

Course Expert: Prof. Arunkumar Khannur,
Christ University, B'lore

Course Code: 17CS61

Course Name: Cryptography, Network Security and Cyber Law

Module: 01 & Part of 02

Lecture Session Details			
Date	Day	Time	Topic
MODULE I			
13-02-2020	THU	10:00 to 10: 50 AM	Introduction, Defence Strategies, and Techniques
14-02-2020	FRI	11:00 to 11:50 AM	Guiding Principles
17-02-2020	MON	12:00 to 12:50 PM	Modulo Arithmetic, Greatest Common Divisor
18-02-2020	TUE	02:00 to 02:50 PM	Useful Algebraic Structures: Groups, Rings, Fields, Chinese Remainder Theorem
20-02-2020	THU	10:00 to 10:50 AM	Basics of Cryptography: Preliminaries, Elementary Substitution Ciphers: Monoalphabetic Ciphers
24-02-2020	MON	12:00 to 12:50 PM	Basics of Cryptography (Contd): Polyalphabetic Ciphers,
25-02-2020	TUE	02:00 to 02:50 PM	Elementary Transposition Ciphers, Other Cipher Properties
27-02-2020	THU	10:00 to 10:50 AM	Secret Key Cryptography: Product Ciphers, DES Construction
28-02-2020	FRI	11:00 to 11:50 AM	Module Summary and Quiz
MODULE II			
02-03-2020	MON	12:00 to 12:50 PM	Public Key Cryptography and RSA: RSA Operations- Key Generation, Encryption, and Decryption, Why does RSA work
03-03-2020	TUE	02:00 to 02:50 PM	Public Key Cryptography and RSA (contd.): Time Complexity, Speeding-up RSA, Software Performance
05-03-2020	THU	10:00 to 10:50 AM	Public Key Cryptography and RSA (contd.): Applications, Practical Issues
06-03-2020	FRI	11:00 to 11:50 AM	Public Key Cryptography and RSA (contd.): Applications, Practical Issues
09-03-2020	MON	12:00 to 12:50 PM	Public Key Cryptography and RSA (contd.): Public Key Cryptography Standard (PKCS) Summary and Quiz

Course Expert: Dr. Shantaladevi Patil, Reva ITM, B'lore

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Course Name: Cryptography, Network Security and Cyber Law

Module: Part of 02 & 03

Lecture Session Details			
Date	Day	Time	Topic
10-03-2020	TUE	02:00 to 02:50 PM	Cryptographic Hash I
12-03-2020	THU	10:00 to 10:50 AM	Cryptographic Hash II
13-03-2020	FRI	11:00 to 11:50 AM	Discrete Logarithm and Its Applications
16-03-2020	MON	12:00 to 12:50 PM	Diffie Hellman Key Exchange Algorithm
17-03-2020	TUE	02:00 to 02:50 PM	Key Management I
19-03-2020	THU	10:00 to 10:50 AM	Key Management II
20-03-2020	FRI	11:00 to 11:50 AM	Authentication I
23-03-2020	MON	12:00 to 12:50 PM	Authentication II
24-03-2020	TUE	02:00 to 02:50 PM	Kerberos I
26-03-2020	THU	10:00 to 10:50 AM	Biometrics
27-03-2020	FRI	11:00 to 11:50 AM	IPSec I
30-03-2020	MON	12:00 to 12:50 PM	IPSec II, Virtual Private Network
31-03-2020	TUE	02:00 to 02:50 PM	Security at Socket Layer I
02-04-2020	THU	10:00 to 10:50 AM	Problems Solving

Course Expert: Dr. Padmashree T, RVCE, B'lore

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Module: 04

Lecture Session Details			
Date	Day	Time	Topic
03-04-2020	FRI	11:00 to 11:50 AM	IEEE 802.11 Wireless LAN Security - Background, Authentication: Pre-WEP Authentication, Authentication in WEP
07-04-2020	TUE	02:00 to 02:50 PM	Authentication and Key agreement in 802.11i, Confidentiality and Integrity.
09-04-2020	THU	10:00 to 10:50 AM	Viruses and Worms Features, Virus characteristics, Worm characteristics, Internet scanning worms, Topological Worms
16-04-2020	THU	10:00 to 10:50 AM	Web worms and Case study, Mobile malware, Introduction, Bluetooth, Botnets Case Study: Storm Botnet
17-04-2020	FRI	11:00 to 11:50 AM	Firewalls: Basics, Firewall functionality, Policies and Access control list, Firewall types, Practical issues: Placement of firewall, Firewall configuration
20-04-2020	MON	12:00 to 12:50 PM	Personal Firewalls: A case study, Chains and Tables, Commands
21-04-2020	TUE	02:00 to 02:50 PM	Intrusion Prevention and detection: Introduction, Prevention Vs Detection, Types of IDS
23-04-2020	THU	10:00 to 10:50 AM	DDoS Attack Prevention/Detection, IP Traceback, Malware Defense: Worm Defense, Worm signature, Virus detection.
24-04-2020	FRI	11:00 to 11:50 AM	Web Services Security: Introduction, Technologies for Web Services, WS-Security
27-04-2020	MON	12:00 to 12:50 PM	SAML and Other Standards: WS-Trust, WS-Security policy. Question Bank of Module-4 discussion.

Course Expert: Ex. Prof. C. R. Rajagopal, AIEMS, B'lore

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Course Name: Cryptography, Network Security and Cyber Law

Module: 05

Lecture Session Details			
Date	Day	Time	Topic
28-04-2020	TUE	02:00 to 02:50 PM	<ul style="list-style-type: none"> • IT ACT: AIM AND OBJECTIVES • SCOPE OF THE ACT • MAJOR CONCEPTS
30-04-2020	THU	10:00 to 10:50 AM	<ul style="list-style-type: none"> • IMPROTANT PROVISIONS
04-05-2020	MON	12:00 to 12:50 PM	<ul style="list-style-type: none"> • ATTRIBUTION,ACKNOWLEDGEMENT,AND DISPATCH OF ELECTRONICS RECORNS. • SECURE ELECRONIC RECORDS AND • SECURE DIGITAL SIGNATURES
05-05-2020	TUE	02:00 to 02:50 PM	<ul style="list-style-type: none"> • REGULATIONS OF CERTIFYING AUTHORITIES • APPOINTMENT OF CONTROLLERS AND OTHER OFFICERS
07-05-2020	THU	10:00 to 10:50 AM	<ul style="list-style-type: none"> • DIGITAL SIGNATURE CERITFICATES
08-05-2020	FRI	11:00 to 11:50 AM	<ul style="list-style-type: none"> • DUTIES OF SUBSCRIBERS • PENALTIES AND ADJUDICATIONS
11-05-2020	MON	12:00 to 12:50 PM	<ul style="list-style-type: none"> • CYBER REGULATIONS APPELLATE TRIBUNAL
12-05-2020	TUE	02:00 to 02:50 PM	<ul style="list-style-type: none"> • OFFENCES
14-05-2020	THU	10:00 to 10:50 AM	<ul style="list-style-type: none"> • PUBLICATION FOR FRADULENT PURPOSE • NETWORK SECURITY PROVIDERS NOT TOBE LIABLE IN CERTAIN CASES
15-05-2020	FRI	11:00 to 11:50 AM	<ul style="list-style-type: none"> • MISCELLANEOUS PROVISIONS