

**AURO UNIVERSITY**  
**(INDIA)**

**The School of Information Technology**

**Online Short-Term Certificate**  
**in**  
**Cyber Security**

**Module Leader**  
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**[www.arouniversity.edu.in](http://www.arouniversity.edu.in)**

## Course Description

- This course provides a holistic overview of the field of Cyber security. The course is designed to provide a dynamic learning experience where students can explore foundational cyber security principles, security architecture, risk management, attacks, incidents, and emerging IT and IS technologies.
- Moreover, learn about what it takes to manage and operate an information security program and focus on areas such as risk assessment, risk management, incident handling. Explore the challenges information security professionals face related to network security, system security and application security.

## Objectives

- The aim of this certificate course is to understand the major concepts of Cyber Security and to bring security awareness about Internet and different gadgets used in day to day life by people for different purposes.
- Computer has made our life easy but at the same time risk associate with its usage has also increased in many areas. The ultimate goal of this module is to provide a guideline to overcome this risk by creating security awareness through simple practical tips and tricks and to educate the students to learn how to avoid becoming victims of cyber-crimes.
- Also to make them familiar with the required precautions to be taken for secure data and transactions while on the Internet.

## Learning Outcomes:

At the end of this certificate course students will be able to:

- Differentiate the various types of security from a computer systems perspective (e.g. cyber security, email security, etc.)
- Describe various basic security practices (e.g. strong passwords, firewalls, account controls, file privacy, etc.)
- Differentiate between various security threats and computer attacks
- Identify several techniques appropriate to provide basic protection of a small computer and/or small network
- Identify potential threats to wireless networks.

## Pre-requisite

Fundamental knowledge of computer and its usage. No other pre-requisite to complete this module.

## Total Duration: 10 hours.

1:30 Hours Per day

## Assessment

It will be in the form of MCQ and Quiz. There will be graded quiz after every Unit. It will contribute to 50% of total evaluation and Final Test will be of 50%. Total Evaluation will be of 50 Marks.

## Syllabus

### **Unit-1:**

Cybercrime: Cybercrime: Definition & Need. Cybercrime and Information Security. Security Triad (CIA), Classifications of Cybercrimes, Hacking and types, Cybercrime and the Indian IT Act 2000, Introduction to E-mail Spoofing, Spamming, Cyber Defamation, Internet Time Theft.

### **Unit-II:**

Trends in mobility, Types and Techniques of Credit Card Frauds, Attacks on Mobile/Cell Phones (Viruses, Mishing, Vishing and Smishing), Keyloggers: Software and Hardware, Virus, Worms and Trojan Horse, Countermeasures, Type of risks are in cybercafé. Tips for safety and secure usage in cybercafé.

### **Unit- III:**

Overview of Steganography, Steganalysis, Digital Forensics to detect cyber-crime and collect evidences, Case Studies, Career and Job opportunities in Cyber Security.

**Course Plan:**

<b>Day</b>	<b>Topic</b>	<b>Duration</b>	<b>Assessment</b>
1	<b>Unit-I:</b> Cybercrime: Definition & Need. Cybercrime and Information Security. Security Triad (CIA). Classifications of Cybercrimes.	1:30	<b>MCQ QUIZ</b>
2	Types of Hackers, Cyber Crime and the Indian IT Act 2000, Introduction to E-mail Spoofing, Spamming, Cyber Defamation, Internet Time Theft.	1:30	
3	<b>Unit-II:</b> Malicious Software: Types of Virus, Worm and Trojan Horse and countermeasures..	1:30	<b>MCQ QUIZ</b>
4	Type of risks are in cybercafé and PC. Tips for safety and secure usage in cybercafé. Type of risks in Mobile and safety tips	1:30	
5	<b>Unit-III:</b> Overview of Steganography, Use of Digital Forensics to detect cyber-crime and to collect evidences.	1:30	<b>MCQ QUIZ</b>
6	Case Studies, Career and Job opportunities in Cyber Security.	1:30	
7	Discussion and Assessment	1 hour	