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# **COURSE FILE**

ON

# CRYPTOGRAPHY & NETWORKSECURITY LAB

**Course Code – CS703PC** 

**IV B.Tech I-SEMESTER** 

A.Y.: 2022-2023

Prepared by

J.PUJITHA Assistant Professor

Computer Science & Engg. Dept. SRI INDU INSTITUTE OF ENGG & TECH. SherigudaM, Ibrahmmatham/M), R.R.Disi-501 10.

PRINCIPAL

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



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#### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Name of the Physical	CRYPTOGRAPHY & NETWORK
laboratory:	SECURITY LAB
Course Code	CS703PC
Room No	A:015
Name of the lab incharge	Mrs.M.SUJATHA
Name of the faculty incharge	Mrs.J.PUJITHA

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#### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

#### 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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Sheriguda(Vill), Ibrahimpatnam
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#### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

#### DEPARTMENT VISION AND MISSION

#### Vision:

To become a prominent knowledge hub for learners, strive for educational excellence with innovative and industrial techniques so as to meet the global needs.

#### Mission:

**DM1:** To provide ambience that enhances innovations, problem solving skills, leadership qualities, decision making, team-spirit and ethical responsibilities.

**DM2:** To impart quality education with professional and personal ethics, so as to meet the challenging technological needs of the industry and society.

**DM3:** To provide academic infrastructure and develop linkage with the world class organizations to strengthen industry-academia relationships for learners.

**DM4:** To provide and strengthen new concepts of research in the thrust area of Computer Science and Engineering to reach the needs of Government and Society.

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#### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

#### PROGRAM EDUCATIONAL OBJECTIVES

- **PEO1:** To develop trained graduates with strong academic and technical skills of modern computer science and engineering.
- **PEO2:** To promote trained graduates with leadership qualities and the ability to solve real time problems using current techniques and tools in interdisciplinary environment.
- **PEO3:** To motivate the graduates towards lifelong learning through continuing education and professional development.

#### PROGRAM SPECIFIC OUTCOMES

- **PSO1:** Professional Skills: To implement computer programs of varying complexity in the areas related to Web Design, Cloud Computing, Network Security and Artificial Intelligence.
- **PSO2:** Problem-Solving Skills: To develop quality products using open ended programming environment.

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#### **PROGRAMME OUTCOMES (POs)**

- **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, review research literature, and analyse 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 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.
- **PO7:** 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.
- **PO8:** Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- **PO9:** Individual and 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, and give and receive clear instructions.
- **PO11:** 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.
- **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.

# COURSE STRUCTURE IV YEAR SYLLABUS (R18Regulations)

Applicable from Academic Year: 2022-23 Batch

### IV Year I Semester

S.No	Course Code	Course Title	L	T	P	Credits
1.	CS701PC	Cryptography& Network Security	3	0	0	3
2.	CS702PC	Data Mining	2	0	0	2
3.		Professional Elective-IV	3	0	0	3
4.		Professional Elective-V	3	0	0	3
5.		Open Elective-II	3	0	0	3
6.	CS703PC	Cryptography& Network Security Lab	0	0	2	1
7.	CS704PC	Industrial Oriented Mini Project/Summer Internship	0	0	0	2*
8.	CS705PC	Seminar	0	0	2	1
9.	CS706PC	Project Stage-I	0	0	6	3
		Total Credits	14	0	10	21

# **IV Year II Semester**

S. No.	Course Code	Course Title	L	Т	P	Credits
1.	SM801MS	Organizational Behaviour	3	0	0	3
2.		Professional Elective-VI	3	0	0	3
3.		Open Elective-III	3	0	0	3
4.	CS802PC	Project Stage-II	0	0	14	7
		Total Credits	9	0	14	16



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#### CS703PC: CRYPTOGRAPHY AND NETWORK SECURITY LAB (PC)

IV -Year B.Tech. CSE I-Sem

L TPC 0 0 21

## **List of Experiments:**

- 1. Write a C program that contains a string (char pointer) with a value 'Hello world'. The program should XOR each character in this string with 0 and displays the result.
- 2. Write a C program that contains a string (char pointer) with a value 'Hello world'. The program should AND or and XOR each character inthisstringwith127anddisplaythe result.
- 3. Write a Java program to perform encryption and decryption using the following algorithms a. Ceaser cipher b.Substitution cipher c.Hill Cipher
- 4. Write a C/JAVA program to implement the DES algorithm logic.
- 5. Write a C/JAVA program to implement the Blow fish algorithm logic.
- 6. Write a C/JAVA program to implement the Rijndael algorithm logic.
- 7. WritetheRC4logicinJavaUsingJavacryptography; encrypt the text "Hello world" using Blowfish. Create your own key using Java key tool.
- 8. Write a Java program to implement RSA algorithm.
- 9. Implement the Diffie-Hellman Key Exchange mechanism using HTML and Java Script.
- 10. CalculatethemessagedigestofatextusingtheSHA-1algorithminJAVA.
- 11. CalculatethemessagedigestofatextusingtheMD5algorithmin JAVA.





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# **COURSE OUTCOMES**

Course Name: Cryptography & Network Security Lab

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

CO No	DESCRIPTION
C416.1	Understand various attacks on the network and understanding the need for security.
C416.2	Apply various classical encryption techniques on messages and analyze various security services and mechanisms.
C416.3	Compare and contrast symmetric and asymmetric key cryptographic systems.
C416.4	Describe the cryptographic hash functions, message authentication codes and various key man agement and distribution techniques.
C416.5	Explain different protocols like SSL,TLS, arious wireless network standards.
C416.6	Analyze how PGP and S/MIME is used to protect messages transmitted through E- Mail and explains IPSEC.

# 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	PS O1	PS O2
C416.1	3	-	2	-	-	-	-	-	-	-	-	-	-	-
C416.2	2	3	3	-	-	-	-	-	-	-	-	-	-	-
C416.3	1	2	3	-	3	-	-	-	-	-	-	3	-	-
C416.4	2	3	3	-	2	-	-	-	-	-	-	2	-	-
C416.5	3	2	3	ı	3	-	-	-	-	-	-	1	-	-
C416.6	2	2	3	-	-	-	-	-	-	-	-	-	-	-
PO Avg	2.2	2.4	2.8	-	2.7	-	-	-	-	-	_	2.7	-	-



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# CRYPTOGRAPHY AND NETWORK SECURITY LAB

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

S.No	Name of The Experiment	CO	PO
1	Write a C program that contains a string (char pointer) with a value 'Hello world'. The program should XOR each character in this string with 0 and displays the result.		1,3
2	Write a C program that contains a string (char pointer) with a value 'Hello world'. The program should AND or and XOR each character in this string with 127 and display the result.	1	1,3
3	Write a Java program to perform encryption and decryption using the Following algorithms Ceaser cipherb.Substitution cipherc.Hill Cipher	2	1,2,3
4	Write a C/JAVA program to implement the DES algorithm logic.	2	1,2,3
5	Write a C/JAVA program to implement the Blowfish algorithm logic.	2	1,2,3
6	Write a C/JAVA program to implement the Rijndael algorithm logic.	3	1,2,3,5,12
7	Write the RC4 logic in Java Using Java cryptography; encrypt the text "Hello world" using Blowfish. Create your own key using Java keyt ool.	5	1,2,3,5,12
8	Write a Java program to implement RSA algorithm.	6	1,2,3
9	Implement the Diffie Hellman Key Exchange mechanism using HTML and Java Script.	1	1,3
10	Calculate the message diges to fatext using the SHA-1algorithm in JAVA.	4	1,2,3,5,12
11	Calculate the message diges to fatext using the MD5 algorithm in JAVA.	4	1,2,3,5,12



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# TIME TABLE FOR A.Y 2022-23

Class: IV B. Tech CSE -A

Semester: I

LH. NO: A-101

W.E.F:29-08-2022

Period/	1	2	3	4	1:00-	5	6	7
Day	9:40-10:30	10:30-11:20	11:20-12:10	12:10-1:00	1:30	1:30-2:20	2:20-3:10	3:10-4:00
Monday	C&NS	C&NS LAB	(BATCH-I)/SEMINAR(I	BATCH-II)		RTS	LIB	POE
Tuesday	DM	RTS	C&NS	COUN	1 t		MINI PROJECT	
Wednesday	CC	MA	JOR PROJECT STAGE	-1	1 0 5	MAJOR PROJECT STAGE -I		
Thursday	RTS	C&NS	DM	INT	1 % [	C&NS	DM	SPORTS
Friday	POE	RTS	CC	DM	H .	CC	CO-C/S	S/DAA
Saturday	CC	POE	C&NS	DM	1 " I	SEMINAR(BATCH-I)/C&NS LAB(BATCH-II)		

# (T) - Tutorial (concern faculty)

Subject Code	Subject Name	Name of the Faculty	Subject Code	Subject Name	Name of the Faculty			
CS701PC Cryptography& Network Security		Mrs.J Pujitha	CS705PC	Seminar Coordinator	Mrs.S.Akhila / Dr. Bapathu Gangadhara Obula Reddy / Dr B Ratnakanth			
CS702PC	Data Mining	Mr.K.Veera Kishore		CO-C/SS/DAA	Mrs.J Pujitha			
CS714PE	Cloud Computing (PE-IV)	Mrs.K.Manmadha	Sports	Sports	Mr.P.Sriramulu			
CS722PE	Real Time Systems (PE-V)	Mrs.M.Karuna	Internet	Internet	Mrs.K.Manmadha			
	Principles of Entrepreneurship (OE-II)	Mr.N.B.C.Sidhhu	LIB	Library	Mrs.K.Manmadha			
CS703PC	Cryptography& Network Security Lab	Mrs.J Pujitha / Mrs.B.S.Swapna Shanthi/ Mrs.N.Shilpa	COUN	Counselling	Mrs.K Anusha			
CS704PC Mini Project Coordinator		Mrs.M.Karuna/ Mrs.K.Manmadha/ Mrs.  K.Anusha  CS706PC		Major Project (Stage-I)	Dr Sasi Kumar/Mrs.J Pujitha / Mrs.M.Karuna			
Class In-Charge: Mrs.J Pujitha		rge: Mrs.J Pujitha Mentor 1: Mrs.J Pujitha			Mentor 2: Mrs.M.Karuna			

Class In-Charge

HOD

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**R18** 

#### **Lab External Question paper**

Year & Semester: IV-I Branch: CSE

Subject Name: CRYPTOGRAPHY AND NETWORK SECURITY LAB Faculty Name: J.PUJITHA

#### **QUESTIONS**

- 1. Write a C program that contains a string (char pointer) with a value 'Hello world'. The program should XOR each character in this string with 0 and displays the result.
- 2. Write a C program that contains a string (char pointer) with a value 'Hello world'. The program should ANDorandXOReachcharacterinthisstringwith127anddisplaythe result.
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- 5. Write a C/JAVA program to implement the Blow fish algorithm logic.
- 6. Write a C/JAVA program to implement the Rijndael algorithm logic.
- 7. Write the RC4 logic in Java Using Java cryptography; encrypt the text"Hello world"using Blow fish.Create your own key using Java key tool.
- 8. Write a Java program to implement RSA algorithm.
- 9. Implement the Diffie-Hellman Key Exchange mechanism using HTML and Java Script.
- 10. Calculate the message diges to fatext using the SHA-1algorithm in JAVA.
- 11. Calculate the message diges to fatext using the MD5 algorithm in JAVA.



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#### **C&NS Lab External Time Table Examination Branch**

A.Y.:2022-23 IV-YEAR SEM-I

DATE	Day	Branch	Session	HT. No	Total No of Students
07-1-2023	SATURDAY	CSE-A	FN	18X31A0511 TO 20X35A0506	68
07-1-2023	SATURDAY	CSE-B	AN	18X31A05B4 TO 20X35A0512	64
09-1-2023	MONDAY	CSE-C	FN	18X31A05C8 TO 20X35A0517	65

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#### **C&NS Lab External Time Table with Examiners**

A.Y.:2022-23 IV-YEAR SEM-I

DATE	Day	Branch	Session	HT.No	Total No of Stude nts	Internal Examiner	External Examiner
07-1-2023	SATURDAY	CSE-A	FN	18X31A0511 TO 20X35A0506	68	J.PUJITHA (9603749303)	Mr.Acharya GNITC
07-1-2023	SATURDAY	CSE-B	AN	18X31A05B4 TO 20X35A0512	64	B.S.SWAPNA SHANTHI (9985528788)	Mr. Acharya GNITC
09-1-2023	MONDAY	CSE-C		18X31A05C8 TO 20X35A0517	65	P.SRIRAMULU (9912556012)	Mr.Acharya GNITC

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# **LAB OCCUPANCY CHART**

#### CRYPTOGRAPHY ANDNETWORK SECURITY LAB

ROOMNO: A-015 BLOCK: A FLOOR: Ground Floor

	Ι	II	III	IV	LUNCH	V	VI	VII
	9:40-10:30	10:30-11:20	11:20-12:10	12:10-1:00		1:30-2:20	2:20-3:10	3:10-4:00
MON		CSE-A (	C&NS LAB (BAT	CH-I)		CSE-C C&NS LAB (BATCH-I)		
TUE						CSE-C C	&NS LAB (B	ATCH-II)
WED						CSE-B C8	&NS LAB (BA	ATCH-I)
THU								
FRI								
SAT		CSE-B C&NS	S LAB (BATCH-I	(II)		CSE-A C	&NS LAB (B	ATCH-II)

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#### CRYPTOGRAPHY AND NETWORK SECURITY LAB

#### Do's

- 1. Come with completed observation and record.
- 2. Remove your shoes or wear foot socks before you enter the lab.
- 3. Always keep quiet. Be considerate to other lab users.
- 4. Report any problems with the computer to the person in charge.
- 5. Shut down the computer properly.
- 6. Wear ID card before entering into the lab.
- 7. Read and understand how to carry out anactivity thoroughly before coming to the lab.
- 8. Write In time, Out time and system details in the login register

#### Don'ts

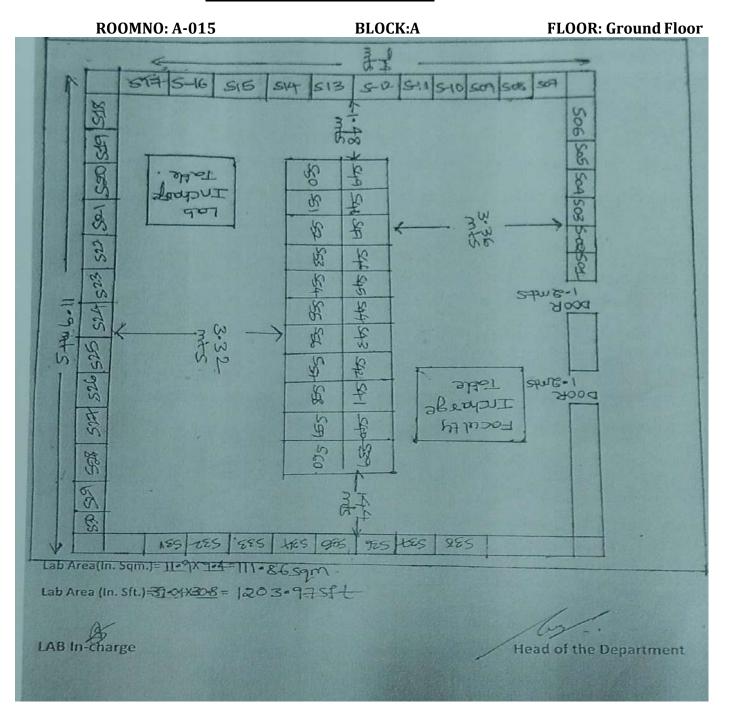
- 1. Do not touch any part of the computer with wet hands.
- 2. Do not change system settings.
- 3. Do not hit the keys on the computer too hard.
- 4. Don't damage, remove, or disconnect any labels, parts, cables or equipment.
- 5. Do not install or download any software or modify or delete any system files on any lab computers.
- 6. Do not disturb your neighbouring students. They may be busy incompleting tasks.
- 7. Do not remove anything from the computer lab oratory with out permission.
- 8. Do not use pedrives.

# CONTROL OF THE PROPERTY OF THE

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# CRYPTOGRAPHY AND NETWORK SECURITY LAB PHYSICAL LAB-1 FLOOR PLAN





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# **C&NS Lab Manual Link**

https://drive.google.com/file/d/1UzWVvDegAj-NJtTnSaSiAoi05HNlOhhq/view?usp=sharing



#### Department of Computer Science and Engineering Course Outcome Attainment (Internal Examination-1)

Branch & Section: CSE-A
Lab Course Name: C&NS Lab

Name of the faculty: J.PUJITHA

Academic Year: 2022-2023 Examination: I Internal Year/semester: IV/I

S. No	HT No.	PW+E	v	DDE
Max.				
Marks ==>		5	5	15
1	18X31A0511	5	4	15
2	18X31A0522	3	2	9
3	18X31A0531	5	5	14
4	18X31A0593	5	5	12
5	19X31A0501	5	5	15
6	19X31A0502	4	3	14
7	19X31A0503	4	5	13
8	19X31A0504	5	4	14
9	19X31A0505	4	3	14
10	19X31A0506	5	4	14
11	19X31A0507	4	4	13
12	19X31A0508	3	4	14
13	19X31A0509	4	5	13
14	19X31A0510	5	5	12
15	19X31A0511	4	4	14
16	19X31A0512	5	4	11
17	19X31A0513	4	4	15
18	19X31A0514	4	5	14
19	19X31A0515	4	5	14
20	19X31A0517	4	4	13
21	19X31A0518	4	3	15
22	19X31A0519	5	5	13
23	19X31A0520	4	4	12
24	19X31A0521	4	4	13
25	19X31A0522	4	4	12
26	19X31A0523	4	4	13
27	19X31A0524	4	5	15
28	19X31A0525	5	4	13
29	19X31A0526	4	5	14
30	19X31A0527	4	4	13
31	19X31A0528	4	4	13
32	19X31A0529	4	4	13
33	19X31A0530	5	4	14
34	19X31A0531	5	5	15
35	19X31A0532	5	4	14
36	19X31A0533	4	5	12
37	19X31A0534	5	5	13
38	19X31A0535	4	4	14
39	19X31A0536	4	5	13
40	19X31A0537	4	5	12
41	19X31A0538	4	4	14
42	19X31A0539	5	4	17

43	19X31A0540	5		4			13	
44	19X31A0541	4		5			14	
45	19X31A0542	3		5			14	
46	19X31A0543	5		4			14	
47	19X31A0544	4		5			13	
48	19X31A0545	3		2			14	
49	19X31A0546	4		4			12	
50	19X31A0547	5		4			12	
51	19X31A0548	5		5			11	
52	19X31A0549	3		4			13	
53	19X31A0550	4		5			12	
54	19X31A0551	5		4			12	
55	19X31A0552	4		5			13	
56	19X31A0553	4		5			12	
57	19X31A0554	4		5			14	
58	19X31A0555	3		4		15		
59	19X31A0556	3		3			15	
60	19X31A0557	5		4		12		
61	19X31A0558	4		5			13	
62	19X31A0559	4		3			14	
63	20X35A0501	4		5		12		
64	20X35A0502	2		2		15		
65	20X35A0503	3		4		15		
66	20X35A0504	3		4		1:		
67	20X35A0505	4		5			13	
68	20X35A0506	2		2			14	
Number	by the faculty / HOD of students performed	above the		3.00 62		3.00 60	9.00 62	
target								
				62		62	62	
Number of	Number of students attempted					-	-	
	Percentage of students scored more than			100%	9	07%	100%	
Target set	Target set by the faculty / HOD			3.00	3	3.00	9.00	
target set by the faculty / 110D								

**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

#### CO Attainment based on Exam Questions:

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

со	Intrnal practical	DDE	OveralI	Level
CO-1	100%	100%	100%	3
CO-2	98%	100%	99%	3
CO-3	98%	100%	99%	3
CO-4	98%	100%	99%	3
CO-5	98%	100%	99%	3
CO-6	98%	100%	99%	3

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

Attainment (Internal 1 Examination) =

# Department of Computer Science and Engineering Course Outcome Attainment (Internal Examination-2)

 Name of the faculty:
 J.PUJITHA
 Academic Year:
 2022-2023

 Branch & Section:
 CSE-A
 Examination:
 II Internal

 Lab Course Name:
 C&NS Lab
 Year/semester
 IV/I

S. No	HT No.	PW+E	v	DDE
Max.				
Mark s		5	5	15
==>			_	
1	18X31A0511	5	4	15
2	18X31A0522	3	2	9
3	18X31A0531	5	5	14
4	18X31A0593	5	5	12
5	19X31A0501	5	5	15
6	19X31A0502	4	3	14
7	19X31A0503	4	5	13
8	19X31A0504	5	4	14
9	19X31A0505	4	3	14
10	19X31A0506	5	4	14
11	19X31A0507	4	4	13
12	19X31A0508	3	4	14
13	19X31A0509	4	5	13
14	19X31A0510	5	5	12
15	19X31A0511	4	4	14
16	19X31A0512	5	4	11
17	19X31A0513	4	4	15
18	19X31A0514	4	5	14
19	19X31A0515	4	5	14
20	19X31A0517	4	4	13
21	19X31A0518	4	3	15
22	19X31A0519	5	5	13
23	19X31A0520	4	4	12
24	19X31A0521	4		
25	19X31A0522	4	4	13
26	19X31A0522	4	4	12
27		4	4	13
28	19X31A0524 19X31A0525	5	5	15
29	19X31A0526	4	4	13
30		4	5	14
31	19X31A0527	4	4	13
32	19X31A0528	4	4	13
33	19X31A0529	5	4	13
34	19X31A0530	5	4	14
35	19X31A0531	5	5	15
	19X31A0532		4	14
36	19X31A0533	4	5	12
37	19X31A0534	5	5	13
38	19X31A0535	4	4	14
39	19X31A0536	4	5	13
40	19X31A0537	4	5	12

41	19X31A0538	4	4	14
42	19X31A0539	5	4	12
43	19X31A0540	5	4	13
44	19X31A0541	4	5	14
45	19X31A0542	3	5	14
46	19X31A0543	5	4	14
47	19X31A0544	4	5	13
48	19X31A0545	3	2	14
49	19X31A0546	4	4	12
50	19X31A0547	5	4	12
51	19X31A0548	5	5	11
52	19X31A0549	3	4	13
53	19X31A0550	4	5	12
54	19X31A0551	5	4	12
55	19X31A0552	4	5	13
56	19X31A0553	4	5	12
57	19X31A0554	4	5	14
58	19X31A0555	3	4	15
59	19X31A0556	3	3	15
60	19X31A0557	5	4	12
61	19X31A0558	4	5	13
62	19X31A0559	4	3	14
63	20X35A0501	4	5	12
64	20X35A0502	2	2	15
65	20X35A0503	3	4	15
66	20X35A0504	3	4	15
67	20X35A0505	4	5	13
68	20X35A0506	2	2	14
Target set	by the faculty / HOD	3.00	3.00	9.00
Number of students performed above the target		62	60	62
Number of students attempted		62	62	62
	e of students scored more	100%	97%	100%

**CO Mapping with Exam Questions:** 

11 8			
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

#### CO Attainment based on Exam Questions:

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

CO	Intrnal Practical	DDE	OveralI	Level		
CO-1	100%	100%	100%	3		
CO-2	98%	100%	99%	3		
CO-3	98%	100%	99%	3	Attainment Level	% students
CO-4	98%	100%	99%	3	1	40%
CO-5	98%	100%	99%	3	2	50%
CO-6	98%	100%	99%	3	3	>60%

Attainment (Internal 2 Examination) =



# **Department of Computer Science and Engineering**

### **Course Outcome Attainment (University Examinations)**

Name of the faculty:J.PUJITHAAcademic Year:2022-2023Branch & Section:CSE-AYear / Semester:IV/I

Lab Course Name: C&NS LAB

S. No	Roll Number	Marks Secured
1	18X31A0511	67
2	18X31A0522	
3	18X31A0531	66
4	18X31A0593	68
5	19X31A0501	69
6	19X31A0502	69
7	19X31A0503	69
8	19X31A0504	68
9	19X31A0505	70
10	19X31A0506	69
11	19X31A0507	71
12	19X31A0508	69
13	19X31A0509	70
14	19X31A0510	71
15	19X31A0511	71
16	19X31A0512	72
17	19X31A0513	71
18	19X31A0514	72
19	19X31A0515	71
20	19X31A0517	71
21	19X31A0518	72
22	19X31A0519	69
23	19X31A0520	73
24	19X31A0521	71
25	19X31A0522	68
26	19X31A0523	72
27	19X31A0524	71
28	19X31A0525	72
29	19X31A0526	72
30	19X31A0527	66
31	19X31A0528	72
32	19X31A0529	73
33	19X31A0530	71
34	19X31A0531	67
35	19X31A0532	69
Max M	arks	
Class A	verage mark	75 70
	r of students	
Numba	ed above the target r of successful	15
student	S	33
scored	age of students more than target	45%
Attainn	nent level	1

S. No	Roll Number	Marks Secured					
36	19X31A0533	70					
37	19X31A0534	69					
38	19X31A0535	72					
39	19X31A0536	70					
40	19X31A0537	73					
41	19X31A0538	71					
42	19X31A0539	73					
43	19X31A0540	72					
44	19X31A0541	71					
45	19X31A0542	69					
46	19X31A0543	72					
47	19X31A0544	69					
48	19X31A0545	68					
49	19X31A0546	71					
50	19X31A0547	69					
51	19X31A0548	69					
52	19X31A0549	70					
53	19X31A0550	72					
54	19X31A0551	73					
55	19X31A0552	71					
56	19X31A0553	71					
57	19X31A0554	72					
58	19X31A0555	70					
59	19X31A0556	71					
60	19X31A0557	72					
61	19X31A0558	69					
62	19X31A0559	70					
63	20X35A0501	69					
64	20X35A0502	68					
65	20X35A0503	69					
66	20X35A0504	69					
67	20X35A0505	68					
68	20X35A0506	65					

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

# Department of Computer Science and Engineering <u>Course Outcome Attainment</u>

Name of the faculty: J.PUJITHA Academic Year: 2022-2023

Branch & Section: CSE-A Year / Semester: IV/I

Lab Course Name: C&NS LAB

Course Outcomes	1st Internal Exam	2nd Internal Exam	Internal Exam	University Exam	Attainment Level
CO1	3.00	3.00	3.00	1.00	1.60
CO2	3.00	3.00	3.00	1.00	1.60
CO3	3.00	3.00	3.00	1.00	1.60
CO4	3.00	3.00	3.00	1.00	1.60
CO5	3.00	3.00	3.00	1.00	1.60
CO6	3.00	3.00	3.00	1.00	1.60
]	Internal & Uni	versity Attainment:	3.00	1.00	
		Weightage	25%	75%	
CO Attai	nment for the Universi	course (Internal, ty)	0.90	0.70	
CO Att	ainment for the Method	e course (Direct l)		1.60	

Overall course attainment level

#### SRI INDU INSTITUTE OF ENGINEERING & TECHNOLOGY

# Department of Computer Science and Engineering <u>Program Outcome Attainment (from Course)</u>

Name of Faculty: J.PUJITHA Academic Year: 2022-2023

Branch & Section: CSE-A Year / Semester: IV/I

Course Name: C&NS LAB

#### CO-PO mapping

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PS01	PS02
C416.1	3	-	2	-	-	-	-	-	-	-	-	-	-	-
C416.2	2	3	3	-	-	-	-	-	-	-	-	-	-	-
C416.3	1	2	3	-	3	-	-	-	-	-	-	3	-	-
C416.4	2	3	3	-	2	-	-	-	-	-	-	2	-	-
C416.5	3	2	3	-	3	-	-	-	-	-	-	1	-	-
C416.6	2	2	3	-	-	-	-	-	-	-	-	-	-	-
PO Avg	2.2	2.4	2.8	-	2.7	-	-	-	-	-	-	2.7	-	-

	Course Outcome Attainment
СО	
	1.60
CO1	
	1.60
CO2	
	1.60
CO3	
	1.60
CO4	
	1.60
CO5	
	1.60
CO6	
Overall course attainment level	1.60

#### POATTAINMENT

CO Attainment 0.52 1.07 1.60 444444 1.07 444444 444444 444444 444444 444444 4444		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
COAttainment 0.52 1.07 1.60 44444 1.07 44444 44444 44444 44444 44444 44444 4444													
	CO Attainment	0.53	1.07	1.60	#####	1.07	#####	######	#####	#####	#####	#####	####

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