Republic of Iraq

The Ministry of Higher Education

& Scientific Research

University: University of Technology
College:
Department: Computer Sciences
Stage: 3nd
Lecturer: Hala Bahjat Abdul wahab
Academic Status:Prof.Dr
Qualification: Ph.D.
Place of work: University of Technology

Follow-up of Implementation Syllabus

Course Instructor	Hala Bahjat Abdul wahab				
E-mail	Hala.B.Abdulwahab@uotechnology.edu.iq				
Title	Data Security				
Course Coordinator					
Course Objective	−This course aims to teach the student how to use algorithms encryption -Programmed appropriately to encrypt important and confidential texts -Teaching them on a mathematical basis and practical understanding of encryption algorithms.				
Course Description	Introduction to Data security, Requirements for computer protection Security mechanisms ,Authentication, Chain of Authority, Access control Permissions based access control, Understanding hacking, Vectors that hackers exploit, Direct intrusion, Dial –up, Hacking techniques, Firewall Definition, concepts system Encryption algorithms, Traditional ciphers. Homophonic substitution cipher Polygram ciphers, Viruses, Macro, Scripting hosts,, Understanding virus propagation, Worm, Common types of virus attacks, Boot sector viruses, Executable viruses, Macro viruses, Understanding worms and Trojan horses				
Textbook	N/A				
References	• B. Schneier, "**Applied Cryptography**", 2nd ed., John Wiley & Sons, Inc., 1996. • ANSI X9.44, "**Public key cryptography using reversible algorithms for the financial services industry: Transport of symmetric algorithm keys using RSA**", 1994..				
Course Assessment	Term Tests	Laboratory	Quizzes	Project	Final Exam
	(40%)	(15%)	(25%)	----	(60%)
General Notes	N/A				

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1st Course weekly Outline

Week	Date	Topics Covered	Lab. Experiment Assignments	Notes
1	2023-09-17	Introduction to Data security, Requirements for computer protection.(ch-1)	Theoretical lectures and practical application	
2	2023-10-24	Security mechanisms ,Authentication,Chain of Authority,Access control,Permissions-based access control. (ch-1)	Theoretical lectures and practical application	
3	2023-10-8	Understanding hacking(Vectorsthat hackers exploit,), (ch-2).	Theoretical lectures and practical application	
4	2023-10-15	Direct intrusion, Dial –up,Hacking techniques. (ch-2)	Theoretical lectures and practical application	
5	2023-10-22	Firewall (Definition,concepts and conditions) (ch-3)	Theoretical lectures and practical application	
6	2023-10-29	The components of cryptographic system ,Encryption algorithms. (ch-4).	Theoretical lectures and practical application	
7	2023-11-5	Traditional ciphers(transposition algorithms), columnmener , fixed prioed. (ch-4)	Theoretical lectures and practical application	
8	2023-11-12	Traditional ciphers(subsistuation algorithms), keyword , additive .	Theoretical lectures and practical	

		(ch-4)	application	
9	**2023-11-19**	Traditional ciphers(subsistuation algorithms), multiplication , affine). (ch-4)	Theoretical lectures and practical application	
10	**2023-11-26**	Traditional ciphers(subsistuation algorithms), vigener , buefort methods**) .** (ch-4**)**	Theoretical lectures and practical application	
11	**2023-12-03**	Homophonic substitution cipher(Beal cipher, High Order Homophonic algorithms), (ch-4)	Theoretical lectures and practical application	
12	**2023-12-10**	Polygram ciphers (playfair method , hill cipher method). (ch-4)	Theoretical lectures and practical application	
13	**2023-12-17**	Viruses(Macro,Scripting hosts,Understanding virus propagation), ch-5.	Theoretical lectures and practical application	
14	**2023-12-24**	Worm,Common types of virus attacks,Boot sector viruses,Executable viruses,Macro viruses .Understanding worms and Trojan horses. (ch-5)	Theoretical lectures and practical application	
15	**2024-01-02**	**Course Exam**		

Instructor Signature: **Dean Signature:**