

College of IT and Management Education

Lesson Plan

Subject : Computer Security (MCE-509)

Branch : MCA

Semester : 5th Semester MCA(July-Dec,2016)

Name of the Faculty : Susanta Kumar Behera

Total Credit Point: 3

Total Number of Classes: 37

Sl. No.	TOPIC PLANNED	SESSION
MODULE-I		12 Hours
1	Meaning and Goals of Computer Security	1
2	Classical Cipher:Substitution Cipher	1
3	Classical Cipher:Permutation Ciphers	1
4	Shannon's characteristics of Good Cipher	1
5	Cryptanalysis	1
6	Symmetric Cryptography :DES algorithm	1
7	Encryption and Decryption in DES,AES basics	1
8	Asymmetric Cryptography :RSA algorithm	1
9	Uses of Encryption: Hash Key Exchange	1
10	Uses of Encryption: Digital signature	1
11	Digital certificate	1
12	Pseudo-randomness	1
MODULE-II		13 Hours
13	Secure Program,types of flaws	1
14	Buffer Overflow, Incomplete mediation, TOCTOU errors	1
15	Malicious codes	1
16	Targeted Malicious Code: Trapdoor, Salami attack	1
17	Covert Channel	1
18	Controls against program Threats	1
19	Memory and Address protection	1
20	Access Control list,Access Control Matrix,Role based access control	1
21	File protection Mechanisms	1
22	User Authentication	1
23	Trusted OS security features	1
24	Military &Commercial Security Policies	1
25	Group oriented Cryptography	1

	MODULE-III	12 Hours
26	Database Security Requirements	1
27	Reliability and Integrity	1
28	Sensitive data and Inference	1
29	Multilevel Database Security issues	1
30	Proposals for Multilevel Security	1
31	Threats in network	1
32	Firewall and its classification	1
33	Intrusion Detection System	1
34	Secure E-mail: PGP	1
35	Security Planning	1
36	Risk Analysis steps	1
37	Legal and ethical Issues in computing	1

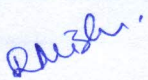
Textbooks:


1. Charles P. **Pfleeger** & Shari Lawrence **Pfleeger**, "*Security in Computing*", Fourth Edition, 2007, Pearson Education, Inc. New Delhi.
2. Josef **Pieprzyk**, Thomas **Hardjono**, Jennifer **Seberry**, "*Fundamentals of Computer Security*", 2003, Springer & Universities Press India, New Delhi.

Reference Books:

1. Dieter **Gollmann**, "*Computer Security*", Second Edition, 2006, Wiley India Pvt. Ltd., New Delhi.
2. William **Stallings** & Lawrie **Brown**, "*Computer Security: Principles and Practice*", First Edition, 2008, Pearson Education, Inc. New Delhi.
3. Charlie **Kaufman**, Radia **Perlman** & Mike **Speciner**, "*Network Security: Private Communication in a Public World*", 2nd Edition, 2003, PHI Learning. New Delhi.
4. Chuck **Easttom**, "*Computer Security Fundamentals*", First Edition, 2006, Pearson Education, Inc. New Delhi.
5. Alfred **Baasta**, "*Computer Security*", First edition, 2008, CENGAGE Learning.


Faculty


Course Coordinator


Principal