

**CENTRAL UNIVERSITY OF KERALA  
DEPARTMENT OF COMPUTER SCIENCE  
M.Sc. COMPUTER SCIENCE – PROGRAMME STRUCTURE**

AUDITED/VALUE ADDED COURSES*						
COURSE CODE	COURSE TITLE	CONTACT HRS/WEEK			CREDITS	
		LEC	LAB	TUT		
CSC5057	Introduction to Cyber Security	2	1	1	Nil	

This is an audited/value added **employability based skill development course** and the credits will not be added to marklist.

Course Objective:

The main objective of this course is to impart knowledge on the basic ways of handling cyber security.

By completing this course, students will obtain the following course outcomes:

1. Knowledge gained:
  - (i) All cyber security threats
2. Skill gained:
  - (ii) Handling cyber security threats.
3. Competency gained:
  - (iii) To be secured from all future threats.

Prerequisites: Nil

Grading:

Lab implementation	– 25%
Participatory based group Project	– 25%
Assignment/Quiz/presentation	– 25%
Individual project	- 25%

### CSC5057 – INTRODUCTION TO CYBER SECURITY

**Module 1**

Information Security Concepts: Information security issues, goals, architecture, Security Services and Mechanisms, Network security model, Security Threats and Vulnerabilities: Overview of Security Threats and Vulnerability, Types of attacks on Confidentiality, Integrity and Availability.

**Module 2**

Malware: Types of Malware, Worms, Viruses, Spyware, Trojan horses. Cyber Security Breaches: Phishing, Identity Theft, Harassment, Cyberstalking. Cyber security Fundamentals: Cyberspace, Cyber Security, Cyber security Importance, Hackers, Cyber Crime and Cyber Terrorism

**Module 3**

Types of Cyber Attacks: Password Attacks, Denial of Service Attacks, Man-in-the-middle attack, Social engineering attacks, Spoofing, E-mail threats. Security Counter Measures: Antivirus Software, Anti-Spyware, Firewalls, Virtual Private Networks, Intrusion Detection Systems, Secure Computing Tips.

**References**

1. [https://heimdalsecurity.com/pdf/cyber\\_security\\_for\\_beginners\\_ebook.pdf](https://heimdalsecurity.com/pdf/cyber_security_for_beginners_ebook.pdf)
2. <http://docshare04.docshare.tips/files/21900/219006870.pdf>
3. <https://www.uou.ac.in/sites/default/files/slm/FCS.pdf>