AMITY UNIVERSITY
UTTAR PRADESH

CourseTitle: Introduction to Cyber Security
CourseLevel: PGDip/PG
Course Code:

CourseCredit:

L	T	P/S	SW/FW	TOTAL CREDIT UNITS
3	1	-	-	4

Course Objectives:

This course gives the **Introduction and concept of Cyber Security**.

The objectives of this course can be illustrated as:

- To provide conceptual understanding of Security issues, challenges and mechanisms.
- To develop basic skills of secure cyber architecture.
- To describe common network vulnerabilities and attacks, defence mechanisms against network attacks, and cyber protection mechanisms.
- To explore the requirements of real-time communication security and issues related to the security of cyber services.

Pre-requisites: Fundamental of Networks

Course Contents/Syllabus:

	Weightage(%)
Module I: The Cyber security Industry	
Importance of cyber security in the global economy, Cyber security a growing profession.	10%
Module II: Malware and How to Protect Yourself	
Trends in Malware: Security, Privacy, and Risk Considerations in a Social Networked World – Protecting Yourself from Yourself, Characteristics and operation of malware, How hackers use unsuspecting individuals to propagate malware.	15%

Module III: Overview of Cyber security in Finance and Telecommunications	15%
Finance Industry Cyber Attacks: Cyber security Issues in Internet Banking , Fighting Cyber Crime in the Telecommunications Industry, Why cyber security is critical to the banking industry	
Module IV: Cisco Security Solutions	15%
Cyber Security: The Operational View, Behaviour Based Security, Cisco's approach to cyber security Behavior-based approach to cyber security.	
Module V: Defending Against Global Threats	15%
Cyber Warfare: The New Battlefront for Defence Forces, Security Intelligence, Tracking a Global Threat, Characteristics of cyber warfare, Cisco Security Intelligence Operations (SIO) tracks and responds to a global threat	
Module VI: Strategic and Architectural Cyber security Planning	15%
Cyber Security: The Strategic View, Cyber Security: The Architectural View, Trends in the cyber threat landscape, Framework of the Enterprise Security Architecture	
Module VII:Vulnerabilities and Solutions	15%
Defending the Borg: Cybernetics and Medical Devices Under Attack Off Starboard Bow, Cyber security and its criticalness to the medical devices industry	

Student Learning Outcomes:

After completion ofCourse, students will be able to:

- Listand briefly describe Cyber **security Industry**
- Explain the differences between the malware and how to protect yourself
- Importance of Cyber Security in Finance and Telecommunication.
- explain CISCO security Solutions
- defending against global threats
- Strategic and Architectural Cyber security Planning
- Explain Vulnerabilities and Solutions

Pedagogy for Course Delivery: This course will be taught on the basis of class room teaching inform of lectures, tutorials, questionnaire sessions and group discussions and covering different modules of the course.

Assessment/ Examination Scheme:

Theory L/T (%)	**Lab/Practical/Studio (%)**	**EndTermExamination**
100%		**100%**

Theory Assessment (L&T):

	Continuous Assessment/Internal Assessment					**EndTerm Examination**
Components (Drop down)	**Attendance**	**Class Test**	**CaseStudy/Project**	**Assignment / Self Work**	**Viva-Voce**	
Weightage(%)	5	10	5	5	5	70

TextBook:

- W.Stallings,"Networks Security Essentials:Application &Standards",5th Edition,PrenticeHallPublication,2013
- W. Stallings,"Cryptography andNetwork Security:Principlesand Practice",InternationalEdition,Pearson Education,2013.
- BehrouzA. Frouzan,"Cryptographyand NetworkSecurity",TataMcGrawHillEducation,2007

- BehrouzA. Frouzan,"Cryptographyand NetworkSecurity",TataMcGrawHillEducation,2007

- Chwan Hua, J David Irwin **"**Introduction to Computer Networks and Cyber security " CRC press 2013

ReferenceBook:

- BruceSchiener,"Applied Cryptography",Second Edition,JohnWiley& Sons Publication,1996
- Peter W Singer, " Cyber Security and Cyber War: What everyone needs to know" Oxford University Press 2014
- Bernard Menezes,"Network Security andCryptography",CengageLearning Publication,2010
- Atul Kahate, "Cryptographyand Network Security", Tata McGrawHillEducation, 2003

Web Reference

- **www.cisco.netacad.com**
- http://www.cnss.gov/Assets/pdf/cnssi_4009.pdf
- http://en.wikipedia.org/wiki/Network_security