

SCHEME OF COURSE WORK

Department of Computer Science and Engineering

Course Details:

COURSE TITLE	NETWORK SECURITY AND CRYPTOGRAPHY LAB		
COURSE CODE	15CS1108	L T P C	0 0 3 2
PROGRAM	B.TECH		
SPECIALIZATION	CSE		
SEMESTER	VIII		
PRE REQUISITES	Object Oriented Programming through Java		
COURSES TO WHICH IT IS A PRE REQUISITE	N/A		

Course Outcomes (COs):

CO 1	Apply methods of conventional encryption
CO 2	Solve the problem of public key encryption using number theory
CO 3	Develop Key-Exchange Algorithms
CO 4	Implement authentication protocol
CO 5	Verify network security protocol

Course Outcome versus Program Outcomes

Course outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	S	S	M	M	S	M						
CO2	M	S										
CO3	S	S	M	S	S							
CO4	S	S	S	M	M							
CO5	S	S	S		S	M						

S - Strongly correlated, M - Moderately correlated, Blank - No correlation

Assessment Methods	Assignment / Quiz / Mid-Test
--------------------	------------------------------

Teaching- Learning & Evaluation

Week	Topic/ Contents	Course Outcomes	Teaching learning strategy	Assessment method & schedule
1	Implement Caesar cipher encryption and decryption	CO1	Programming	Viva-1
2	Implement Hill cipher encryption	CO1	Programming	Viva-2
3	Implement play fair cipher encryption	CO1	Programming	Viva-3
4	Implement fast modular exponentiation algorithm.	CO2	Programming	Viva-4
5	Implement Rabin-Miller Primality Testing Algorithm.	CO2	Programming	Viva-5
6	Implement the Euclid Algorithm to generate the GCD of an array of 10 integers.	CO3	Programming	Viva-6
7	Implement Extended Euclid Algorithm to find multiplicative inverse of a number	CO2	Programming	Viva-7
8	Implement the encryption and decryption of 8-bit data using Simplified DES Algorithm (created by Prof. Edward Schaefer).	CO4	Programming	Viva-8
9	Implement RSA algorithm for encryption and decryption.	CO4	Programming	Viva-9
10	Implement Diffie-Hellman Key Exchange Algorithm.	CO3	Programming	Viva-10
11	Implement CRT (Chinese Remainder Theorem).	CO2	Programming	Viva-11
12	Configure a mail agent to support Digital Certificates, send a mail and verify the correctness of this system using the configured parameters.	CO5	Programming	Viva-12