

| COURSE CODE | COURSE TITLE | L | T | P | C |
|-------------|----------------------|---|---|---|---|
| 1152CS117 | INFORMATION SECURITY | 3 | 0 | 0 | 3 |
| | | | | | |

Course Category: Program Elective

A. Preamble :

This course helps to study the critical need for ensuring Information Security in Organizations

B. Prerequisite Courses:

| Sl. No | Course Code | Course Name |
|--------|-------------|-------------------|
| 1 | 1151CS111 | Computer Networks |

C. Related Courses:

| Sl. No | Course Code | Course Name |
|--------|-------------|-----------------------------------|
| 1 | 1152CS101 | Cryptography and Network Security |

D. Course Educational Objectives :

Learners are exposed to

- understand the basics of Information Security
- know the legal, ethical and professional issues in Information Security
- know the aspects of risk management
- become aware of various standards in this area
- know the technological aspects of Information Security

E. Course Outcomes :

Upon the successful completion of the course, students will be able to:

| CO No's | Course Outcomes | Knowledge Level (Based on revised Bloom's Taxonomy) |
|---------|---|---|
| CO1 | Discuss the basics of information security | K2 |
| CO2 | Illustrate the legal, ethical and professional issues in information security | K2 |
| CO3 | Demonstrate the aspects of risk management. | K2 |
| CO4 | Summarize various standards in Information Security System | K2 |
| CO5 | Explain the Security Techniques | K2 |

F. Correlation of Cos with Program outcomes and Programme Specific Outcomes:

| Cos | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 | PSO3 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|
| CO1 | M | | | | | M | | L | | | | | | | |
| CO2 | M | | | | | M | | H | | M | | M | | | |
| CO3 | L | | | | | M | L | L | L | M | | M | L | | M |
| CO4 | L | | | | | M | | L | | | | | | | |
| CO5 | L | L | L | | L | M | | L | | M | | M | L | L | |

H- High; M-Medium; L-Low

G. Course Content:

UNIT I – INTRODUCTION

9

History of Information Security- Critical Characteristics of Information, NSTISSC Security Model, Components of an Information System, Securing the Components, Balancing Security and Access, The SDLC, The Security SDLC

UNIT II – SECURITY INVESTIGATION

9

Need for Security, Business Needs, Threats, Attacks, Legal, Ethical and Professional Issues

UNIT III – SECURITY ANALYSIS

9

Risk Management: Identifying and Assessing Risk, Assessing and Controlling Risk

UNIT IV – LOGICAL DESIGN

9

Blueprint for Security, Information Security Policy, Standards and Practices, ISO 17799/BS 7799, NIST Models, VISA International Security Model, Design of Security Architecture, Planning for Continuity

UNIT V – PHYSICAL DESIGN

9

Security Technology, IDS, Scanning and Analysis Tools, Cryptography, Access Control Devices, Physical Security, Security and Personnel

TOTAL: 45 Hours

H. Learning Resources

i. Text Books:

1. Michael E Whitman and Herbert J Mattord, “Principles of Information Security”, Vikas Publishing House, New Delhi, 2003

1. Reference Books:

1. Micki Krause, Harold F. Tipton, “ Handbook of Information Security Management”, Vol 1-3 CRC Press LLC, 2004.
2. Stuart Mc Clure, Joel Scrambray, George Kurtz, “Hacking Exposed”, Tata McGraw-Hill, 200.
3. Matt Bishop, “ Computer Security Art and Science”, Pearson/PHI, 2002.

iii Onlineresources

1. <http://cscourseonline.com/wp-content/uploads/2015/05/information-security-and-CL-unit-1.pdf>.
2. <http://www.cs.iit.edu/~cs549/slides/chapter-1.pdf>