



ESTD : 2007

# Sri Indu Institute of Engineering and Technology (Autonomous)

(Formerly RVR Institute of Engineering & Technology )

**An Autonomous Institution Under UGC**

NAAC Accredited. Recognized Under 2(f) of UGC Act 1956

EAMCET CODE: INDI

Approved by AICTE, New Delhi, & Affiliated to JNTUH, Hyderabad.

JNTUH CODE: X3



## COURSE FILE

ON

## BASIC ELECTRICAL ENGINEERING LAB

**Course Code – EE102ES**

**I B. Tech Semester-I  
A.Y. 2022-2023**

**Prepared by  
G.BHARGAVI  
Asst. Professor**

Head of the Department  
Department of H&S  
SRI INDU INSTITUTE OF ENGG & TECH  
Sheriguda(VIII) Ibrahimpatnam (M) R.R. Dist-501 510

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



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<b>Academic Year</b>	2022-2023
<b>Course Title</b>	Basic Electrical Engineering Lab
<b>Course Code</b>	EE102ES
<b>Programme</b>	B.Tech
<b>Year &amp; Semester</b>	I & I
<b>Branch &amp; Section</b>	CSE ( DATA SCIENCE )
<b>Regulation</b>	BR22
<b>Room No</b>	D204 & A005
<b>Name of the lab incharge</b>	S.NISCHALA
<b>Name of the faculty incharge</b>	G.BHARGAVI

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

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

## PROGRAMME OUTCOMES

**PO1: Engineering Knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

**PO2: Problem Analysis:** Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

**PO3: 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.

**PO4: 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.

**PO5: 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.

**PO6: The Engineer & 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.

**PO7: Environment & Sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

**PO8: Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

**PO9: Individual & Team Work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

**PO10: 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.

**PO11: Project Management & 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.

**PO12: 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.

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## B.Tech. in COMPUTER SCIENCE AND ENGINEERING (DATA SCIENCE) COURSE STRUCTURE, I YEAR SYLLABUS (BR22 Regulations)

Applicable from Academic Year: 2022-23 Batch

### I Year I Semester

S. No.	Course Code	Course Title	L	T	P	Credits
1.	MA101BS	Matrices and Calculus	3	1	0	4
2.	CH103BS	Engineering Chemistry	3	1	0	4
3.	CS103ES	Programming for Problem Solving	3	0	0	3
4.	EE101ES	Basic Electrical Engineering	2	0	0	2
5.	ME101ES	Computer Aided Engineering Graphics	1	0	4	3
6.	CS106ES	Elements of Computer Science & Engineering	0	0	2	1
7.	CH106BS	Engineering Chemistry Laboratory	0	0	2	1
8.	CS107ES	Programming for Problem Solving Laboratory	0	0	2	1
9.	EE102ES	Basic Electrical Engineering Laboratory	0	0	2	1
		Induction Program				
		<b>Total</b>	<b>12</b>	<b>2</b>	<b>12</b>	<b>20</b>

### I Year II Semester

S. No.	Course Code	Course	L	T	P	Credits
1.	MA201BS	Ordinary Differential Equations and Vector Calculus	3	1	0	4
2.	AP202BS	Applied Physics	3	1	0	4
3.	ME202ES	Engineering Workshop	0	1	3	2.5
4.	EN204HS	English for Skill Enhancement	2	0	0	2
5.	EC201ES	Electronic Devices and Circuits	2	0	0	2
6.	AP205BS	Applied Physics Laboratory	0	0	3	1.5
7.	CS201ES	Python Programming Laboratory	0	1	2	2
8.	EN207HS	English Language and Communication Skills Laboratory	0	0	2	1
9.	CS203ES	IT Workshop	0	0	2	1
10.	*MC201ES	Environmental Science	3	0	0	0
		<b>Total</b>	<b>13</b>	<b>4</b>	<b>12</b>	<b>20</b>



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## BASIC ELECTRICAL ENGINEERING LABORATORY

(Course Code: EE102ES)

B.Tech. I Year I Sem.

L T P C

0 0 2 1

**Prerequisites:** Basic Electrical Engineering

### Course Objectives:

- To measure the electrical parameters for different types of DC and AC circuits using conventional and theorems approach.
- To study the transient response of various R, L and C circuits using different excitations.
- To determine the performance of different types of DC, AC machines and Transformers.

**Course Outcomes:** After learning the contents of this paper the student must be able to

- Verify the basic Electrical circuits through different experiments.
- Evaluate the performance calculations of Electrical Machines and Transformers through various testing methods.
- Analyze the transient responses of R, L and C circuits for different input conditions.

### List of experiments/demonstrations:

#### PART- A (compulsory)

1. Verification of KVL and KCL
2. Verification of Thevenin's and Norton's theorem
3. Transient Response of Series RL and RC circuits for DC excitation
4. Resonance in series RLC circuit
5. Calculations and Verification of Impedance and Current of RL, RC and RLC series circuits
6. Measurement of Voltage, Current and Real Power in primary and Secondary Circuits of a Single-Phase Transformer
7. Performance Characteristics of a DC Shunt Motor
8. Torque-Speed Characteristics of a Three-phase Induction Motor.

#### PART-B (any two experiments from the given list)

1. Verification of Superposition theorem.
2. Three Phase Transformer: Verification of Relationship between Voltages and Currents(Star-Delta, Delta-Delta, Delta-star, Star-Star)
3. Load Test on Single Phase Transformer (Calculate Efficiency and Regulation)
4. Measurement of Active and Reactive Power in a balanced Three-phase circuit
5. No-Load Characteristics of a Three-phase Alternator

### TEXT BOOKS:

1. D.P. Kothari and I. J. Nagrath, "Basic Electrical Engineering", Tata McGraw Hill, 4<sup>th</sup> Edition, 2019.
2. MS Naidu and S Kamakshiah, "Basic Electrical Engineering", Tata McGraw Hill, 2<sup>nd</sup> Edition, 2008.



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## COURSE OUTCOMES

**Course Name: Basic Electrical Engineering Lab (C119)**

At the End of the course, student will be able to

CO No	DESCRIPTION
C119.1	Apply basic circuit laws and simplify the network using reduction techniques. (Application)
C119.2	Understand time domain analysis, resonance in RLC parameters and evaluate impedance in RLC circuit (Knowledge)
C119.3	Understand the working concept , Select range of apparatus based on the ratings of different machines like transformers and motors (Knowledge)
C119.4	Determine efficiency and regulation of transformers by various test (Evaluation)
C119.5	Determine the performance characteristics of dc shunt motor. (Evaluation)
C119.6	Determine 3 phase power, torque speed characteristics of 3 phase induction motor. (Evaluation)

### COs and POs & PSOs Mapping

Course Outcome	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
C119.1	3	3	2	1	-	-	-	-	2	1	-	2	-	-
C119.2	3	3	1	2	1	-	-	-	2	1	-	2	-	-
C119.3	3	-	-	-	1	-	-	-	2	-	-	3	-	-
C119.4	2	3	1	-	1	1	-	-	3	-	-	2	-	-
C119.5	2	3	1	-	1	1	-	-	3	-	-	2	-	-
C119.6	2	3	1	-	1	1	-	-	3	-	-	2	-	-
<b>PO Avg</b>	<b>2.5</b>	<b>3</b>	<b>1.2</b>	<b>1.5</b>	<b>1</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>2.5</b>	<b>1</b>	<b>-</b>	<b>2.16</b>	<b>-</b>	<b>-</b>

3-High

2-Medium

1-Low



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## LIST OF EXPERIMENTS AND THEIR CO, PO MAPPING

S.No	Name of The Experiment	CO	PO
1	Verification of KVL and KCL	1	1,2,3,4,9,10,12
2	Verification of Thevenin's and Norton's theorem	1	1,2,3,4,9,10,12
3	Transient Response of Series RL and RC circuits for DC excitation	2	1,2,3,4,5,9,10,12
4	Resonance in series RLC circuit	2	1,2,3,4,5,9,10,12
5	Calculations and Verification of Impedance and Current of RL, RC and RLC series circuits	2	1,2,3,4,5,9,10,12
6	Measurement of Voltage, Current and Real Power in primary and Secondary Circuits of a Single-Phase Transformer	3	1,5,9,12
7	Performance Characteristics of a DC Shunt Motor	5	1,2,3,5,6,9,12
8	Torque-Speed Characteristics of a Three-phase Induction Motor.	6	1,2,3,5,6,9,12
9	Verification of Superposition theorem	1	1,2,3,4,9,10,12
10	Load Test on Single Phase Transformer (Calculate Efficiency and Regulation)	4	1,2,3,5,6,9,12





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Class: DATA SCIENCE

Semester: I W.E.F: 14-11-2022

LH: D-208

	I 9:40- 10:30	II 10:30 - 11:20	III 11:20- 12:10	12:10- 12:45	IV 12.45- 1.35	V 1.35- 2.25	VI 2.25- 3.15	VII 3.15-4.00
MON	BEE	M&C	PPS	<b>L U N C H</b>	BEE/EC LAB			LIB
TUE	PPS LAB				M&C	M&C	ECSE	EG(T)
WED	PPS	EC	BEE		EG PRACTICE			BEE(T)/M&C(T)
THU	EC	PPS	BEE		BEE/EC LAB			EC(T)/PPS(T)
FRI	EG PRACTICE				M&C	EC	BEE	PPS(T)/EC(T)
SAT	BEE	PPS	ECSE		PPS	M&C	EC	M&C(T)/BEE(T)

Course Code	Course Name	Name of the Faculty	Course Code	Course Name	Name of the Faculty
MA101BS	Matrices and Calculus	CH.SARITHA	ME101ES	ComputerAided Engineering Graphics	A.MALLESH
CH103BS	Engineering Chemistry	O.SUBHASHINI	CH106BS	Engineering Chemistry Lab	O.SUBHASHINI
CS103ES	Programming for Problem Solving	U.NARESH	CS107ES	Programming for Problem Solving Lab	U.NARESH/G.KALYANI
EE101ES	Basic Electrical Engineering	S.NISCHALA	EE102ES	Basic Electrical Engineering Lab	G.BHARGAVI /M.NAGA RAJU
CS106ES	Elements of Computer Science & Engineering	P.SRILATHA			

*O. Subhashini*  
Class In-Charge

*Ch. Saritha*  
Time Table Coordinator



*[Signature]*  
Head of The Department  
**Dr. R. YADAGIRI RAO**  
M.Sc., B.Ed., M.Tech(CSE), Ph.D.  
Head of the Department  
Department of H&S  
SRI INDU INSTITUTE OF ENGG & TECH  
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**X3**

**BR22**

## Lab External Question paper

Year & Semester: I-I

Branch: CSE-DATA SCIENCE

Subject Name: Basic Electrical Engineering Lab

Faculty Name: G.BHARGAVI

### S. No.                      QUESTIONS

1. Verification of KVL.
2. Verification of KCL.
3. Verification of Thevenins theorem.
4. Verification of Nortons theorem.
5. Transient Response of Series RL circuit using DC excitation.
6. Transient Response of Series RC circuit using DC excitation.
7. Resonance in series RLC circuit.
8. Calculation and Verification of Impedance and Current of RL, RC and RLC series circuits.
9. Verification of Superposition theorem.
10. Torque-Speed Characteristics of a Three-phase Induction Motor.
11. Performance Characteristics of a DC Shunt Motor.
12. Load Test on Single Phase Transformer (Calculate Efficiency and Regulation)
13. Measurement of voltage, current and real power in primary and secondary circuits of a single phase transformer.



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## BEE Lab External Time Table Examination Branch

A.Y. : 2022-23

SEM-I

DATE	Day	Branch	Session	HT.No	Total No of Students
11-3-2023	SATURDAY	DS	FN	22X31A6701 TO 22X31A6764	64
13-3-2023	MONDAY	CSE-A	FN	22X31A0501 TO 22X31A0565	65
14-3-2023	TUESDAY	CSE-B	FN	22X31A0566 TO 22X31A05D0	65
14-3-2023	TUESDAY	CYBER SECURITY	AN	22X31A6201 TO 22X31A6262	62
15-3-2023	WEDNESDAY	CSE-C	FN	22X31A05D1 TO 22X31A05J1	61

  
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## BEE Lab External Time Table with examiners

A.Y. : 2022-23

SEM-I

DATE	Day	Branch	Session	HT.No	Total No of Students	Internal Examiner	External Examiner
11-3-2023	SATURDAY	DS	FN	22X31A6701 TO 22X31A6764	64	M.NAGA RAJU (9640269828)	Mr.Suresh GNITC
13-3-2023	MONDAY	CSE-A	FN	22X31A0501 TO 22X31A0565	65	K.RAJASHEK HAR (8074465493)	Ms.Ch.Laxmi GNITC
14-3-2023	TUESDAY	CSE-B	FN	22X31A0566 TO 22X31A05D0	65	MP.REENA (9160504581)	Mr.Basav Reddy GNITC
14-3-2023	TUESDAY	CYBER SECURITY	AN	22X31A6201 TO 22X31A6262	62	S.NISCHALA (9912482689)	Mr.P.S.Reddy GNITC
15-3-2023	WEDNESDAY	CSE-C	FN	22X31A05D1 TO 22X31A05J1	61	MP.REENA (9160504581)	Ms.Ratna Kishori GNITC

  
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## LAB OCCUPANCY CHART

### BASIC ELECTRICAL ENGINEERING LAB

	<b>I</b> 9:40-10:30	<b>II</b> 10:30 -11:20	<b>III</b> 11:20-12:10	12:10- 12.45	<b>IV</b> 12.45-1.35	<b>V</b> 1.35-2.25	<b>VI</b> 2.25-3.15	<b>VII</b> 3.15- 4.00
<b>MON</b>				<b>L U N C H</b>	I BTECH I SEM DATA SCIENCE			
<b>TUE</b>	I BTECH I SEM CSE-B				I BTECH I SEM CSE-A			
<b>WED</b>	I BTECH I SEM CSE-C				I BTECH I SEM CYBER SECURITY			
<b>THU</b>	I BTECH I SEM CSE-B				I BTECH I SEM DATA SCIENCE			
<b>FRI</b>	I BTECH I SEM CYBER SECURITY							
<b>SAT</b>	I BTECH I SEM CSE-A				I BTECH I SEM CSE-C			

Head of the Department  
 Department of H&S  
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## BASIC ELECTRICAL ENGINEERING LAB

### Do's

1. Pull the plug itself, not the cord attached to it
2. Disconnect any appliances that spark and have it repaired immediately
3. Always disconnect appliances before cleaning them
4. Turn of appliance when you leave home
5. Clean appliance and free of dust, lint grease,
6. Use moisture resistant cards when outside.
7. Wear rubber solid shoes when operating power tools
8. Follow manufacturer's instructions when operating electrical devices. All electrical devices should carry an underwriter's laboratory approval tag
9. Make sure outdoor electrical out lets are covered with weather proof covers
10. Use extension cards only for temporary applications
11. Use heavy duty cards when using power tools
12. Keep work areas clean and dry. Sparks can ignite wood scraps, saw dust and solvents
13. Make sure your power tools are grounded or certified double insulated.
14. When utilizing adapters, make sure to screw in the wire for grounding.

### Don'ts

1. Never turn on an appliance when standing or sitting in water. Shocks can be fatal.
2. Never overload a circuit by plugging into many appliances
3. Plug three way grounded plugs into appropriate outlets. Never tamper with the third prong
4. Never install cords under rugs where they will become warn by foot traffic



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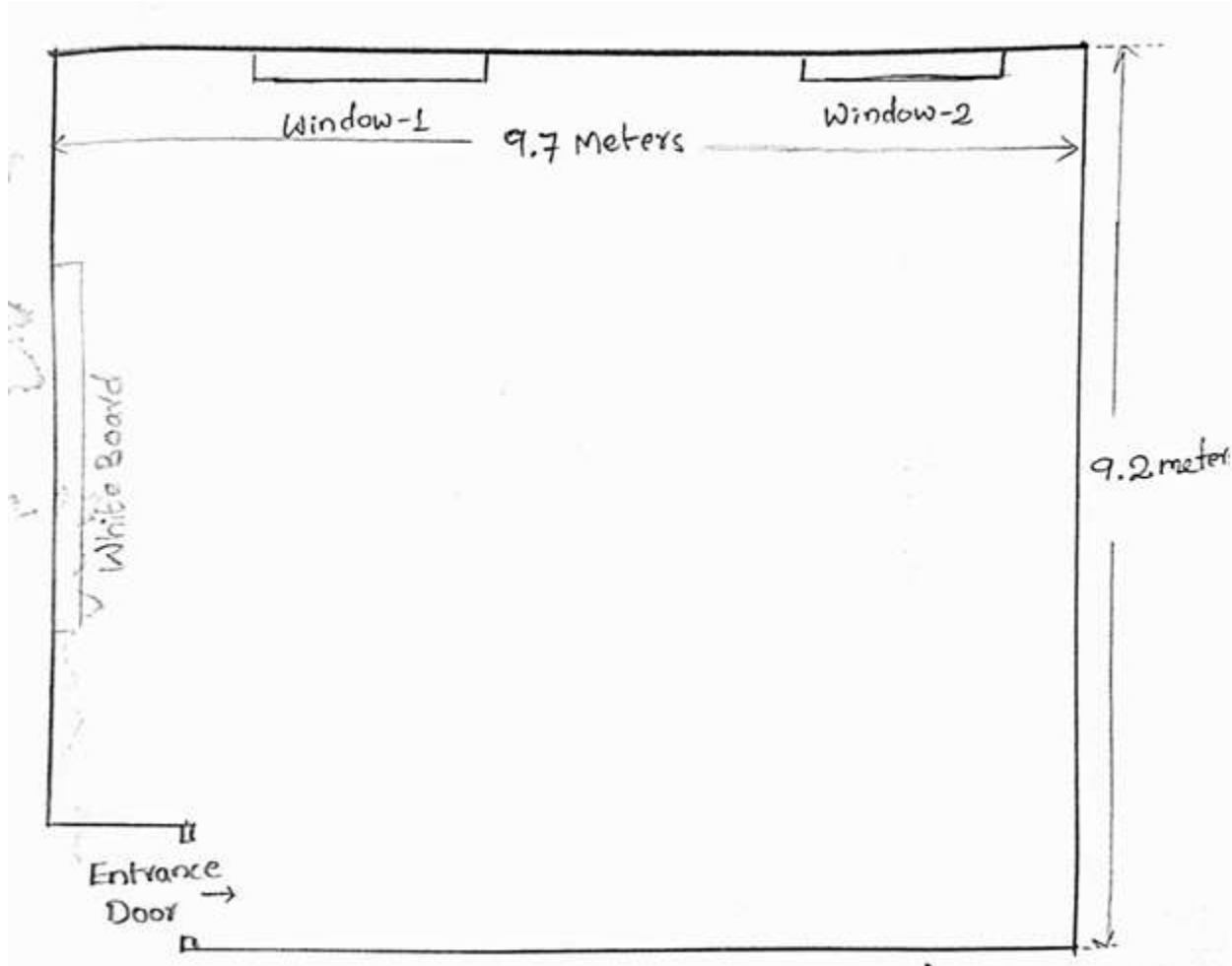
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Website: <https://siiet.ac.in/>

## BASIC ELECTRICAL ENGINEERING LAB

### PHYSICAL LAB-1 FLOOR PLAN

ROOM NO: D-204



Lab Area (in sq.m) = 89.24

*[Signature]*  
Lab In-Charge

*[Signature]*  
Head of the Department  
Head of the Department  
Department of H&S  
SRI INDU INSTITUTE OF ENGG & TECH  
Sheriguda (V) Ibrahimpatnam (M) R.R. Dist-501 510



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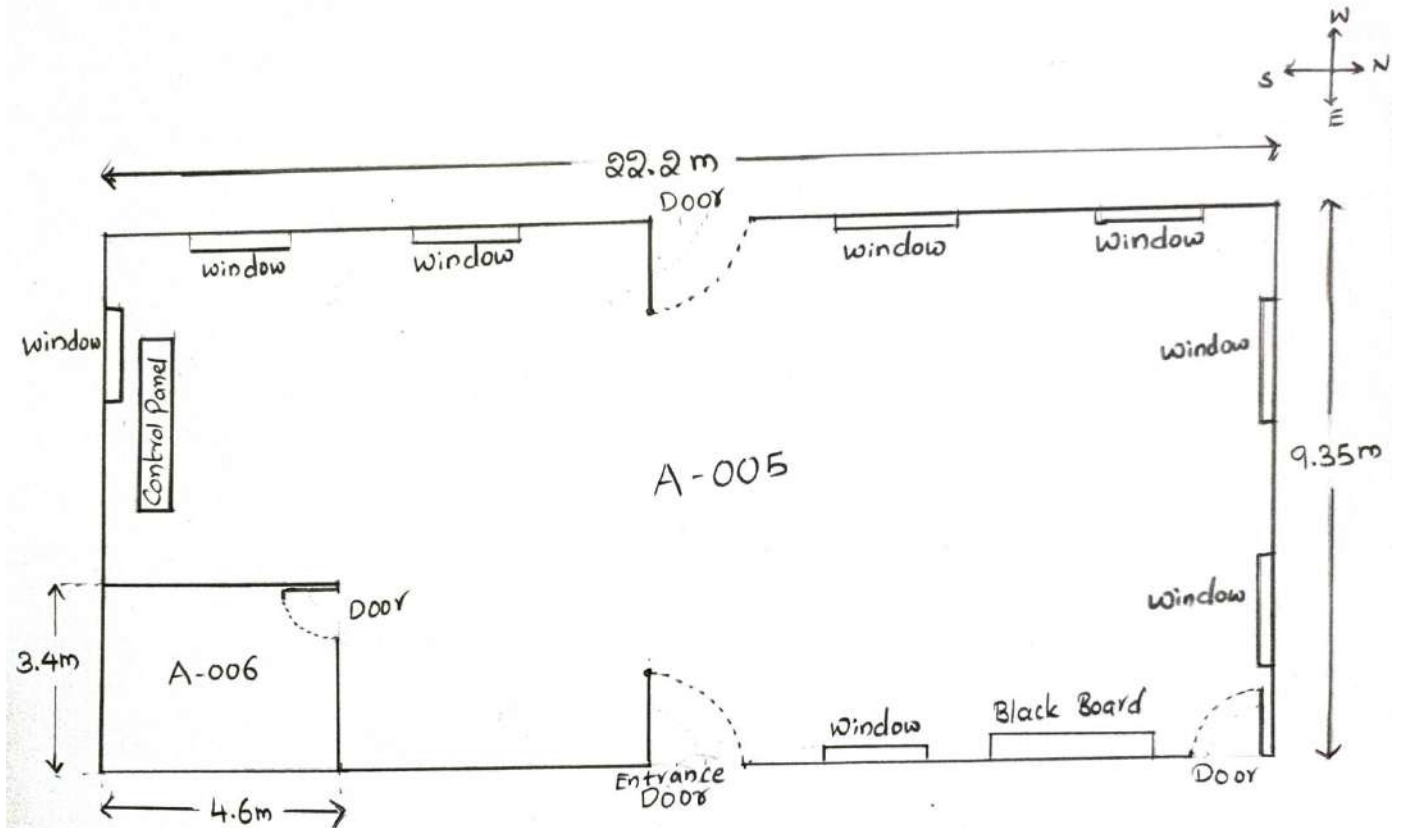
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Website: <https://siiet.ac.in/>

## BASIC ELECTRICAL ENGINEERING LAB

### PHYSICAL LAB-2 FLOOR PLAN

ROOM NO: A-005



Lab Area (in sq.m) = 191.93

*[Signature]*  
Lab In-Charge

*[Signature]*  
Head of the Department  
Head of the Department  
Department of H&S  
SRI INDU INSTITUTE OF ENGG & TECH  
Sheriguda (V) Ibrahimpatnam (M) R.R. Dist-501 510





# SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution under UGC)

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/>

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## Lab manual link

<https://drive.google.com/file/d/1CezhXs40s30tKHGvSy8DOi0bg0xJMB-Z/view>

# SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

Department of Humanities and Sciences



## Course Outcome Attainment (Internal Examination-1)

Name of the faculty : G.BHARGAVI                      Academic Year: 2022-2023  
 Branch & Section: DATA SCIENCE                      Examination: I Internal  
 Lab Course Name: Basic Electrical Engineering Lab                      Year/semester I/I

S.No	HT No.	R+O+A	V+V	E+E+R
<b>Max. Marks ==&gt;</b>		<b>10</b>	<b>10</b>	<b>10</b>
1	22X31A6701	9	8	10
2	22X31A6702	10	8	9
3	22X31A6703	10	9	9
4	22X31A6704	10	8	9
5	22X31A6705	10	8	9
6	22X31A6706	10	7	9
7	22X31A6707	10	9	9
8	22X31A6708	10	8	9
9	22X31A6709	10	8	9
10	22X31A6710	10	8	9
11	22X31A6711	10	9	9
12	22X31A6712	10	9	9
13	22X31A6713	10	8	9
14	22X31A6714	10	7	9
15	22X31A6715	10	8	9
16	22X31A6716	10	8	9
17	22X31A6717	10	8	9
18	22X31A6718	10	9	9
19	22X31A6719	10	8	9
20	22X31A6720	10	8	10
21	22X31A6721	10	9	9
22	22X31A6722	10	8	9
23	22X31A6723	9	7	9
24	22X31A6724	10	9	10
25	22X31A6725	10	9	9
26	22X31A6726	9	3	9
27	22X31A6727	9	3	9
28	22X31A6728	9	3	9
29	22X31A6729	10	9	9
30	22X31A6730	9	6	9
31	22X31A6731	10	9	9
32	22X31A6732	A	A	A
33	22X31A6733	10	9	9
34	22X31A6734	10	9	10
35	22X31A6735	A	A	A
36	22X31A6736	10	9	9
37	22X31A6737	10	8	9
38	22X31A6738	10	8	9
39	22X31A6739	9	6	9
40	22X31A6740	9	4	9
41	22X31A6741	9	6	8
42	22X31A6742	9	3	9
43	22X31A6743	10	8	9
44	22X31A6744	10	8	9

45	22X31A6745	10	9	10
46	22X31A6746	10	9	10
47	22X31A6747	10	9	10
48	22X31A6748	9	6	8
49	22X31A6749	9	6	9
50	22X31A6750	9	8	9
51	22X31A6751	10	8	9
52	22X31A6752	4	7	5
53	22X31A6753	4	7	5
54	22X31A6754	10	9	9
55	22X31A6755	4	7	5
56	22X31A6756	4	6	5
57	22X31A6757	4	6	5
58	22X31A6758	4	6	5
59	22X31A6759	10	9	9
60	22X31A6760	10	8	9
61	22X31A6761	10	8	9
62	22X31A6762	10	8	9
63	22X31A6763	10	8	9
64	22X31A6764	9	8	9
65				
Target set by the faculty / HoD		6.00	6.00	6.00
Number of students performed above the target		56	57	56
Number of students attempted		64	64	64
Percentage of students scored more than target		88%	89%	88%

**CO Mapping with Exam Questions:**

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

% Students Scored >Target %	88%	89%	88%
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**CO Attainment based on Exam Questions:**

CO - 1	88%	89%	88%
CO - 2	88%	89%	88%
CO - 3	88%	89%	88%
CO - 4			
CO - 5			
CO - 6			

CO	Intrnal practical	E+E+R	Overall	Level
CO-1	88%	88%	88%	3
CO-2	88%	88%	88%	3
CO-3	88%	88%	88%	3
CO-4				
CO-5				
CO-6				

Attainment Level	
1	40%
2	50%
3	60%

Attainment (Internal 1 Examination) = 3

R+O+A : RECORD+OBSERVATION+ATTANDANCE

V+V: VIVA VOICE

E+E+R:EXPERIMENT WRITE UP+EXECUTION+RESULT

# SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

Department of Humanities and Sciences



## Course Outcome Attainment (Internal Examination-2)

Name of the faculty : G.BHARGAVI    Academic Year: 2022-2023  
 Branch & Section: DATA SCIENCE    Examination: II Internal  
 Lab Course Name: Basic Electrical Engineering Lab    Year/semester I/I

S.No	HT No.	R+O+A	V+V	E+E+R	ppt
<b>Max. Marks ==&gt;</b>		<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>
1	22X31A6701	9	9	9	10
2	22X31A6702	9	9	9	10
3	22X31A6703	10	9	10	10
4	22X31A6704	10	9	9	10
5	22X31A6705	10	9	8	10
6	22X31A6706	9	9	8	10
7	22X31A6707	10	9	9	10
8	22X31A6708	10	9	9	10
9	22X31A6709	10	9	8	10
10	22X31A6710	10	9	8	10
11	22X31A6711	10	9	8	10
12	22X31A6712	10	9	9	10
13	22X31A6713	10	9	10	10
14	22X31A6714	9	5	8	10
15	22X31A6715	10	9	8	10
16	22X31A6716	10	9	10	10
17	22X31A6717	10	9	9	10
18	22X31A6718	10	9	10	10
19	22X31A6719	10	9	8	10
20	22X31A6720	10	9	9	10
21	22X31A6721	10	9	9	10
22	22X31A6722	10	9	8	10
23	22X31A6723	10	9	9	10
24	22X31A6724	10	10	10	10
25	22X31A6725	10	9	10	10
26	22X31A6726	10	9	10	10
27	22X31A6727	9	9	8	10
28	22X31A6728	10	9	10	10
29	22X31A6729	10	9	10	10
30	22X31A6730	9	8	8	10
31	22X31A6731	10	9	10	10
32	22X31A6732	A	A	A	10
33	22X31A6733	10	9	10	10
34	22X31A6734	10	10	10	10
35	22X31A6735	A	A	A	10
36	22X31A6736	10	9	10	10
37	22X31A6737	10	9	9	10
38	22X31A6738	9	8	8	10
39	22X31A6739	9	8	8	10
40	22X31A6740	9	8	8	10
41	22X31A6741	9	8	8	10
42	22X31A6742	10	8	8	10
43	22X31A6743	10	8	9	10
44	22X31A6744	10	8	8	10
45	22X31A6745	10	10	10	10
46	22X31A6746	10	9	10	10
47	22X31A6747	10	10	10	10
48	22X31A6748	9	7	8	10
49	22X31A6749	10	7	8	10
50	22X31A6750	10	9	10	10
51	22X31A6751	10	9	10	10
52	22X31A6752	9	5	8	10
53	22X31A6753	9	5	8	10

54	22X31A6754	10	8	10	10
55	22X31A6755	9	5	8	10
56	22X31A6756	9	5	8	10
57	22X31A6757	9	5	8	10
58	22X31A6758	9	5	8	10
59	22X31A6759	10	9	10	10
60	22X31A6760	10	8	10	10
61	22X31A6761	10	8	10	10
62	22X31A6762	10	8	10	10
63	22X31A6763	10	8	10	10
64	22X31A6764	10	9	10	10
65					
Target set by the faculty / HoD		6.00	6.00	6.00	6.00
Number of students performed above the target		62	55	62	64
Number of students attempted		64	64	64	64
Percentage of students scored more than target		97%	86%	97%	100%

**CO Mapping with Exam Questions:**

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

% Students Scored >Target	97%	86%	97%	100%
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**CO Attainment based on Exam Questions:**

CO - 1				
CO - 2				
CO - 3				
CO - 4	97%	86%	97%	100%
CO - 5	97%	86%	97%	100%
CO - 6	97%	86%	97%	100%

CO	Intrnal practica	E+E+R	ppt	Overall	Level
CO-1					
CO-2					
CO-3					
CO-4	91%	97%	100%	96%	3
CO-5	91%	97%	100%	96%	3
CO-6	91%	97%	100%	96%	3

Attainment Level	
1	40%
2	50%
3	60%

Attainment (Internal 2 Examination) = 3

R+O+A : RECORD+OBSERVATION+ATTANDANCE

V+V: VIVA VOICE

E+E+R:EXPERIMENT WRITE UP+EXECUTION+RESULT



# SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

Department of Humanities and Sciences

## Course Outcome Attainment (University Examinations)

Name of the faculty : G.BHARGAVI  
 Branch & Section: DATA SCIENCE  
 Lab Course Name: Basic Electrical Engineering Lab

Academic Year: 2022-2023  
 Year / Semester: I/I

S.No	Roll Number	Marks Secured
1	22X31A6701	53
2	22X31A6702	53
3	22X31A6703	58
4	22X31A6704	58
5	22X31A6705	55
6	22X31A6706	49
7	22X31A6707	47
8	22X31A6708	54
9	22X31A6709	54
10	22X31A6710	54
11	22X31A6711	57
12	22X31A6712	56
13	22X31A6713	57
14	22X31A6714	46
15	22X31A6715	57
16	22X31A6716	57
17	22X31A6717	54
18	22X31A6718	59
19	22X31A6719	53
20	22X31A6720	56
21	22X31A6721	57
22	22X31A6722	51
23	22X31A6723	53
24	22X31A6724	58
25	22X31A6725	57
26	22X31A6726	58
27	22X31A6727	54
28	22X31A6728	57
29	22X31A6729	57
30	22X31A6730	51
31	22X31A6731	57
32	22X31A6732	A
33	22X31A6733	57
34	22X31A6734	59
Class Average mark		54
Number of students performed above the target		32
Number of successful students		63
Percentage of students scored more than target		51%
<b>Attainment level</b>		<b>3</b>

S.No	Roll Number	Marks Secured
35	22X31A6735	
36	22X31A6736	59
37	22X31A6737	56
38	22X31A6738	56
39	22X31A6739	49
40	22X31A6740	46
41	22X31A6741	46
42	22X31A6742	51
43	22X31A6743	52
44	22X31A6744	56
45	22X31A6745	60
46	22X31A6746	57
47	22X31A6747	60
48	22X31A6748	51
49	22X31A6749	50
50	22X31A6750	59
51	22X31A6751	59
52	22X31A6752	49
53	22X31A6753	49
54	22X31A6754	56
55	22X31A6755	50
56	22X31A6756	46
57	22X31A6757	46
58	22X31A6758	46
59	22X31A6759	58
60	22X31A6760	55
61	22X31A6761	53
62	22X31A6762	53
63	22X31A6763	54
64	22X31A6764	58
65	0	
Attainment Level		% students
1		40%
2		50%
3		60%



# SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

Department of Humanities and Sciences

## Course Outcome Attainment

Name of the faculty : G.BHARGAVI

Academic Year: 2022-2023

Branch & Section: DATA SCIENCE

Year / Semester: I/I

Lab Course Name: Basic Electrical Engineering Lab

Course Outcomes	Ist Internal Exam	2nd Internal Exam	Internal Exam	University Exam	Attainment Level
CO1	3.00		3.00	3.00	3.00
CO2	3.00		3.00	3.00	3.00
CO3	3.00		3.00	3.00	3.00
CO4		3.00	3.00	3.00	3.00
CO5		3.00	3.00	3.00	3.00
CO6		3.00	3.00	3.00	3.00
<b>Internal &amp; University Attainment:</b>			3.00	3.00	
<b>Weightage</b>			40%	60%	
<b>CO Attainment for the course (Internal, University)</b>			1.20	1.80	
<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 Humanities and Sciences

## Program Outcome Attainment (from Course)

Name of Faculty: G.BHARGAVI                      Academic Year: 2022-2023  
 Branch & Section: DATA SCIENCE                      Year / Semester: I/I  
 Course Name: Basic Electrical Engineering Lab

### CO-PO mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	3	2	1	-	-	-	-	2	1	-	2		
CO2	3	3	1	2	1	-	-	-	2	1	-	2		
CO3	3	-	-	-	1	-	-	-	2	-	-	3		
CO4	2	3	1	-	1	1	-	-	3	-	-	2		
CO5	2	3	1	-	1	1	-	-	3	-	-	2		
CO6	2	3	1	-	1	1	-	-	3	-	-	2		
<b>Course</b>	<b>2.50</b>	<b>3.00</b>	<b>1.20</b>	<b>1.50</b>	<b>1.00</b>	<b>1.00</b>			<b>2.50</b>	<b>1.00</b>		<b>2.17</b>		

CO	Course Outcome Attainment
	3.00
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
CO Attainment	2.50	3.00	1.20	1.50	1.00	1.00			2.50	1.00		2.17

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