COMSATS University Islamabad
Department of Computer Science
Course Description Form (CDF)

Course Information	
Course Code: **CSC432**	Course Title: **Information Security**
Credit Hours: **3(3, 0)**	Lecture Hours/Week: **3**
Lab Hours/Week: **0**	Pre-Requisites: **None**

Catalogue Description:

This course introduces the concepts and applications of information security. Topics include: Information Security Overview; Threats & Attacks; Legal & Professional Issues; Security Planning; Risk Analysis; Security Technology; Cryptography; Confidentiality; Authentication Models; Operational Security; and Implementation & Maintenance.

Unit wise Major Topics:

Unit	Topic	No. of teaching hours
1.	Information Security: Overview, Significance, CNSS Model, Components, Design Principles, Security vs. Access; Threats & Attacks; Issues: Legal, Ethical, and Social.	6
2	Security Planning: Policies, Standards, Practices, Education & Training, and Continuity Strategies.	3
3	Risk Management: Introduction, Process, Mitigation, Response, and Contingency Planning.	6
4.	Security Technology: Access Control, Firewalls, VPN; and Intrusion Detection.	9
5.	Cryptography: Basic Types, Encryption Methods, Algorithms, and Tools.	9
6.	Physical Security: Access Control, Preventing Data Interception, and Securing Mobile Systems.	3
7.	Implementation & Maintenance: Development Life Cycle, Technical & Non-Technical Aspects, Maintenance Models, and Physical Security.	9
Total Contact Hours		**45**

Mapping of CLOs and SOs

Sr.#	Unit #	Course Learning Outcomes	Blooms Taxonomy Learning Level	SO
CLO-1	1-2	Discuss the fundamental concepts, policies, standards and ethical issues of information security.	*Understanding*	1,8-9
CLO-2	3	Investigate various counter measures and security controls to minimize risk and exposure	*Applying*	2
CLO-3	4-5	Analyze various information security technologies	*Analyzing*	7-8

CLO-4	6-7	Describe the policies and procedures to information security implementation and maintenance	*Understanding*	1

CLO Assessment Mechanism

Assessment Tools	CLO-1	CLO-2	CLO-3	CLO-4
Quizzes	Quiz 1	Quiz 2	Quiz 3	Quiz 4
Assignments	Assignment 1	Assignment 2	Assignment 3	Assignment 4
Mid Term Exam	Mid Term Exam	Mid Term Exam	Mid Term Exam	-
Final Term Exam	Final Term Exam			

Text and Reference Books

Text Book:
   1. Principles of Information Security, Michael E., Whitman & Mattord, H. J., Cengage Learning, 2017.

Reference Books:
   1. Security in Computing, Pfleeger, C.P., Pfleeger, S.L. & Margulies, J., Prentice Hall, 2015.
   2. Introduction to Computer Security, Goodrich, M., & Tamassia, R., Pearson, 2021.