



**Sri Indu Institute of  
Engineering & Technology**

Recognized Under 2(f) of UGC Act 1956  
Approved by AICTE, New Delhi  
Affiliated to JNTUH, Hyderabad.

# **COURSE FILE**

**ON**

## **ELECTRONIC DEVICES AND CIRCUITS LAB**

**Course Code - EC306PC**

**II B.Tech I-SEMESTER**

**A.Y.: 2022-2023**

**Prepared by**

**Mr. K. RAJENDER**  
**Assistant Professor**

**Head of the Department**  
Electronics and Communication Engg. Dept  
SRI INDU INSTITUTE OF ENGG & TECH  
Sheriguda(V), Ibrahimpatnam(M), R.R.Dist-501 510

**PRINCIPAL**  
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R.R. Dist. Telangana-501 510.



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## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

<b>Academic Year</b>	2022-2023
<b>Course Title</b>	ELECTRONIC DEVICES AND CIRCUITS LAB
<b>Course Code</b>	EC306PC
<b>Programme</b>	B.Tech
<b>Year &amp; Semester</b>	II year I-semester
<b>Room Number</b>	A-113
<b>Name of the lab incharge</b>	Mrs.A.Sindhuja
<b>Name of the faculty incharge</b>	Mr. K.Rajender

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## INSTITUTE VISION AND MISSION

### Vision:

To become a premier institute of academic excellence by providing the world class education that transforms individuals into high intellectuals, by evolving them as empathetic and responsible citizens through continuous improvement.

### Mission:

**IM1:** To offer outcome-based education and enhancement of technical and practical skills.

**IM2:** To Continuous assess of teaching-learning process through institute-industry collaboration.

**IM3:** To be a centre of excellence for innovative and emerging fields in technology development with state-of-art facilities to faculty and students' fraternity.

**IM4:** To Create an enterprising environment to ensure culture, ethics and social responsibility among the stakeholders.

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## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

### DEPARTMENT VISION AND MISSION

#### Vision:

To become a recognized center in the field of Electronics and Communication Engineering by producing creative engineers with social responsibility and address ever-changing global challenges.

#### Mission:

**DM1:** To facilitate an academic environment that enables student's centric learning.

**DM2:** To provide state-of-the-art hardware and software technologies to meet industry requirements.

**DM3:** To continuously update the Academic and Research infrastructure.

**DM4:** To Conduct Technical Development Programs for overall professional caliber of Stake Holders.

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## PROGRAM EDUCATIONAL OBJECTIVES

Program Educational objectives are to Promote:

- PEO1:** Graduates with a strong foundation in Electronics and Communication Engineering, Science and Technology to become successful in the chosen professional career.
- PEO2:** Graduates with ability to execute innovative ideas for Research and Development with continuous learning.
- PEO3:** Graduates inculcated with industry based soft-skills to enable employability.
- PEO4:** Graduates demonstrate with ability to work in interdisciplinary teams and ethical professional behavior.

## PROGRAM SPECIFIC OUTCOMES

- PSO 1: Design Skills:** Design, analysis and development a economical system in the area of Embedded system & VLSI design.
- PSO 2: Software Usage:** Ability to investigate and solve the engineering problems using MATLAB, Keil and Xilinx.

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## PROGRAM OUTCOMES

- 1. ENGINEERING KNOWLEDGE:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- 2. PROBLEM ANALYSIS:** Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- 3. DESIGN/DEVELOPMENT OF SOLUTIONS:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- 4. CONDUCT INVESTIGATIONS OF COMPLEX PROBLEMS:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- 5. MODERN TOOL USAGE:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
- 6. THE ENGINEER AND SOCIETY:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- 7. ENVIRONMENT AND SUSTAINABILITY:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- 8. ETHICS:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- 9. INDIVIDUAL AND TEAM WORK:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- 10. COMMUNICATION:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, give and receive clear instructions.
- 11. PROJECT MANAGEMENT AND FINANCE:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
- 12. LIFE-LONG LEARNING:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**  
**B.Tech. in ELECTRONICS AND COMMUNICATION ENGINEERING**  
**COURSE STRUCTURE & SYLLABUS (R18)**

Applicable From 2018-19 Admitted Batch

**II YEAR I SEMESTER**

S.No.	Course Code	Course Title	L	T	P	Credits
1	EC301PC	Electronic Devices and Circuits	3	1	0	4
2	EC302PC	Network Analysis and Transmission Lines	3	0	0	3
3	EC303PC	Digital System Design	3	1	0	4
4	EC304PC	Signals and Systems	3	1	0	4
5	EC305ES	Probability Theory and Stochastic Processes	3	0	0	3
6	EC306PC	Electronic Devices and Circuits Lab	0	0	2	1
7	EC307PC	Digital System Design Lab	0	0	2	1
8	EC308ES	Basic Simulation Lab	0	0	2	1
9	*MC309	Constitution of India	3	0	0	0
		<b>Total Credits</b>	<b>18</b>	<b>3</b>	<b>6</b>	<b>21</b>

**II YEAR II SEMESTER**

S.No.	Course Code	Course Title	L	T	P	Credits
1	MA401BS	Laplace Transforms Numerical Methods & Complex Variables	3	1	0	4
2	EC402PC	Electromagnetic Fields and Waves	3	0	0	3
3	EC403PC	Analog and Digital Communications	3	1	0	4
4	EC404PC	Linear IC Applications	3	0	0	3
5	EC405PC	Electronic Circuit Analysis	3	0	0	3
6	EC406PC	Analog and Digital Communications Lab	0	0	3	1.5
7	EC407PC	IC Applications Lab	0	0	3	1.5
8	EC408PC	Electronic Circuit Analysis Lab	0	0	2	1
9	*MC409	Gender Sensitization Lab	0	0	2	0
		<b>Total Credits</b>	<b>15</b>	<b>2</b>	<b>10</b>	<b>21</b>

\*MC – Satisfactory/Unsatisfactory

## EC306PC: ELECTRONIC DEVICES AND CIRCUITS LAB

B.Tech. II Year I Sem.

L	T	P	C
0	0	2	1

### List of Experiments(Twelve experiments to be done):

Verify any twelve experiments in H/W Laboratory

1. PN Junction diode characteristics A) Forward bias B) Reverse bias.
2. Zener diode characteristics and Zener as voltage Regulator
3. Full Wave Rectifier with & without filters
4. Input and output characteristics of BJT in CE Configuration
5. Input and output characteristics of FET in CS Configuration
6. Common Emitter Amplifier Characteristics
7. Common Base Amplifier Characteristics
8. Common Source amplifier Characteristics
9. Measurement of h-parameters of transistor in CB ,CE, CC configurations
10. Switching characteristics of a transistor
11. SCR Characteristics.
12. Types of Clippers at different reference voltages
13. Types of Clampers at different reference voltages
14. The steady state output wave form of clampers for a square wave input

### Major Equipment required for Laboratories:

1. RegulatedPowerSuppliers,0-30V
2. 20MHz, Dual Channel Cathode Ray Oscilloscopes.
3. Functions Generators- Sine and Square wave signals
4. Multimeters
5. Electronic Components





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(Approved by AICTE, New Delhi and Affiliated to JNTUH, Hyderabad)

Khalsa Ibrahimpatnam, Sheriguda (V), Ibrahimpatnam (M), Ranga Reddy Dist., Telangana – 501 510

Website: <https://siiet.ac.in/>

**Course: Electronic Devices And Circuits Lab (C216)**

**Class: II ECE-A**

## Course Outcomes

After completing this course the student will be able to:

- |        |   |                                      |
|--------|---|--------------------------------------|
| C216.1 | Construct and analyze the characteristics of PN junction diode, Zener diode and Silicon Controlled Rectifier.                         | Creating, Applying, Analyzing        |
| C216.2 | Implement the rectifier circuits with and without filter and voltage regulator.   | Applying                             |
| C216.3 | Implement the various types of clippers and clampers at different reference voltages.   | Applying                             |
| C216.4 | Design and observe the switching characteristics of transistor.   | Creating ,Understanding and Applying |
| C216.5 | Observe the characteristics of CE and CS configuration and calculate the h- parameters of transistors in CE, CB and CC configuration. | Understanding , Application          |
| C216.6 | Design and analyze the characteristics of CE, CB and CS amplifiers.   | Understanding ,Creating, Applying    |

## Mapping of course outcomes with program outcomes:

High -3      Medium -2      Low-1

PO / CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2
C216.1	3	2	-	-	1	1	1	1	2	2	2	3	3	3
C216.2	-	1	3	-	-	1	1	1	2	2	2	2	3	3
C216.3	1	3	-	-	1	1	1	1	2	2	2	-	3	3
C216.4	1	-	2	2	-	1	1	1	2	2	2	3	3	3
C216.5	1	-	3	-	1	1	1	1	2	2	2	2	3	3
C216.6	3	3	-	-	-	1	1	1	2	2	2	3	3	3
<b>C216</b>	<b>1.8</b>	<b>2.3</b>	<b>2.7</b>	<b>2</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.6</b>	<b>3.00</b>	<b>3.00</b>



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## LIST OF EXPERIMENTS AND THEIR CO, PO/PSO MAPPING

S.No	Name of The Experiment	CO	PO/PSO
1	PN Junction diode characteristics A) Forward bias B) Reverse bias.	1	1,2,5,6,7,8,9,10,11,12/1,2
2	Zener diode V-I characteristics and Zener diode as voltage regulator.	1	1,2,5,6,7,8,9,10,11,12/1,2
3	Full wave rectifier with and without filters.	2	2,3,6,7,8,9,10,11,12/1,2
4	Input and output Characteristics of a BJT in CE configuration and calculation of h parameters.	5	1,3,5,6,7,8,9,10,11,12/1,2
5	Input and output characteristics of FET in CS Configuration	5	1,3,5,6,7,8,9,10,11,12/1,2
6	Common Emitter Amplifier Characteristics	6	1,2,6,7,8,9,10,11,12/1,2
7	Common Base Amplifier Characteristics	6	1,2,6,7,8,9,10,11,12/1,2
8	Common Source amplifier Characteristics	6	1,2,6,7,8,9,10,11,12/1,2
9	Switching characteristics of a transistor	4	1,3,4,6,7,8,9,10,11,12/1,2/1
10	Types of Clippers at different reference voltages	3	1,2,5,6,7,8,9,10,11/1,2
11	Types of Clampers at different reference voltages	3	1,2,5,6,7,8,9,10,11/1,2
12	The steady state output waveform of clampers for a square wave input	3	1,2,5,6,7,8,9,10,11/1,2



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## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

### Class Timetable

CLASS: II-B.Tech ECE-A

A.Y:2022-23

SEMESTER: I

LH: C-101

TIME/ DAY	I 9:40-10:30	II 10:30-11:20	III 11:20-12:10	IV 12:10-1:00	1:00-1:30	V 1:30-2:20	VI 2:20-3:10	VII 3:10-4:00
MON	EDC	COI	EDC LAB / DSD LAB		L U N C H	DSD	NATL	SPORTS
TUE	PTSP	NATL	DSD	COI		EDC	SS	DSD(T)/SS(T)
WED	SS	PTSP	DSD LAB / BS LAB			DSD	SS(T)/EDC(T)	EDC
THU	NATL	PTSP	COI	EDC(T)/DSD(T)		SS	DSD	COUN
FRI	SS	EDC	COI	PTSP		LIB	CO-CU/DAA	
SAT	EDC	DSD	SS	NATL		PTSP	BS LAB / EDC LAB	

\*(T) - Tutorial Concern Faculty

Course Code	Course Name	Name of the Faculty	Course Code	Course Name	Name of the Faculty
EC301PC	EDC-Electronic Devices and Circuits	K.Rajender	EC306PC	EDC LAB - Electronic Devices and Circuits Lab	K.Rajender/B.Ashwini/M.Srilatha
EC302PC	NATL-Network Analysis and Transmission Lines	M.Nagaraju	EC307PC	DSD LAB - Digital System Design Lab	G.Anusha/T.Divya/P.Krishna Rao
EC303PC	DSD-Digital System Design	G.Anusha	EC308ES	BS LAB - Basic Simulation Lab	P.Rajendra/T.Naresh
EC304PC	SS-Signals and Systems	P.Rajendra	LIB	Library	B.Ashwini/Dr.K.Srinivasa Reddy
EC305ES	PTSP-Probability Theory and Stochastic Processes	T.Naresh	COUN	Counseling	K.Rajender/G.Anusha/G.Anitha
*MC309	COI-Constitution of India	S.Swapna	CO-CU/DAA	Co-Curricular/Dept.Assc.Act.	K.Rajender/T.Naresh/D.Aruna
			SPORTS	Sports	G.Anitha/P.Sumana

Class Incharge

Head of the Department

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## Lab External Question Paper

Subject Name: Electronic Devices and Circuits Lab

Year & Semester: II-I

A.Y:2022-2023

- 
1. a) Plot Volt-Ampere Characteristics of P-N Diode A) Forward bias B) Reverse bias..  
b) Find cut-in voltage for P-N Junction diode?
  2. a) Plot Volt-Ampere Characteristics of Zener Diode.  
b) Find Zener Breakdown Voltage in Reverse Biased conditions.
  3. Find below parameters for Full- Wave Rectifier with and without filter.
    - a) Percentage Regulation
    - b) Ripple Factor
    - c) Efficiency
  4. Draw input and output characteristics of a transistor in Common Source Configuration.
  5. Draw input and output characteristics of a transistor in C.E Configuration.
  6. Plot frequency response of FET common source amplifier and find its cut off frequencies and Band width.
  7. Plot frequency response of Common Emitter Amplifier and calculate its Bandwidth.
  8. Plot frequency response of C.B Amplifier and calculate its Bandwidth.
  9. Switching characteristics of a transistor.
  10. Draw the input and output waveforms of Clippers at different reference voltages.
  11. Draw the input and output wave forms of Clampers at different reference voltages for sine wave input.
  12. Draw the input and output wave forms of clampers at different reference voltages for a square wave input.



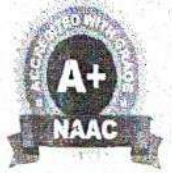
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## DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING

### B.Tech II ECE Regular Lab External Exams Timetable

A.Y: 2022-23

SEM: I

S. No.	Name of the Lab & Lab Number	Year/ Branch Section	Date & Time of the Lab Exam	Lab Internal Examiners Details
1	Electronic Devices and Circuits Lab (A-113)	II ECE-A	11.04.2023 (10:00 AM - 01:00 PM)	Mr.K.Rajender & Mrs.G.Nirmala
		II ECE-B	12.04.2023 (10:00 AM - 01:00 PM)	
2	Digital System Design Lab (A-313)	II ECE-A	12.04.2023 (10:00 AM - 01:00 PM)	Mrs.G.Anusha & Mrs.P.Srilatha
		II ECE-B	13.04.2023 (10:00 AM - 01:00 PM)	
3	Basic Simulation Lab (C-002)	II ECE-A	13.04.2023 (10:00 AM - 01:00 PM)	Mr.T.Naresh & Mrs.S.Alekhya
		II ECE-B	11.04.2023 (10:00 AM - 01:00 PM)	

**HOD/ECE**  
**Head of the Department**  
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## DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING

### B.Tech II ECE Regular Lab External Examiners from TKREC

A.Y: 2022-23

SEM: I

S. No.	Name of the Lab & Lab No.	Year/ Branch Section	Date & Time of the Lab Exam	Lab Internal Examiners Details	Lab External Examiners Details
1	Electronic Devices and Circuits Lab(A-113)	II ECE-A	11.04.2023 (10:00 AM – 01:00 PM)	Mr.K.Rajender 8897756066	B.Sunitha
		II ECE-B	12.04.2023 (10:00 AM – 01:00 PM)		Dr.G.Sirisha
2	Digital System Design Lab (A-313)	II ECE-A	12.04.2023 (10:00 AM – 01:00 PM)	Mrs.G.Anusha 8639937510	V.Nageshwar Reddy
		II ECE-B	13.04.2023 (10:00 AM – 01:00 PM)		V Lavanya
3	Basic Simulation Lab(C-002)	II ECE-A	13.04.2023 (10:00 AM – 01:00 PM)	Mr.T.Naresh 8919911324	V Amulya
		II ECE-B	11.04.2023 (10:00 AM – 01:00 PM)		Y Prathyusha
4	Analog and Digital Electronics Lab (A-114)	II CSE-A	15.04.2023 (10:00 AM – 01:00 PM)	Mrs.K.Padma 9030468759	B Rekha
		II CSE-B	11.04.2023 (10:00 AM – 01:00 PM)		B Nireesha
		II CSE-C	12.04.2023 (01:00 PM – 04:00 PM)		V.Nageshwar Reddy
		II CSE (CS)	11.04.2023 (01:00 PM – 04:00 PM)	Mrs.P.Kavitha 8125250145	B Sunitha
		II CSE (IOT)	12.04.2023 (10:00 AM – 01:00 PM)		N Aravind

HOD/ECE

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Website: <https://silet.ac.in/>

## LAB OCCUPANCY CHART

### ELECTRONIC DEVICES AND CIRCUITS LAB

A.Y : 2022-23

SEM-I

	I 9:40-10:30	II 10:30 -11:20	III 11:20-12:10	IV 12:10-1:00	1:00-1:30	V 1:30-2:20	VI 2:20-3:10	VII 3:10-4:00
MON			EDC Lab II ECE-A		L U N C H			
TUE							EDC Lab II ECE-B	
WED	MAINTENANCE							
THU								
FRI			EDC Lab II ECE-B					
SAT		EECE I ECE						EDC Lab II ECE-A

  
LAB INCHARGE

  
HOD

**Head of the Department**  
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## DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

### Do's and Don'ts

- All students must observe the dress code while in the laboratory
- Foods, drinks and smoking are **NOT** allowed
- All bags must be left at the indicated place.
- The lab time table must be strictly followed.
- Be **PUNCTUAL** for your laboratory session.
- Experiment must be completed within the given time.
- Noise must be kept to minimum.
- Workspace must be kept clean and tidy at all time.
- Handle all apparatus with care.
- All students are liable for any damage to equipment due to their own negligence.
- All equipment, apparatus, tools and components must be **RETURNED** to their original place after use.
- Students are strictly **PROHIBITED** from taking out any items from the laboratory.
- Report immediately to the lab supervisor if any injury occurred.
- Report immediately to the lab supervisor if any damages to equipment.

### **BEFORE LEAVING LAB**

- Place the stools under the lab bench.
- Turn off the power to all instruments.
- Please check the laboratory notice board regularly for updates.





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Khalsa Ibrahimpatnam, Sheriguda (V), Ibrahimpatnam (M), Ranga Reddy Dist., Telangana – 501 510

Website: <https://siiet.ac.in/>

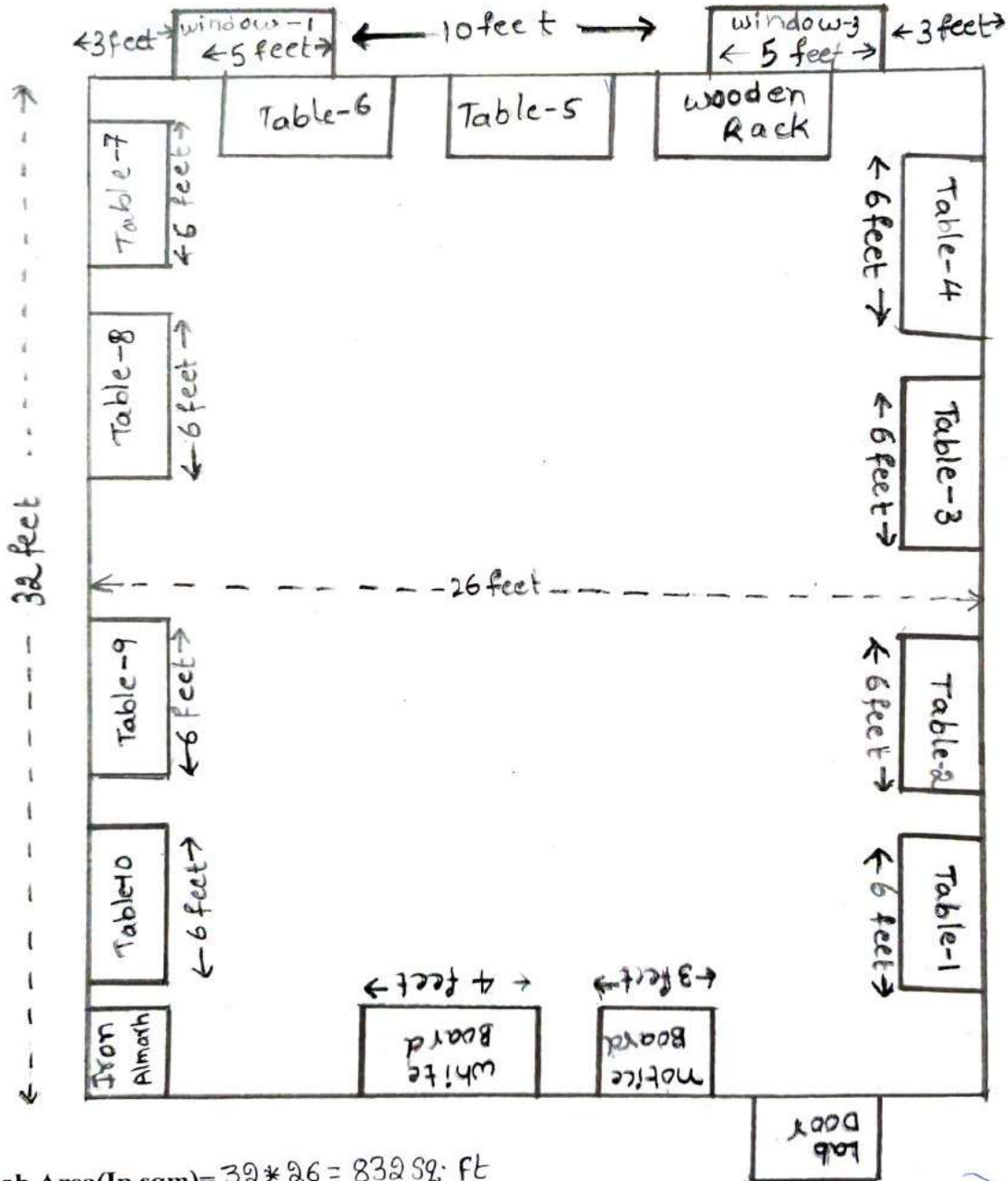
## ELECTRONIC DEVICES AND CIRCUITS LAB

### PHSICAL LAB FLOOR PLAN

ROOM NO: 113

BLOCK: A

FLOOR: I



Lab Area(In sqm)=  $32 * 26 = 832$  Sq. Ft

*Sindhya.*  
Lab In-charge

*[Signature]*  
Head of The Department  
**Head of the Department**  
Electronics and Communication Engg. Dept  
SRI INDU INSTITUTE OF ENGG & TECH  
Sheriguda(V), Ibrahimpatnam(M), R.R.Dist-501 510



# **SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY**

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## **Lab manual link:**

[https://drive.google.com/file/d/1yN\\_BALFllsFhkUBpfIE8xRFbiO7PTWdg/view?usp=sharing](https://drive.google.com/file/d/1yN_BALFllsFhkUBpfIE8xRFbiO7PTWdg/view?usp=sharing)



43	22X35A0409	5	5	13
44	22X35A0410	5	5	14
45	22X35A0411	5	4	15
46	22X35A0412	5	4	15
47	22X35A0413	5	5	14
48	22X35A0414	5	5	13
49	22X35A0415	5	4	14
50	22X35A0416	5	5	14
51	22X35A0417	5	5	14
52	22X35A0418	5	5	14
53	22X35A0419	5	4	13
54	22X35A0420	5	5	14
Target set by the faculty / HoD		3.00	3.00	9.00
Number of students performed above the target		54	54	52
Number of students attempted		54	54	54
Percentage of students scored more than target		100%	100%	96%

**CO Mapping with Exam Questions:**

CO - 1	Y	Y	Y
CO - 2	Y	Y	Y
CO - 3	Y	Y	Y
CO - 4	Y	Y	Y
CO - 5	Y	Y	Y
CO - 6	Y	Y	Y

% Students Scored > Target %	100%	100%	96%
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**CO Attainment based on Exam Questions:**

CO - 1	100%	100%	96%
CO - 2	100%	100%	96%
CO - 3	100%	100%	96%
CO - 4	100%	100%	96%
CO - 5	100%	100%	96%
CO - 6	100%	100%	96%

CO	Intrnal practic	DDE	Overall	Level
CO-1	100%	96%	98%	3.00
CO-2	100%	96%	98%	3.00
CO-3	100%	96%	98%	3.00
CO-4	100%	96%	98%	3.00
CO-5	100%	96%	98%	3.00
CO-6	100%	96%	98%	3.00

Attainment Level	
1	40%
2	50%
3	60%

Attainment (Internal 1 Examination) = **3.00**

**NOTE:**

**A+A+CD+MG : AIM+APPARATUS+CIRCUIT DIAGRAM+MODEL GRAPH**

**T+P+C+R : THEORY+PROCEDURE+CALCULATION+RESULT**

**DDE : Day to Day Evaluation**

# SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY



Department of Electronics and Communication Engineering

## Course Outcome Attainment (Internal Examination-2)

Name of the faculty : K.RAJENDER Academic Year: 2022-23  
 Branch & Section: ECE - A Examination: II Internal  
 Course Name: ELECTRONIC DEVICES & CIRCUITS LAB Year/Semester: II/I

S.No	HT No.	A+A+CD+MG	T+P+C+R	DDE
Max. Marks ==>		5	5	15
1	21X31A0401	5	4	14
2	21X31A0402	5	5	13
3	21X31A0403	5	4	11
4	21X31A0404	5	5	13
5	21X31A0405	5	4	13
6	21X31A0406	5	4	14
7	21X31A0407	5	4	15
8	21X31A0408	4	4	12
9	21X31A0409	4	3	10
10	21X31A0410	5	4	14
11	21X31A0412	5	4	13
12	21X31A0413	5	5	14
13	21X31A0414	5	4	11
14	21X31A0415	5	5	13
15	21X31A0416	4	3	10
16	21X31A0417	5	4	12
17	21X31A0418	5	4	13
18	21X31A0420	5	5	14
19	21X31A0421	5	5	13
20	21X31A0422	5	5	13
21	21X31A0423	5	4	14
22	21X31A0424	4	4	14
23	21X31A0425	5	3	12
24	21X31A0426	5	4	14
25	21X31A0427	5	5	14
26	21X31A0428	4	4	14
27	21X31A0429	5	4	14
28	21X31A0431	5	4	14
29	21X31A0432	5	4	14
30	21X31A0433	5	4	14
31	21X31A0434	5	5	14
32	21X31A0435	5	4	14
33	21X31A0436	4	3	7
34	21X31A0437	4	3	7
35	22X35A0401	5	4	14
36	22X35A0402	5	5	13
37	22X35A0403	5	5	13
38	22X35A0404	5	5	14
39	22X35A0405	5	4	15
40	22X35A0406	5	5	14
41	22X35A0407	5	5	15
42	22X35A0408	5	5	14

43	22X35A0409	5	5	13
44	22X35A0410	5	5	14
45	22X35A0411	5	4	15
46	22X35A0412	5	4	15
47	22X35A0413	5	5	14
48	22X35A0414	5	5	13
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CO - 1	Y	Y	Y
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CO - 3	Y	Y	Y
CO - 4	Y	Y	Y
CO - 5	Y	Y	Y
CO - 6	Y	Y	Y

% Students Scored >Target %	100%	100%	96%
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**CO Attainment based on Exam Questions:**

CO - 1	100%	100%	96%
CO - 2	100%	100%	96%
CO - 3	100%	100%	96%
CO - 4	100%	100%	96%
CO - 5	100%	100%	96%
CO - 6	100%	100%	96%

CO	Intrnal practica	DDE	Overall	Level
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CO-2	100%	96%	98%	3.00
CO-3	100%	96%	98%	3.00
CO-4	100%	96%	98%	3.00
CO-5	100%	96%	98%	3.00
CO-6	100%	96%	98%	3.00

Attainment Level	
1	40%
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Attainment (Internal 2 Examination) = **3.00**

**NOTE:**

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# SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY



Department of Electronics and Communication Engineering

## Course Outcome Attainment

Name of the faculty K.RAJENDER Academic Year: 2022-23  
Branch & Section: ECE - A Year: II  
Course Name: ELECTRONIC DEVICES & CIRCUITS LAB Semester: I

Course Outcomes	1st Internal Exam	2nd Internal Exam	Internal Exam	University Exam	Attainment Level
CO1	3.00	3.00	3.00	3.00	3.00
CO2	3.00	3.00	3.00	3.00	3.00
CO3	3.00	3.00	3.00	3.00	3.00
CO4	3.00	3.00	3.00	3.00	3.00
CO5	3.00	3.00	3.00	3.00	3.00
CO6	3.00	3.00	3.00	3.00	3.00
<b>Internal &amp; University Attainment:</b>			3.00	3.00	
<b>Weightage</b>			25%	75%	
<b>CO Attainment for the course (Internal, University)</b>			0.75	2.25	
<b>CO Attainment for the course (Direct Method)</b>			3.00		

Overall course attainment level

**3.00**



# SRI INDU INSTITUTE OF ENGINEERING & TECHNOLOGY



Department of Electronics and Communication Engineering

## Program Outcome Attainment (from Course)

Name of Faculty: K.RAJENDER Academic Year: 2022-23  
 Branch & Section: ECE - A Year: II  
 Course Name: ELECTRONIC DEVICES & CIRCUITS LAB Semester: I

### CO-PO mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	2	-	-	1	1	1	1	2	2	2	3	3	3
CO2	-	1	3	-	-	1	1	1	2	2	2	2	3	3
CO3	1	3	-	-	1	1	1	1	2	2	2	-	3	3
CO4	1	-	2	2	-	1	1	1	2	2	2	3	3	3
CO5	1	-	3	-	1	1	1	1	2	2	2	2	3	3
CO6	3	3	-	-	-	1	1	1	2	2	2	3	3	3
<b>Course</b>	<b>1.8</b>	<b>2.3</b>	<b>2.7</b>	<b>2.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.6</b>	<b>3.0</b>	<b>3.0</b>

CO	Course Outcome Attainment
CO1	3.00
CO2	3.00
CO3	3.00
CO4	3.00
CO5	3.00
CO6	3.00
<b>Overall course attainment level</b>	<b>3.00</b>

### PO-ATTAINMENT

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO Attainment	1.80	2.25	2.67	2.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.60	3.00	3.00

CO contribution to PO - 33%, 67%, 100% (Level 1/2/3)