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

Analog and Digital Communications Lab

Course Code – EC406PC

II B.Tech II-SEMESTER

A.Y.: 2022-2023

Prepared by

Mrs. M.Ganesh
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
Sri Indu Institute of Engineering & Tech
Sheriguda(Vill), Ibrahimpatnam
R.R. Dist. Telangana-501 510.

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Name of the physical laboratory	Analog and Digital Communications Lab
Course code	EC406PC
Room No.	A-314
Name of the lab in charge	M. Ganesh
Name of the Faculty in charge	S. Naresh

Index of Course File

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.

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
Sri Indu Institute of Engineering & Tech
Sheriguda(Vill), Ibrahimpatnam
R.R. Dist. Telangana-501 510.

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.

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
Sri Indu Institute of Engineering & Tech
Sheriguda(Vill), Ibrahimpatnam
R.R. Dist. Telangana-501 510.

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.

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
Sri Indu Institute of Engineering & Tech
Sheriguda(Vill), Ibrahimpatnam
R.R. Dist. Telangana-501 510.

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.

SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY
Accredited by NAAC with A+ Grade, Recognized under 2(f) of UGC Act 1956
(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 Syllabus with Structure

R18 B.Tech. ECE Syllabus **JNTU HYDERABAD**

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
		Total Credits	**18**	**3**	**6**	**21**

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	1	0	4
5	EC405ES	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	EC408ES	Electronic Circuit Analysis Lab	0	0	2	1
9	*MC409	Gender Sensitization Lab	0	0	2	0
		Total Credits	**15**	**2**	**10**	**21**

*MC – Satisfactory/Unsatisfactory

EC406PC: ANALOG AND DIGITAL COMMUNICATIONS LAB

B.Tech II Year II Semester

L	T	P	C
0	0	3	1.5

Note:

- Minimum 12 experiments should be conducted:
- All these experiments are to be simulated first either using MATLAB, COMSIM or any other simulation package and then to be realized in hardware

List of Experiments:

1. (i) Amplitude modulation and demodulation (ii) Spectrum analysis of AM
2. (i) Frequency modulation and demodulation (ii) Spectrum analysis of FM
3. DSB-SC Modulator & Detector
4. SSB-SC Modulator & Detector (Phase Shift Method)
5. Frequency Division Multiplexing & De multiplexing
6. Pulse Amplitude Modulation & Demodulation
7. Pulse Width Modulation & Demodulation
8. Pulse Position Modulation & Demodulation
9. PCM Generation and Detection
10. Delta Modulation
11. Frequency Shift Keying: Generation and Detection
12. Binary Phase Shift Keying: Generation and Detection
13. Generation and Detection (i) DPSK (ii) QPSK

Major Equipments required for Laboratories:

1. CROs: 20MHz
2. Function Generators: 2MHz
3. Spectrum Analyzer
4. Regulated Power Supplies: 0-30V
5. MAT Lab/Equivalent Simulation Package with Communication tool box
6. Analog and Digital Modulation and Demodulation Trainer Kits.

SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

Accredited by NAAC with A+ Grade, Recognized under 2(f) of UGC Act 1956
(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/

CO, PO,PSO'S MAPPING

A.Y: 2022-23 **SEMESTER: II** **CLASS: II ECE**

Course Outcomes After completing this course, the student will be able to:

C226.1	Design and Implement different modulation and demodulation techniques.	(Knowledge)
C226.2	Apply time division multiplexing concepts in different pulse modulation techniques.	(Application)
C226.3	Demonstrate the ability to generate PCM signals from analog signals.	(Analysis)
C226.4	Describe practical implementation of baseband modulation techniques.	(Knowledge)
C226.5	Design and implement different pulse modulation techniques like PAM, PWM and PPM.	(Synthesis)
C226.6	Compare analog and digital modulation techniques.	(Evaluation)

Mapping of course outcomes with program outcomes:

High -3 Medium -2 Low-1

PO / CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C226.1	3	2	2	-	2	1	-	-	2	2	-	3	2	3
C226.2	3	2	-	-	1	2	-	1	-	3	-	2	2	3
C226.3	3	3	-	2	2	1	2	-	-	2	-	-	2	3
C226.4	3	3	-	2	2	2	-	1	2	-	2	-	2	3
C226.5	3	2	-	-	1	-	-	-	-	-	3	2	3	3
C226.6	3	2	2	-	-	-	1	-	1	-	2	3	2	3
AVG	**3**	**2.33**	**2**	**2**	**1.6**	**1.5**	**1.5**	**1**	**1.6**	**2.33**	**2.33**	**2.5**	**2.16**	**3**

LIST OF EXPERIMENTS AND THEIR CO, PO, PSO MAPPING

S.No	Name of The Experiment	CO	PO	PSO
1	i) Amplitude modulation and demodulation (ii) Spectrum analysis of AM	1	1,2,3,5,6,9,10,12	1,2
2	(i) Frequency modulation and demodulation (ii) Spectrum analysis of FM	1	1,2,3,5,6,9,10,12	1,2
3	DSB-SC Modulator & Detector	4	1,2,4,5,6,8,9,11	1,2
4	SSB-SC Modulator & Detector (Phase Shift Method)	4	1,2,4,5,6,8,9,11	1,2
5	Frequency Division Multiplexing & De multiplexing	2	1,2,5,6,8,10,12	1,2
6	Pulse Amplitude Modulation & Demodulation	5	1,2,5,11,12	1,2
7	Pulse Width Modulation & Demodulation	5	1,2,5,11,12	1,2
8	Pulse Position Modulation & Demodulation	5	1,2,5,11,12	1,2
9	PCM Generation and Detection	3	1,2,4,5,6,7,10	1,2
10	Delta Modulation	4	1,2,4,5,6,8,9,11	1,2
11	Frequency Shift Keying: Generation and Detection	6	1,2,3,7,9,11,12	1,2
12	Binary Phase Shift Keying: Generation and Detection	6	1,2,3,7,9,11,12	1,2
13	Generation and Detection (i) DPSK (ii) QPSK	6	1,2,3,7,9,11,12	1,2

SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

UGC Autonomous, Accredited by NAAC A+ Grade, Recognized under 2(f) of UGC Act 1956.
(Approved by AICTE, New Delhi and Affiliated to JNTUH, Hyderabad)
Khalsa Ibrahimpatnam, Sheriguda(V), Ibrahimpatnam(M), Ranga Reddy Dist., Telangana – 501 510
https://siiet.ac.in/

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Class Timetable

CLASS: II-B.Tech ECE-B A.Y:2022-23 SEMESTER: II LH: C-102

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	EMF&W	ECA	A&DC	LTNM	LUNCH	LICA	ECA LAB / GS LAB	
TUE	LICA	A&DC	EMF&W	ECA		A&DC LAB / ICA LAB		
WED	LTNM	EMF&W	LICA	ECA		A&DC(T)/ LTNM(T)/	CO-CU/DAA	
THU	A&DC	COUN	GS LAB / ECA LAB			LTNM	EMF&W	SPORTS
FRI	ECA	EMF&W	LTNM(T)/A&DC(T)	LICA		A&DC	LTNM	LIB
SAT	LICA	LTNM	ECA	A&DC		ICA LAB / A&DC LAB		

*(T) – Tutorial Concern Faculty

Course Code	Course Name	Name of the Faculty	Course Code	Course Name	Name of the Faculty
MA401BS	LTNM-Laplace Transforms, Numerical Methods & Complex Variables	Dr.B.Mahesh	EC406PC	A&DC LAB-Analog and Digital Communications Lab	M.Ganesh/S.Naresh/K.Rajender
			EC407PC	ICA LAB-IC Applications Lab	P.Kavitha/A.Vaani/T.Divya
EC402PC	EMF&W-Electromagnetic Fields and Waves	Dr.S.Suresh	EC408PC	ECA LAB-Electronic Circuit Analysis Lab	Dr.D.Lakshmaiah/Dr.S.Suresh/ K.Mallaiah
EC403PC	A&DC-Analog and Digital Communications	S.Naresh	*MC409	GS LAB-Gender Sensitization Lab	G.Ananda Rao
EC404PC	LICA-Linear IC Applications	P.Kavitha	COUN	Counseling	B.Ashwini/T.Divya/G.Anusha
EC405PC	ECA-Electronic Circuit Analysis	Dr.D.Lakshmaiah	SPORTS	Sports	G.Nirmala/M.Srilatha
			CO-CU/DAA	Co-Curricular/ Dept. Assoc.Activities	S.Alekhya/I.Venu/K.Bhaskar Reddy
			LIB	Library	A.Sindhuja/G.Swathi

Class Incharge

Head of the Department
Electronics and Communication Engg. Dept
SRI INDU INSTITUTE OF ENGG & TECH

Principal
Sri Indu Institute of Engineering & Tech
Sheriguda(Vill), Ibrahimpatnam
R.R. Dist. Telangana -501 510

SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

Accredited by NAAC with A+ Grade, Recognized under 2(f) of UGC Act 1956
(Approved by AICTE, New Delhi and Affiliated to JNTUH, Hyderabad)
Khalsa Ibrahimpatnam, Sheriguda (V), Ibrahimpatnam (M), Ranga Reddy Dist., Telangana – 501 510Website: https://siiet.ac.in/

ANALOG AND DIGITAL COMMUNICATIONS LAB

EXTERNAL EXAM QUESTION PAPER

A.Y.2022-23 **CLASS: II** **SEMESTER: II**

1. Implement an AM demodulator and analyze its performance with varying input signals.
2. Construct an FM modulator circuit and observe the effects of varying modulation index
3. Implement an SSB-SC modulator and demodulator using the phase shift method.
4. Design a detector for DSB-SC modulation and analyze its output.
5. Build a simple FDM system with multiple input signals.
6. Construct a PAM modulator and demodulator circuit and observe its output.
7. Implement a PWM modulator and demodulator and observe its response.
8. Build a PPM modulator and demodulator and observe the effects of changing pulse positions.
9. PCM Generation and Detection.
10. Analyze the performance of delta modulation in terms of signal fidelity.
11. Build an FSK generator circuit and observe the frequency shifts.
12. Create a BPSK modulator circuit and observe the phase shifts. and Implement a BPSK demodulator and analyze its performance.
13. Implement a QPSK modulator and demodulator and analyze their performance.

SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY
Accredited by NAAC with A+ Grade, Recognized under 2(f) of UGC Act 1956
Approved by AICTE, Affiliated to JNTU Hyderabad
Sheriguda(Vill), Ibrahimpatnam(Mdl), R. R. Dist – 501510
www.sliet.ac.in

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

II ECE REGULAR LAB EXTERNAL EXAMS TIMETABLE

A.Y: 2022-23 **SEM: II**

S.No.	Name of the Lab	Year/ Section	Name of the Lab Internal Examiner	Date & Time
1	Analog and Digital Communications Lab	II ECE-A	Mrs.B.Jyothirmai	21.09.2023(FN)
		II ECE-B	Mr.M.Ganesh	20.09.2023(AN)
2	Electronic Circuit Analysis Lab	II ECE-A	Mrs.G.Nirmala	19.09.2023(FN)
		II ECE-B	Mrs.G.Nirmala	19.09.2023(AN)
3	IC Applications Lab	II ECE-A	Mrs.D.Aruna Kumari	20.09.2023(FN)
		II ECE-B	Mrs.P.Kavitha	21.09.2023(AN)

Timings:- FN: 09:40 AM – 12:40 PM AN: 01:00 PM – 04:00 PM

HOD/ECE
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
PRINCIPAL
Sri Indu Institute of Engineering & Tech
Sheriguda(Vill), Ibrahimpatnam,
R R Dist Telangana -501 510

SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY
Accredited by NAAC with A+ Grade, Recognized under 2(f) of UGC Act 1956
Approved by AICTE, Affiliated to JNTU Hyderabad
Sheriguda(Vill), Ibrahimpatnam(Mdl), R. R. Dist – 501510
www.siiet.ac.in

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

II ECE REGULAR LAB EXTERNAL EXAMINERS FROM TKRCET

A.Y: 2022-23 SEM: II

S.No.	Name of the Lab	Year/ Section	Name of the Lab Internal Examiner	Date & Time	Name of the Lab External Examiner & Designation	Lab External Examiner Contact No.
1	Analog and Digital Communications Lab	II ECE-A	Mrs.B.Jyothirmai	21.09.2023(FN)	Dr. K. Sukanya Assoc. Prof	9951018558
		II ECE-B	Mr.M.Ganesh	20.09.2023(AN)	Mrs. M. Jagruthi Asst. Prof	9703263741
2	Electronic Circuit Analysis Lab	II ECE-A	Mrs.G.Nirmala	19.09.2023(FN)	Dr. J.Sunitha Kumari Assoc. Prof	9849727103
		II ECE-B	Mrs.G.Nirmala	19.09.2023(AN)	Dr. P. Gayathri Assoc. Prof	9440337355
3	IC Applications Lab	II ECE-A	Mrs.D.Aruna Kumari	20.09.2023(FN)	Dr. Mahesh Assoc. Prof	9491457702
		II ECE-B	Mrs.P.Kavitha	21.09.2023(AN)	Dr. B. Swapna Rani Assoc. Prof	9866104554

HOD/ECE
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
Sri Indu Institute of Engineering & Tech
Sheriguda(Vill), Ibrahimpatnam
R.R Dist. Telangana -501 510

Sri Indu Institute of Engineering & Technology

Sheriguda (Vill), Ibrahimpatnam (Mdl), R.R.Dist-501 510

Department Of Electronics And Communication Engineering

LAB OCCUPANCY CHART

A.Y:2022-23 **SEMESTER: II** **LH: A-314**

	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			MAINTAINANCE		LUNCH			
TUE						A&DC Lab II ECE-B		
WED	MAINTAINANCE					A&DC Lab II ECE-A		
THU						A&DC Lab II ECE-A		
FRI								
SAT						A&DC Lab II ECE-B		

S.No.	Class	Faculty Incharge	Supporting Faculty
1	A&DC Lab II ECE-A	Mrs.B.Jyothirmai	Mr.K.Rajender
2	A&DC Lab II ECE-B	Mr.M.Ganesh	Mr.S.Naresh

Lab In-charge

HOD/ECE

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

PRINCIPAL
Sri Indu Institute of Engineering & Tec
Sheriguda(V), Ibrahimpatnam(M)
R.R Dist. Telangana -501 510

SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

Accredited by NAAC with A+ Grade, Recognized under 2(f) of UGC Act 1956
(Approved by AICTE, New Delhi and Affiliated to JNTUH, Hyderabad)
Khalsa Ibrahimpatnam, Sheriguda (V), Ibrahimpatnam (M), Ranga Reddy Dist., Telangana – 501 510Website: https://siiet.ac.in/

ANALOG AND DIGITAL COMMUNICATIONS LAB

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

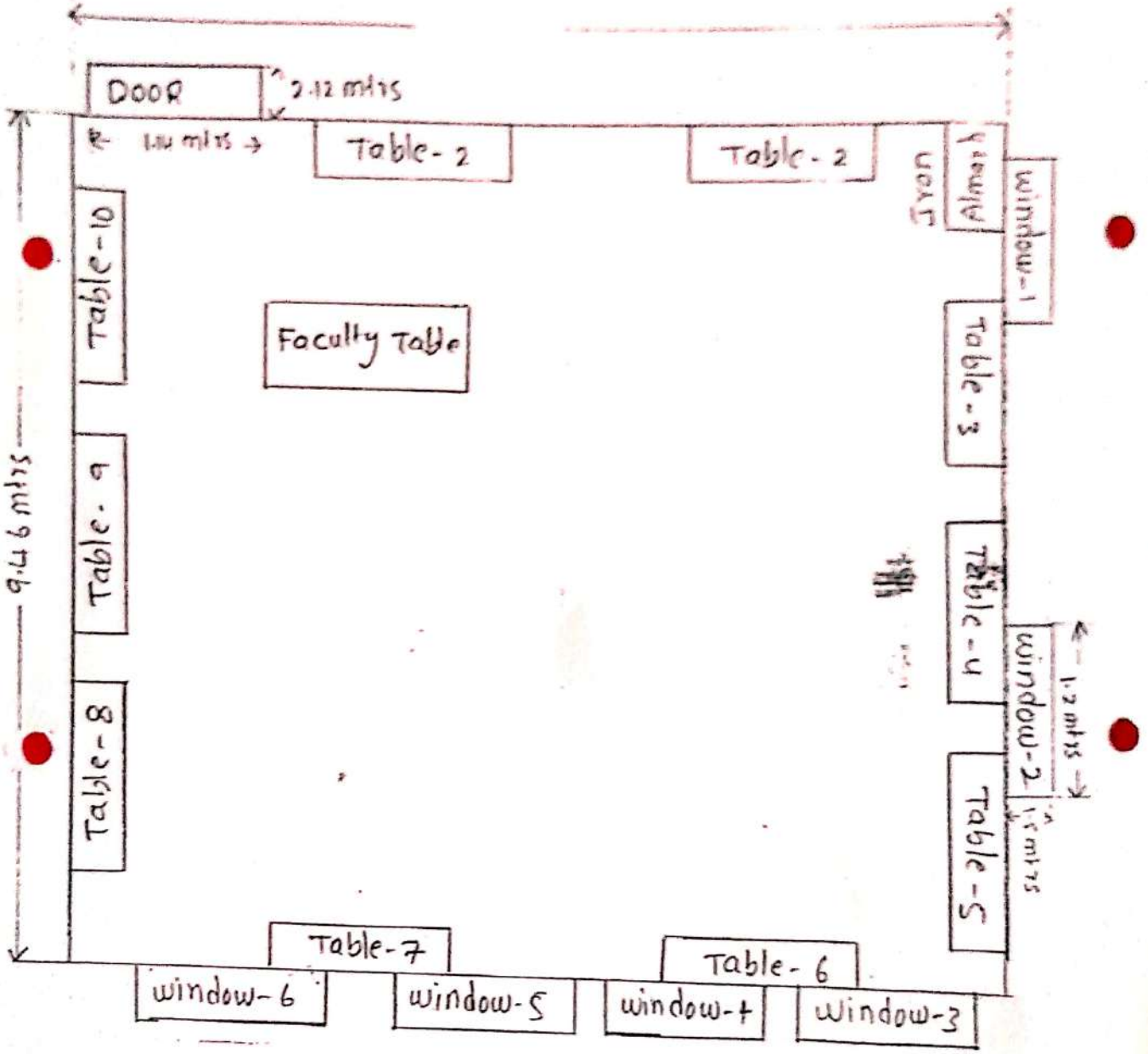
- Place the stools under the lab bench.
- Turn off the power to all instruments.
- Please check the laboratory notice board regularly for updates.

SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

ANALOG & DIGITAL COMMUNICATIONS LAB

PHYSICAL LAB FLOOR PLAN

ROOM NO: 314 BLOCK: A FLOOR: 3rd DATE: 21/12/2004



Lab Area(In sqm)= 87.03259sqm

Lab In charge

HOD/ECE

SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

Accredited by NAAC with A+ Grade, Recognized under 2(f) of UGC Act 1956
(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/

ANALOG AND DIGITAL COMMUNICATIONS LAB

Lab Manual Link:

https://drive.google.com/file/d/1W_dNMF6IJLZE650FdtslsY4S5q7tKhoT/view?usp=drive_link

SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

Department of Electronics and Communication Engineering

Course Outcome Attainment (Internal Examination-1)

Name of the faculty : M.Ganesh A.Y 2022-23

Branch & Section: ECE - B I Internal

Course Name: ANALOG AND DIGITAL COMMUNICATIONS LAB Year/Semester: II/II

S.No	HT No.	A+A+CD+MG	T+P+C+R	DDE
Max. Marks ==>		5	5	15
1	21X31A0438	5	5	13
2	21X31A0440	5	5	13
3	21X31A0441	5	2	10
4	21X31A0442	5	5	14
5	21X31A0443	5	4	10
6	21X31A0444	5	4	13
7	21X31A0445	3	2	9
8	21X31A0446	5	5	13
9	21X31A0447	5	5	14
10	21X31A0448	5	2	10
11	21X31A0449	4	4	9
12	21X31A0450	4	3	10
13	21X31A0451	5	5	12
14	21X31A0452	5	5	12
15	21X31A0453	5	5	14
16	21X31A0454	3	2	9
17	21X31A0455	4	4	10
18	21X31A0456	5	5	11
19	21X31A0457	4	4	12
20	21X31A0458	5	5	10
21	21X31A0459	5	5	14
22	21X31A0460	5	5	13
23	21X31A0461	4	4	10
24	21X31A0462	5	3	11
25	21X31A0463	3	2	9
26	21X31A0464	5	5	13
27	21X31A0465	5	5	13
28	21X31A0466	5	4	13
29	21X31A0467	5	5	12
30	21X31A0468	4	4	12
31	21X31A0469	5	5	13
32	21X31A0470	5	5	14
33	21X31A0471	5	5	14
34	21X31A0472	5	5	14
35	22X35A0421	5	5	13
36	22X35A0422	5	5	14
37	22X35A0423	5	5	13
38	22X35A0424	4	3	11
39	22X35A0425	5	5	13
40	22X35A0426	5	5	13
41	22X35A0427	4	3	12
42	22X35A0428	5	5	13
43	22X35A0429	5	5	12
44	22X35A0430	4	1	9
45	22X35A0431	5	5	14
46	22X35A0432	5	5	14
47	22X35A0433	5	5	12
48	22X35A0434	5	5	12
49	22X35A0435	5	4	10
50	22X35A0436	5	2	11
51	22X35A0437	4	3	11
52	22X35A0438	5	5	14
53	22X35A0439	4	3	10
54	22X35A0440	5	5	13
55	22X35A0441	3	3	11

Target set by the faculty / HoD	3.00	3.00	9.00
Number of students performed above the target	55	48	55
Number of students attempted	55	55	55
Percentage of students scored more than target	100%	87%	100%

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%	87%	100%

CO Attainment based on Exam Questions:

CO - 1	100%	87%	100%
CO - 2	100%	87%	100%
CO - 3	100%	87%	100%
CO - 4	100%	87%	100%
CO - 5	100%	87%	100%
CO - 6	100%	87%	100%

CO	Intrnal practical	DDE	OverallI	Level
CO-1	94%	100%	97%	3.00
CO-2	94%	100%	97%	3.00
CO-3	94%	100%	97%	3.00
CO-4	94%	100%	97%	3.00
CO-5	94%	100%	97%	3.00
CO-6	94%	100%	97%	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 : M.Ganesh A.Y 2022-23

Branch & Section: ECE - B II Internal

urse Name: ANALOG AND DIGITAL COMMUNICATIONS LAB Semester: II/II

S.No	HT No.	A+A+CD+MG	T+P+C+R	DDE
Max. Marks ==>		5	5	15
1	21X31A0438	5	5	14
2	21X31A0440	5	5	13
3	21X31A0441	4	2	11
4	21X31A0442	5	5	14
5	21X31A0443	5	4	12
6	21X31A0444	5	5	13
7	21X31A0445	4	1	9
8	21X31A0446	5	5	14
9	21X31A0447	5	4	14
10	21X31A0448	3	3	11
11	21X31A0449	4	3	11
12	21X31A0450	4	1	9
13	21X31A0451	5	5	12
14	21X31A0452	5	5	13
15	21X31A0453	5	5	13
16	21X31A0454	5	2	12
17	21X31A0455	4	3	11
18	21X31A0456	3	3	11
19	21X31A0457	4	4	12
20	21X31A0458	5	5	11
21	21X31A0459	5	5	14
22	21X31A0460	5	5	13
23	21X31A0461	4	3	11
24	21X31A0462	4	2	11
25	21X31A0463	4	2	11
26	21X31A0464	5	4	13
27	21X31A0465	5	5	14
28	21X31A0466	5	5	13
29	21X31A0467	4	2	12
30	21X31A0468	5	3	12
31	21X31A0469	5	5	14
32	21X31A0470	5	5	14
33	21X31A0471	5	5	14
34	21X31A0472	5	5	14
35	22X35A0421	5	4	13
36	22X35A0422	5	5	14
37	22X35A0423	5	5	12
38	22X35A0424	4	3	10
39	22X35A0425	5	4	13
40	22X35A0426	5	4	13
41	22X35A0427	4	3	10
42	22X35A0428	5	5	13
43	22X35A0429	5	4	13
44	22X35A0430	4	2	8
45	22X35A0431	5	5	14
46	22X35A0432	5	5	14
47	22X35A0433	4	3	12
48	22X35A0434	5	5	13
49	22X35A0435	5	4	12
50	22X35A0436	3	3	11
51	22X35A0437	4	3	12
52	22X35A0438	5	5	13
53	22X35A0439	4	3	11
54	22X35A0440	5	4	13
55	22X35A0441	3	2	9

Target set by the faculty / HoD	3.00	3.00	9.00
Number of students performed above the target	55	46	54
Number of students attempted	55	55	55
Percentage of students scored more than target	100%	84%	98%

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%	84%	98%

CO Attainment based on Exam Questions:

CO - 1	100%	100%	98%
CO - 2	100%	84%	98%
CO - 3	100%	84%	98%
CO - 4	100%	84%	98%
CO - 5	100%	84%	98%
CO - 6	100%	84%	98%

CO	Intrnal practical	DDE	OverallI	Level
CO-1	100%	98%	99%	3.00
CO-2	92%	98%	95%	3.00
CO-3	92%	98%	95%	3.00
CO-4	92%	98%	95%	3.00
CO-5	92%	98%	95%	3.00
CO-6	92%	98%	95%	3.00

Attainment Level	
1	40%
2	50%
3	60%

Attainment (Internal 2 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 (University Examinations)

Name of the faculty : M.Ganesh Academic Year: 2022-23

Branch & Section: ECE - B Year / Semester: II/II

Course Name: ANALOG AND DIGITAL COMMUNICATIONS LAB

S.No	Roll Number	Marks Secured
1	21X31A0438	71
2	21X31A0440	69
3	21X31A0441	56
4	21X31A0442	72
5	21X31A0443	68
6	21X31A0444	68
7	21X31A0445	55
8	21X31A0446	70
9	21X31A0447	69
10	21X31A0448	60
11	21X31A0449	62
12	21X31A0450	55
13	21X31A0451	68
14	21X31A0452	70
15	21X31A0453	69
16	21X31A0454	69
17	21X31A0455	64
18	21X31A0456	63
19	21X31A0457	65
20	21X31A0458	67
21	21X31A0459	71
22	21X31A0460	69
23	21X31A0461	63
24	21X31A0462	57
25	21X31A0463	56
26	21X31A0464	69
27	21X31A0465	69
28	21X31A0466	69
29	21X31A0467	67
30	21X31A0468	64
31	21X31A0469	70
32	21X31A0470	70
33	21X31A0471	71
34	21X31A0472	72
Max Marks		75

S.No	Roll Number	Marks Secured
35	22X35A0421	69
36	22X35A0422	70
37	22X35A0423	67
38	22X35A0424	64
39	22X35A0425	68
40	22X35A0426	69
41	22X35A0427	67
42	22X35A0428	67
43	22X35A0429	71
44	22X35A0430	55
45	22X35A0431	72
46	22X35A0432	72
47	22X35A0433	69
48	22X35A0434	70
49	22X35A0435	69
50	22X35A0436	62
51	22X35A0437	65
52	22X35A0438	72
53	22X35A0439	62
54	22X35A0440	65
55	22X35A0441	66

Class Average mark	67
Number of students performed above the target	36
Number of successful students	55
Percentage of students scored more than target	65%
Attainment level	**3**

Attainment Level	% students
1	40%
2	50%
3	60%

SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

Department of Electronics and Communication Engineering

Course Outcome Attainment

Name of the faculty M.Ganesh
Academic Year 2022-23
Branch & Section: ECE - B
Examination: I Internal
Course Name: ANALOG AND DIGITAL COMMUNICATIONS LAB
Year:II-2
Semester: II/II

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
Internal & University Attainment:			3.00	3.00	
Weightage			25%	75%	
CO Attainment for the course (Internal, University			0.75	2.25	
CO Attainment for the course (Direct Method)			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:	M.Ganesh	Academic Year:	2022-23
Branch & Section:	ECE - B	Year:	II
Course Name:	ANALOG AND DIGITAL COMMUNICATIONS LAB	Semester:	II

CO-PO mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	2	2	-	2	1	-	-	2	2	-	3	2	3
CO2	3	2	-	-	1	2	-	1	-	3	-	2	2	3
CO3	3	3	-	2	2	1	2	-	-	2	-	-	2	3
CO4	3	3	-	2	2	2	-	1	2	-	2	-	2	3
CO5	3	2	-	-	1	-	-	-	-	-	3	2	3	3
CO6	3	2	2	-	-	-	1	-	1	-	2	3	2	3
Course	**3.00**	**2.33**	**2.00**	**2.00**	**1.60**	**1.50**	**1.50**	**1.00**	**1.67**	**2.33**	**2.33**	**2.50**	**2.17**	**3.00**

CO	**Course Outcome Attainment**
CO1	3.00
CO2	3.00
CO3	3.00
CO4	3.00
CO5	3.00
CO6	3.00
Overall course attainment level	**3.00**

PO-ATTAINMENT

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO Attainment	**3.00**	**2.33**	**2.00**	**2.00**	**1.60**	**1.50**	**1.50**	**1.00**	**1.67**	**2.33**	**2.33**	**2.50**	**2.17**	**3.00**

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