

# **Session Plan(January-May 2018)**

Semester: Sixth

Course Code: 612

Paper Code: 6382

**Name Of Course: Network Security and Management**

## **Course Outcomes (Cos)-**

### **Students will be able to-**

**CO612.1** Explain the network security terminologies and aspects of computer based security.

**CO612.2** Explain security management for the information system.

**CO612.3** Use Techniques and algorithms involved in secrete communication, to solve given problem

**CO612.4** Explain models, protocols and architecture for network management.

**CO612.5** Install and configure the network services and troubleshooting tools for monitoring,  
Analyzing and managing the network.

**UNIT 1- Introduction to Network security**

| S. NO. | Topic Name  | CO Attempted | Expected Date            | Actual Date | Resource Used | Teaching Method | Remark |
|--------|---|--------------|--------------------------|-------------|---------------|-----------------|--------|
| 1.     | Security overview   | CO612.1      | 22/01/2018<br>23/01/2018 |             | Chalk-Board   | Lecture         |        |
| 2.     | Computer security   | CO612.1      | 24/01/2018               |             | Chalk-Board   | Lecture         |        |
| 3.     | Network security  | CO612.1      | 25/01/2018               |             | Chalk-Board   | Lecture         |        |
| 4.     | Key principles of Network security <ul style="list-style-type: none"><li>• Confidentially</li><li>• Integrity</li><li>• Availability.</li></ul> | CO612.1      | 27/01/2018<br>29/01/2018 |             | Chalk-Board   | Lecture         |        |
| 5.     | Threats to security   | CO612.1      | 30/01/2018               |             | Chalk-Board   | Lecture         |        |
| 6.     | Need of security  | CO612.1      | 01/02/2018               |             | Chalk-Board   | Lecture         |        |
| 7.     | Types of security   | CO612.1      | 02/02/2018<br>03/02/2018 |             | Chalk-Board   | Lecture         |        |
| 8.     | Security issues.  | CO612.1      | 05/02/2018               |             | Chalk-Board   | Lecture         |        |

Expected Study Hours: 08 hrs

Actual Study Hours:

Reason for delay:

Signature of Lecturer with Name

## **UNIT 2- Information System Security Management**

| <b>S. NO</b> | <b>Topic Name</b>   | <b>CO Attempted</b> | <b>Expected Date</b>                   | <b>Actual Date</b> | <b>Resource Used</b>            | <b>Teaching Method</b> | <b>Remark</b> |
|--------------|---|---------------------|--|--------------------|---------------------------------|------------------------|---------------|
| 1.           | Security Policies   | CO612.2             | 06/02/2018                             |                    | Chalk-Board                     | Lecture                |               |
| 2.           | Security Awareness  | CO612.2             | 07/02/2018                             |                    | Chalk-Board                     | Lecture                |               |
| 3.           | security control – <ul style="list-style-type: none"><li>• Physical Controls</li><li>• Procedural Controls</li><li>• Technical Controls</li><li>• Legal and liability</li></ul> | CO612.2             | 08/02/2018<br>09/02/2018               |                    | Chalk-Board                     | Lecture                |               |
| 4.           | Identification and Authentication- <ul style="list-style-type: none"><li>• Password</li><li>• Biometrics</li><li>• Single Sign On (SSO)</li></ul>                               | CO612.2             | 10/02/2018<br>12/02/2018<br>13/02/2018 |                    | Computer and Bio-metric Machine | Practical              |               |

Expected Study Hours: 08 hrs

Actual Study Hours:

Reason for delay:

Signature of Lecturer with Name

**UNIT 3- Secrete Communication**

| S No | Topic Name  | CO Attempted | Expected Date                          | Actual Date | Resource Used | Teaching Method | Remark |
|------|---|--------------|--|-------------|---------------|-----------------|--------|
| 1.   | Introduction to secrete communication   | CO612.3      | 15/02/2018                             |             | Chalk-Board   | Lecture         |        |
| 2.   | Basics of Cryptography  | CO612.3      | 16/02/2018<br>17/02/2018               |             | Chalk-Board   | Lecture         |        |
| 3.   | Substitution cipher   | CO612.3      | 19/02/2018<br>20/02/2018               |             | Chalk-Board   | Lecture         |        |
| 4.   | Cryptographic primitives  | CO612.3      | 21/02/2018                             |             | Chalk-Board   | Lecture         |        |
| 5.   | Encryption  | CO612.3      | 22/02/2018                             |             | Chalk-Board   | Lecture         |        |
| 6.   | Symmetric Encryption- <ul style="list-style-type: none"><li>• Stream cipher</li><li>• Block cipher</li><li>• Sharing Keys</li></ul> | CO612.3      | 23/02/2018<br>24/02/2018<br>26/02/2018 |             | Chalk-Board   | Lecture         |        |
| 7.   | Asymmetric Encryption   | CO612.3      | 27/02/2018<br>28/02/2018               |             | Chalk-Board   | Lecture         |        |
| 8.   | Certificate Authority   | CO612.3      | 01/03/2018                             |             | Chalk-Board   | Lecture         |        |
| 9.   | Digital signature   | CO612.3      | 03/03/2018                             |             | Chalk-Board   | Lecture         |        |
| 10.  | Secure Socket Layer (SSL)   | CO612.3      | 05/03/2018                             |             | Chalk-Board   | Lecture         |        |
| 11.  | Transport Secure Layer (TLS)  | CO612.3      | 06/03/2018                             |             | Chalk-Board   | Lecture         |        |
| 12.  | Hashing algorithms  | CO612.3      | 07/03/2018<br>To<br>09/03/2018         |             | Chalk-Board   | Lecture         |        |

Expected Study Hours: 15 hrs

Actual Study Hours:

Reason for delay:

Signature of Lecturer with Name

### **UNIT 4- Network Management**

| <b>S. NO</b> | <b>Topic Name</b>   | <b>CO Attempted</b> | <b>Expected Date</b>     | <b>Actual Date</b> | <b>Resource Used</b> | <b>Teaching Method</b> | <b>Remark</b> |
|--------------|---|---------------------|--------------------------|--------------------|----------------------|------------------------|---------------|
| 1.           | Definition need and advantages.   | CO612.4             | 10/03/2018               |                    | Chalk-Board          | Lecture                |               |
| 2.           | Windows NT Networking Architecture  | CO612.4             | 12/03/2018<br>13/03/2018 |                    | Chalk-Board          | Lecture                |               |
| 3.           | Windows NT Operating System - Design and Basics   | CO612.4             | 14/03/2018<br>15/03/2018 |                    | Chalk-Board          | Lecture                |               |
| 4.           | Open Systems and Industry Standards   | CO612.4             | 16/03/2018               |                    | Chalk-Board          | Lecture                |               |
| 5.           | Client/Server Computing   | CO612.4             | 17/03/2018               |                    | Chalk-Board          | Lecture                |               |
| 6.           | Interoperating with Other Networks  | CO612.4             | 20/03/2018<br>21/03/2018 |                    | Chalk-Board          | Lecture                |               |
| 7.           | Remote Access Service- <ul style="list-style-type: none"><li>• Point to point protocol</li></ul>                    | CO612.4             | 22/03/2018               |                    | Chalk-Board          | Lecture                |               |
| 8.           | Network Security and Domain Planning- <ul style="list-style-type: none"><li>• Security Model Architecture</li></ul> | CO612.4             | 23/03/2018<br>24/03/2018 |                    | Chalk-Board          | Lecture                |               |
| 9.           | Controlling Access- <ul style="list-style-type: none"><li>• User Accounts</li><li>• User Rights</li></ul>           | CO612.4             | 26/03/2018               |                    | Chalk-Board          | Lecture                |               |

Expected Study Hours: 15 hrs

Actual Study Hours:

Reason for delay:

Signature of Lecturer with Name

### **UNIT 5- Network Services**

| <b>S. NO</b> | <b>Topic Name</b>                 | <b>CO Attempted</b> | <b>Expected Date</b> | <b>Actual Date</b> | <b>Resource Used</b> | <b>Teaching Method</b> | <b>Remark</b> |
|--------------|-----------------------------------|---------------------|----------------------|--------------------|----------------------|------------------------|---------------|
| 1.           | Enterprise Level                  | CO612.5             | 27/03/2018           |                    | Chalk-Board          | Lecture                |               |
| 2.           | Installing and Configuring TCP/IP | CO612.5             | 28/03/2018           |                    | Computer             | Practical              |               |
| 3.           | Configuring TCP/IP Clients        | CO612.5             | 31/03/2018           |                    | Computer             | Practical              |               |
| 4.           | Dynamic IP Addressing             | CO612.5             | 02/04/2018           |                    | Computer             | Practical              |               |
| 5.           | Configuring DHCP                  | CO612.5             | 03/04/2018           |                    | Computer             | Practical              |               |
| 6.           | Accessing the DHCP Manager        | CO612.5             | 04/04/2018           |                    | Computer             | Practical              |               |
| 7.           | Managing DHCP Scopes              | CO612.5             | 05/04/2018           |                    | Computer             | Practical              |               |
| 8.           | Reserving IP addresses            | CO612.5             | 06/04/2018           |                    | Chalk-Board          | Lecture                |               |
| 9.           | Installing and Configuring WINS   | CO612.5             | 07/04/2018           |                    | Computer             | Practical              |               |
| 10.          | Installing DNS Service            | CO612.5             | 09/04/2018           |                    | Computer             | Practical              |               |

Expected Study Hours: 12 hrs

Actual Study Hours:

Reason for delay:

Signature of Lecturer with Name

### **UNIT 6- Simple Network Management Protocol (SNMP) for Network Management**

| <b>S. NO</b> | <b>Topic Name</b>                      | <b>CO Attempted</b> | <b>Expected Date</b> | <b>Actual Date</b> | <b>Resource Used</b> | <b>Teaching Method</b> | <b>Remark</b> |
|--------------|--|---------------------|----------------------|--------------------|----------------------|------------------------|---------------|
| 1.           | Overview of SNMP                       | CO612.5             | 10/04/2018           |                    | Chalk-Board          | Lecture                |               |
| 2.           | SNMP Registry                          | CO612.5             | 10/04/2018           |                    | Chalk-Board          | Lecture                |               |
| 3.           | Management Information Base            | CO612.5             | 11/04/2018           |                    | Chalk-Board          | Lecture                |               |
| 4.           | Object Identifiers                     | CO612.5             | 11/04/2018           |                    | Chalk-Board          | Lecture                |               |
| 5.           | SNMP Installation                      | CO612.5             | 12/04/2018           |                    | Computer             | Practical              |               |
| 6.           | Starting and Stopping the SNMP Service | CO612.5             | 13/04/2018           |                    | Computer             | Practical              |               |
| 7.           | Troubleshooting SNMP                   | CO612.5             | 13/04/2018           |                    | Computer             | Practical              |               |

Expected Study Hours: 12 hrs

Actual Study Hours:

Reason for delay:

Signature of Lecturer with Name

## **UNIT 7- Troubleshooting Tools and Strategies**

| <b>S. NO .</b> | <b>Topic Name</b>   | <b>CO Attempted</b> | <b>Expected Date</b>     | <b>Actual Date</b> | <b>Resource Used</b> | <b>Teaching Method</b> | <b>Remark</b> |
|----------------|---|---------------------|--------------------------|--------------------|----------------------|------------------------|---------------|
| 1.             | Overview of TCP/IP Troubleshooting Tools  | CO612.5             | 16/04/2018               |                    | Chalk-Board          | Lecture                |               |
| 2.             | Identify the TCP/IP Configuration by Using IPConfig   | CO612.5             | 17/04/2018               |                    | Computer             | Practical              |               |
| 3.             | Test Connection to the TCP/IP Network by Using Ping   | CO612.5             | 19/04/2018               |                    | Computer             | Practical              |               |
| 4.             | Understanding Address and Name Resolution Test<br>IP- address to MAC-address Resolution by Using ARP  | CO612.5             | 20/04/2018               |                    | Chalk-Board          | Lecture                |               |
| 5.             | Understanding IP Routing for Windows NT – <ul style="list-style-type: none"><li>• The Route Table</li></ul>   | CO612.5             | 21/04/2018               |                    | Chalk-Board          | Lecture                |               |
| 6.             | Display Current TCP/IP Connections and Statistics by Using Netstat  | CO612.5             | 23/04/2018<br>24/04/2018 |                    | Computer             | Practical              |               |
| 7.             | Using Performance Monitor   | CO612.5             | 25/04/2018               |                    | Computer             | Practical              |               |
| 8.             | Troubleshooting Other Connection Problems – <ul style="list-style-type: none"><li>• Error 53</li><li>• Cannot Connect to a Specific Server</li><li>• Troubleshooting Telnet</li></ul> | CO612.5             | 26/04/2018<br>27/04/2018 |                    | Computer             | Practical              |               |

Expected Study Hours: 20 hrs

Actual Study Hours:

Reason for delay:

Signature of Lecturer with Name