

Department of Computer Science

SEMESTER : IV	NAME OF THE FACULTY : Mrs. V. Sahana
BRANCH : CNE	DATE OF COMMENCEMENT: 11.01.16
SUBJECT : Client Server Programming	DATE OF CLOSING : 20.04.16
SUBJECT CODE : 14SCN41	CLASS STRENGTH : 14
NO OF HRS/WK : 5	TOTAL HRS : 64

Session No	Chapter no (No of hrs planed for the chapter)	DATE	Topics planned for the session	Teaching Aids	Assignments/ Tests planned for the chapter	Topics covered As per plan
1.	2/2	11/1	Module 1: The Client Server Model and Software Design: Introduction	Board, chalk, duster		
2.	2/2	11/1	Motivation, Terminology and Concepts	„		
3.	3/4	12/1	Concurrent Processing in Client-Server software Introduction,	„		
4.	3/4	12/1	Concurrency in Networks, Concurrency in Servers, Terminology and Concepts	„		
5.	3/4	12/1	,An example of Concurrent Process Creation, Executing New Code	ppt		
6.	3/4	18/1	Context Switching and Protocol Software Design ,Concurrency and Asynchronous I/O	Board, chalk, duster		
7.	4/4	18/1	Program Interface to Protocols: Introduction, Loosely Specified Protocol Software Interface,	Hand on session	Assignment- I	
8.	4/4	19/1	Interface Functionality, Conceptual Interface Specification,	„		
9.	4/4	19/1	. System Calls, Two Basic Approaches to Network Communication,	„		
10.	4/4	19/1	The Basic I/O Functions available in UNIX, Using UNIX I/O with TCP/IP.	„		

11.	5/2	25/1	Module II: The Socket Interface: Introduction, Berkley Sockets,	„		
12.	5/5	25/1	Specifying a Protocol Interface, The Socket Abstraction			
13.	5/5	27/1	Specifying an End Point Address, A Generic Address Structure	”		
14.	5/5	27/1	, Major System Calls used with Sockets			
15.	5/5	27/1	Utility Routines for Integer Conversion, Using Socket Calls in a Program,	„		
16.	5/5	2/2	Symbolic Constants for Socket Call Parameters.	Board, chalk, duster	Assignment -II	
17.	6/12	2/2	Algorithms and Issues in Client Software Design: Introduction, Learning Algorithms instead of Details,	”		
18.	6/12	3/2	Client Architecture, Identifying the Location of a Server	”		
19.	6/12	3/2	, Parsing an Address Argument,			
20.	6/12	3/2	Looking up a Domain Name, Looking up a well-known Port by Name			
21.	6/12	10/2	Port Numbers and Network Byte Order			
22.	6/12	10/2	Looking up a Protocol by Name, The TCP Client Algorithm,	”		
23.	6/12	11/2	Allocating a Socket, Choosing a Local Protocol Port Number			
24.	6/12	11/2	A fundamental Problem in choosing a Local IP Address, Connecting a TCP Socket to a Server	”		
25.	6/12	11/2	Communicating with the Server using TCP, Reading a response from a TCP Connection,	Hand on session	Assignment – III	
26.	6/12	17/2	Closing a TCP Connection, Programming a UDP Client, Connected and Unconnected UDP Socket			

27.	6/12	17/2	Using Connect with UDP, Communicating with a Server using UDP,	„		
28.	6/12	18/2	Closing a Socket that uses UDP, Partial Close for UDP, A Warning about UDP Unreliability			
29.	7/10	18/2	Module III Example Client Software: Introduction, The Importance of Small Examples, Hiding Details	”		
30.	7/10	18/2	An Example Procedure Library for Client Programs, Implementation of Connect TC			
31.	7/10	26/2	Implementation of Connect UDP, A Procedure that Forms Connections, Using the Example Library,	”		
32.	7/10	26/2	The DAYTIME Service, Implementation of a TCP Client for DAYTIME	„		
33.	7/10	29/2	Reading from a TCP Connection, The Time Service, Accessing the TIME Service	„		
34.	7/10	29/2	Accurate Times and Network Delays	„		
35.	7/10	29/2	A UDP Client for the TIME Service	„		
36.	7/10	5/3	A TCP Client for the ECHO Service	„	Assignment – IV	
37.	7/10	5/3	A UDP Client for the ECHO Service.	Board, chalk, duster		
38.	7/10	8/3	Using the Example Library	Hand on session		
39.	8/14	8/3	Module IV: Algorithms and Issues in Server Software Design: Introduction,	„		
40.	8/14	8/3	The Conceptual Server Algorithm, Concurrent Vs Iterative Servers	”		
41.	8/14	18/3	Connection-Oriented Vs Connectionless Access	„		
42.	8/14	18/3	Connection-Oriented Servers, Connectionless Servers, Failure,	„	Assignment -V	
43.	8/14	19/3	Reliability and Statelessness, Optimizing Stateless Servers, Four Basic Types of Servers	Board, chalk, duster		

44.	8/14	19/3	Request Processing Time, Iterative Server Algorithms	„		
45.	8/14	19/3	An Iterative Connection-Oriented Server Algorithm,	„		
46.	8/14	28/3	Binding to a Well Known Address using INADDR_ANY, Placing the Socket in Passive Mode	Hand on session/ppt		
47.	8/14	28/3	Accepting Connections and using them. An Iterative Connectionless Server Algorithm,	Hand on session/ppt		
48.	8/14	29/3	Forming a Reply Address in a Connectionless Server	„		
49.	8/14	29/3	Concurrent Server Algorithms, Master and Slave Processes, A Concurrent Connectionless Server Algorithm	„		
50.	8/14	29/3	A concurrent Connection-Oriented Server Algorithm, Using separate Programs as Slaves	„	Assignment - VI	
51.	8/14	4/4	Apparent Concurrency using a Single Process, When to use each Server Types	„		
52.	8/14	4/4	The Important Problem of Server Deadlock, Alternative implementations	„		
53.	9/3	5/4	MODULE V Iterative, Connectionless Servers (UDP): Introduction,	„		
54.	9/3	5/4	Creating a Passive Socket, Process Structure	„		
55.	9/3	5/4	An example TIME Server.	„		
56.	10/4	13/4	Iterative, Connection-Oriented Servers (TCP): Introduction	Hand on session/ppt		
57.	10/4	13/4	Allocating a Passive TCP Socket,	“		
58.	10/4	15/4	A Server for the DAYTIME Service, Process Structure, An Example DAYTIME Server	„	Assignment - VII	
59.	10/4	15/4	Closing Connections, Connection Termination and Server Vulnerability.	„		
60.	11/4	15/4	Concurrent, Connection-Oriented Servers (TCP): Introduction, Concurrent ECHO	„		

61.	11/4	20/4	Iterative Vs Concurrent Implementations	”		
62.	11/4	20/4	Process Structure, An example Concurrent ECHO Server	”		
63.	11/4	20/4	Cleaning up Errant Processes	”		

Syllabus for Internal Assessment Tests (IAT)*

IAT #	Syllabus
IAT-1	1-23
IAT-2	24-46
IAT-3	38-62

Literature:

Book Type	Code	Author & Title	Publication info	
			Edition & Publisher	ISBN #
Text Book	TB1	Douglas E. Comer, David L. Stevens: Internetworking with TCP/IP – Vol 3, Client Server Programming and Applications, BSD Socket Version with ANSI C	2nd Edition, Pearson 2001	978-81-203-2553-1

SEMESTER : IV
 BRANCH : CNE
 SUBJECT : Cyber Crime and Digital Forensics
 SUBJECT CODE : 14SCN424
 NO OF HRS/WK : 5

NAME OF THE FACULTY : Poornima.H.N
 DATE OF COMMENCEMENT : 11.01.2016
 DATE OF CLOSING : 20.04.2016
 CLASS STRENGTH : 15
 TOTAL HRS : 65

Sessi on No	Chapter no (No of hrs planed for the chapter)	DATE	Topics planned for the session	Teaching Aids	Assign ments/ Tests planned for the chapter	Topics covere d As per plan
1	1/1	11.01.16 Monday	Introduction to Cybercrime · Introduction · Cybercrime: Definition and Origins of the Word · Cybercrime and Information Security	Board, duster		
2	2/1	11.01.16 Monday	· Who are Cybercriminals? · Classifications of Cybercrimes · Cybercrime: The Legal Perspectives	Board, duster		
3	3/1	11.01.16 Monday	· Cybercrimes: An Indian Perspective	„		
4	4/1	12.01.16 Tuesday	· Cybercrime and the Indian ITA 2000	Board, duster		
5	5/1	12.01.16 Tuesday	· A Global Perspective on Cybercrimes	Board, duster		
6	6/1	18.01.16 Monday	· Cybercrime Era: Survival Mantra for the Netizens · Concluding Remarks and Way Forward to Further Chapters	Board, duster	Assignm ent- I	
7	7/1	18.01.16 Monday	· Cybercrime Era: Survival Mantra for the Netizens · Concluding Remarks and Way Forward to Further Chapters	„		
8	8/1	18.01.16 Monday	Cyberoffenses: How Criminals Plan Them · Introduction · How Criminals Plan the Attacks	„		
9	9/1	19.01.16 Tuesday	· Social Engineering · Cyberstalking	“		

10	10/1	19.01.16 Tuesday	· Cybercafe and Cybercrimes · Botnets: The Fuel for Cybercrime	“		
11	11/1	25.01.16 Monday	· Attack Vector · Cloud Computing	“		
12	12/1	25.01.16 Monday	Test on Module 1			
13	1/2	25.01.16 Monday	Cybercrime: Mobile and Wireless Devices · Introduction · Proliferation of Mobile and Wireless Devices	”		
14	2/2	01.02.16 Monday	· Trends in Mobility · Credit Card Frauds in Mobile and Wireless Computing Era	”		
15	3/2	01.02.16 Monday	· Security Challenges Posed by Mobile Devices	”		
16	4/2	01.02.16 Monday	· Registry Settings for Mobile Devices	”		
17	5/2	02.02.16 Tuesday	· Authentication Service Security	”		
18	6/2	02.02.16 Tuesday	· Attacks on Mobile/Cell Phones	”	Assignment -II	
19	7/2	08.02.16 Monday	· Mobile Devices: Security Implications for Organizations	”		
20	8/2	08.02.16 Monday	· Organizational Measures for Handling Mobile	”		
21	9/2	08.02.16 Monday	· Organizational Security Policies	”		
22	10/2	09.02.16 Tuesday	-Measures in Mobile Computing Era	Board, chalk, duster		
23	11/2	09.02.16 Tuesday	· Laptops			
24	12/2	15.02.16 Monday	Test on Module 2			
25	1/3	15.02.16 Monday	Tools and Methods Used in Cybercrime · Introduction · Proxy Servers and Anonymizers			

26	2/3	15.02.16 Monday	· Phishing	„		
27	3/3	16.02.16 Tuesday	· Password Cracking · Keyloggers and Spywares	„		
28	4/3	16.02.16 Tuesday	· Virus and Worms · Trojan Horses and Backdoors	„		
29	5/3	22.02.16 Monday	Steganography · DoS and DDoS Attacks	„		
30	6/3	22.02.16 Monday	· SQL Injection	Board, chalk, duster	Assignm ent –III	
31	7/3	22.02.16 Monday	· Buffer Overflow	„		
32	8/3	23.02.16 Tuesday	· Attacks on Wireless Networks	„		
33	9/3	23.02.16 Tuesday	-Phishing and Identity Theft · Introduction · Phishing	„		
34	10/3	29.02.16 Monday	-Identity Theft (ID Theft)	„		
35	11/3	29.02.16 Monday	-Identity Theft (ID Theft)	„		
36	12/3	29.02.16 Monday	Test on Module 3			
37	1/4	01.03.16 Tuesday	Understanding Computer Forensics · Introduction · Historical Background of Cyberforensics	Board, duster		
38	2/4	01.03.16 Tuesday	· Digital Forensics Science · The Need for Computer Forensics	„		
39	3/4	08.03.16 Tuesday	· Cyberforensics and Digital Evidence · Forensics Analysis of E-Mail	„		
40	4/4	08.03.16 Tuesday	· Digital Forensics Life Cycle · Chain of Custody Concept	„		

			· Network Forensics			
41	5/4	21.03.16 Monday	· Approaching a Computer Forensics Investigation · Setting up a Computer Forensics Laboratory: Understanding the Requirements	„		
42	6/4	21.03.16 Monday	· Computer Forensics and Steganography · Relevance of the OSI 7 Layer Model to Computer Forensics	„		
43	7/4	21.03.16 Monday	· Forensics and Social Networking Sites: The Security/Privacy Threats	„		
44	8/4	22.03.16 Tuesday	· Computer Forensics from Compliance Perspective	Board, duster		
45	9/4	22.03.16 Tuesday	· Challenges in Computer Forensics	„	Assignment –IV	
46	10/4	28.03.16 Monday	· Special Tools and Techniques	„		
47	11/4	28.03.16 Monday	· Forensics Auditing · Antiforensics			
48	12/4	28.03.16 Monday	Test on Module 4			
49	1/5	29.03.16 Tuesday	Report Writing for High-Tech Investigations	Board, duster		
50	2/5	29.03.16 Tuesday	Understanding the Importance of Reports	„		
51	3/5	04.04.16 Monday	Guidelines for Writing Reports	„		
52	4/5	04.04.16 Monday	Generating Report Findings with Forensics Software Tools	„		
53	5/5	04.04.16 Monday	Expert Testimony in High-Tech Investigations: Preparing for Testimony	„		
54	6/5	05.04.16 Tuesday	Testifying in Court.	„		
55	7/5	05.04.16 Tuesday	Preparing for a Deposition or Hearing	„		

56	8/5	11.04.16 Monday	Preparing Forensics Evidence for Testimony	„		
57	9/5	11.04.16 Monday	Ethics for the Expert Witness: Applying Ethics and Codes to Expert Witnesses	„		
58	10/5	11.04.16 Monday	Organizations with Codes of Ethics .	„		
59	11/5	12.04.16 Tuesday	Ethical Difficulties in Expert Testimony. An Ethics Exercise	„		
60	12/5	12.04.16 Tuesday	Test on Module 5	„	Assignment –V	
61	13/5	18.04.16 Monday	Revision Module1			
62		18.04.16 Monday	Revision Module2	„		
63		18.04.16 Monday	Revision Module3	„		
64		20.04.16 Wednesday	Revision Module4	„		
65		20.04.16 Wednesday	Revision Module5	„		
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Syllabus for Internal Assessment Tests (IAT)

IAT #	Syllabus
IAT-1	Class # 01 – 30
IAT-2	Class # 31– 50

* : See calendar of events for the schedules of IATs.

Literature:

Book Type	Code	Author & Title	Publication information	
			Edition // Publisher	ISBN #
Text Book	TB1	Sunit Belapure and Nina Godbole Cyber Security: Understanding Cyber Crimes, Computer Forensics And Legal Perspectives	Wiley India Pvt Ltd	ISBN 13: 9788126521791.
Text Book	TB2	Nelson, Phillips and Einfinger Stuart	Cengage Learning, New	ISBN-10:

		Computer Forensics and Investigations	Delhi	1592003826; ISBN-13: 978-1592003822
References	RB1	Thomas J. Mowbray “Cybersecurity: Managing Systems, Conducting Testing, and Investigating Intrusion “	John Wiley and Sons 2014	ISBN-13: 978-1118697115
References	RB2	James Graham, Ryan Olson, Rick Howard “Cyber security essentials”	CRC Press 2000.	ISBN-10: 1439851239; ISBN-13: 978-1439851234;