Equipment
1	Digital IC tester
2	Digital logic IC trainer kit
3	Dual Power supply
4	Digital Multimeter

MICROPROCESSOR & MICROCONTROLLER LAB

Lab-in-charge: Ms. Sandhya Venugopal

Lab Instructor: Ms.Smitha. P.C

Lab Courses:

2019 Curriculum

ODD Semester	EVEN Semester
CSL331 System software and Microprocessor Lab (S5 CSE**)**	ECL 204 Microcontroller Lab (S4ECE)
EEL3331 Microprocessor & Microcontroller Lab (S5 EEE)	ECL 204 Microcontroller Lab (S4EV)

List of Experiments

S. No	Name of Experiments	Targeted POs,PSO
1	Arithmetic operations using 8085- Addition/Subtraction	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
2	Arithmetic operations using 8085- Multiplication/Division	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
3	Binary to BCD conversion using 8085 trainer kit.	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
4	Sorting an array in ascending order using 8085 trainer kit.	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
5	Block transfer using 8085	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
6	8085 interfacing to DAC for square wave generation	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
7	8085 interfacing to DAC for triangular wave generation	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
8	16 bit addition /subtraction using 8086 trainer kit	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
9	Block transfer of a list of numbers using 8086	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2

10	Sorting of N numbers in ascending/descending order using 8086 trainer kit	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
11	Implementation of code conversion between BCD, Binary, Hexadecimal and ASCII	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
12	Interfacing 8086 with stepper motor	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
13	Interfacing of DAC with 8086 kit	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
14	8051 microcontroller ALP programming for arithmetic operations-addition, subtraction, multiplication and division.	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
16	Sum of n numbers using 8051	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
17	Sorting (Ascending /Descending) of data .	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
18	Largest of n numbers using 8051	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
19	Data transfer /exchange between specified memory locations	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
20	Square / cube / square root of 8 bit data.	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
21	Interfacing of stepper motor with 8051	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
22	Interfacing of DAC with 8051	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2
23	Interfacing ADC with 8051 trainer kit	PO1, PO2, PO3,PO4,PO9,PO10,PO12,PSO1,PSO2

Photos:

Major Equipment

S. No	Name of Equipment
1	8085 Microprocessor trainer kit
2	8086 Microprocessor trainer kit
3	8051 Microcontroller trainer kit
4	Cathode ray oscilloscope
5	ADC Interface board
6	Stepper motor Interface board
7	DAC Interface board
8	40 pin Universal programmer
9	VEGA processor

VLSI LAB

Lab-in-charge: Ms.Mary Catherine

Lab Instructor: Ms.Lasitha V.

Lab Courses:

2019 Curriculum

ODD Semester	EVEN Semester
Scientific Computing Lab(ECL201)S3 EV	Basic Electrical and Electronics Engineering Workshop (ESL 130)
Logic Design Lab(ECL203)S3 EV	Analog Circuits and Simulation Lab ECL 202 (S4 EV)
Basic Electrical and Electronics Engineering Workshop (ESL 130)	

List of Experiments:

S. No.	Name of Experiments	Targeted POs, PSO
1	Drawing of electronic circuit diagrams using EDA tool	PO1, PO2, PO3,PO4,PO5,PO9, PO10,PO12,PSO1,PSO2
2	1. Familiarization of computing tool (PYTHON). 2. .Familiarization of scientific computing. 3. Realization of Arrays and Matrices. 4. Simple data visualisation. 5. Numerical differentiation and integration. 6. Solution of ordinary differential equation. 7. Simple data analysis with spread sheets. 8. Coin toss and level crossing problems.	PO1, PO2, PO3,PO4,PO5,PO9, PO10,PO12,PSO1,PSO2
3	Verilog Experiments 1.Familiarization of FPGA, Verilog Syntax, ModelSim- Installation Guidelines 2.Basic gates and Universal gates 3.Adders & Subtractors 4.MUX and DEMUX 5.Flip flops & counters in Verilog	PO1, PO2, PO3,PO4,PO5,PO9, PO10,PO12,PSO1,PSO2

4	Simulation Experiments using LT Spice 1. RC integrating and differentiating circuits (Transient analysis with different inputs and frequency response). 2. Clipping and Clamping circuits (Transient and transfer characteristics). 3. RC coupled CE amplifier-frequency response and characteristics. 4. Feedback amplifiers (current series, voltage series) gain and frequency response. 5. Low frequency oscillators-RC phase shift or Wien bridge.	PO1, PO2, PO3,PO4,PO5,PO9, PO10,PO12,PSO1,PSO2

Major Equipment

S. No	Name of Equipment
1	PROCESSOR INTEL CORE i3 Motherboard H510M-B RAM: 4GB DDR4 Adata SSD HDD 256GB NVME Cabinet with SMBS Keyboard & Mouse 18.5" Monitor HDMI

PROJECT LAB

Lab-in-charge: Ms. Anandhi. V

Lab Instructor: Ms. Smitha. P.C.

Major Equipment

S. No	Name of Equipment
1	PROCESSOR INTEL CORE i3 Motherboard H510M-B RAM: 4GB DDR4 Adata SSD HDD 256GB NVME Cabinet with SMPS Keyboard & Mouse 18.5" Monitor HDMI
2	Digital Storage Oscilloscope
3	Function Generator
4	Power supply
5	Digital Multimeter
6	Digital Soldering station