



**Course Outline:** Cyber Security Fundamentals

**Certification:** ICSI | CSA Cyber Security Analyst

Required course and exam:

Course	Exam
Cyber Security Fundamentals	CSA

**Duration:** 3 Days

**Candidate Prerequisites:**

Basic Familiarity with Networking and Windows/Linux Operating System

**Overview:**

The course teaches the basics regarding Information Security in both theoretical and practical aspects. Students will learn the basics of Information Security.

**Course Objectives:**

- Getting Familiar with Information Security
- Get familiar with authentication mechanisms
- Getting familiar with ACLs
- Get familiar with laws, regulations and compliance
- Learn the essential concepts of Cryptography
- Learn the concept of networks and network security
- Learn the Windows OS and how to be used in an infrastructure
- Learn basic concepts about Unix/Linux Servers
- Learn basic concepts of software vulnerabilities

**Who Should Attend:**

Individuals and Professionals which they need to drive into the Information Security.



### **What is Included:**

- eBook
- Lab Guide
- 24/7 remote access to a virtual lab for 6 months
- 1 exam voucher - Online Exam Proctoring
- Certificate of Attendance (Digital)

### **Module 1: Information Security**

- What is Security
- The Confidentiality, Integrity and Availability triad
- Types of Attacks
- Threats, Vulnerabilities and Risk
- Risk Management
- Incident Response

### **Module 2: Identification, Authentication and Authorization**

- Identification
- Identity Verification
- Authentication
- Multifactor Authentication
- Mutual Authentication
- Password Authentication
- Biometrics
- Authorization
- Least Privilege Principle

### **Module 3: Access Control**

- Access Control Lists
- Access Control Methodologies
- Access Control Models



#### **Module 4: Laws and Compliance**

- Laws and Regulations
- Compliance
- Regulatory Compliance
- Industry Compliance

#### **Module 5: Cryptography**

- History
- Symmetric vs Asymmetric Cryptography
- Hash Functions
- Digital Signatures
- Certificates

#### **Module 6. Network Infrastructure and Security**

- IP Protocols
- Network Architectures
- Management Protocols
- Network Protocols
- Routers and Switches
- Firewalls, IDS/IPS, VPNs.
- Wireless Security
- Mobile Security
- Network Security Tools

#### **Module 7. Microsoft Windows Infrastructure**

- Active Directory Domain Services
- Group Policy Objects
- Operating System Hardening
- Operating System Security Tools



## **Module 8. Unix/Linux Servers**

- Third Party Software Updates
- Core Operating System Updates
- Hardening Unix/Linux Server

## **Module 9: Application Security**

- Software Development Vulnerabilities
- Buffer Overflows
- Input Validation Attacks
- Authentication, Authorization and Cryptographic Attacks
- Web Security
- Database Security
- Application Security Tools

### **Exam:**

The CSA exam covers all 9 modules. The multiple choice exam duration is 1 hour. Passing Grade is 70%.