TOROS ÜNİVERSİTESİ

Faculty Of Engıneerıng
Electrıcal And Electronıcs Engıneerıng (Englısh)

Course Information

SECURITY OF INFORMATION SYSTEMS

Code	Semester	Theoretical	Practice	National Credit	ECTS Credit
		Hour / Week			
CSE413	Fall	3	0	3	5

Prerequisites and co-requisites	
Language of instruction	English
Type	Elective
Level of Course	Bachelor's
Lecturer	Ins. Volkan Kadir GÜNGÖR
Mode of Delivery	Face to Face
Suggested Subject	
Professional practise (internship)	None
Objectives of the Course	This course aims at making the students to achieve basic security skills and how to use them in the design and implementation of computer systems and networks.
Contents of the Course	This course focuses on the security issues in computer systems and computer networks.

Learning Outcomes of Course

#	Learning Outcomes
1	This course aims at making the students to achieve basic security skills and how to use them in the design and implementation of computer systems and networks
2	Ability to use techniques and modern engineering tools necessary for engineering practice
3	Ability to create algorithmic solutions to inspect, improve and enhance existing systems by means of analytical approaches
4	Ability to implement designs by experiments

Course Syllabus

#	Subjects	Teaching Methods and Technics
1	Introduction to security and basic security concepts	Lecture
2	Basic elements of security	Lecture
3	Identification • Authentication • Authorization • Encryption and Cryptography • Logging and Auditing	Lecture
4	Cryptography and its use in security	Lecture
5	Use of symmetric and asymmetric cryptography in network communication • Authentication mechanisms in network communication • Integrity in network communication • Non-repudiation in network communication	Lecture
6	Network security	Lecture
7		
8	Security in operating systems	Lecture
9	Securing the data • Secure storage • Security in databases	Lecture
10	Web security	Lecture

11	Internet security • Security of web servers • Security of application servers • Security of web services • J2EE architecture and its security mechanisms	Lecture
12	Secure identity management	Lecture
13	Compliance and Certification	Lecture
14	Security Audits	Lecture
15	Threat and elements of threat • Emergency response • Legal elements	Lecture
16	Final Exam	

Course Syllabus

#	Material / Resources	Information About Resources	Reference / Recommended Resources
1	Cryptography and Network Security (4th Edition) Principles and Practices, William Stallings		

Method of Assessment

#	Weight	Work Type	Work Title
1	40%	Mid-Term Exam	Mid-Term Exam
2	60%	Final Exam	Final Exam

Relationship between Learning Outcomes of Course and Program Outcomes

#	Learning Outcomes	Program Outcomes	Method of Assessment
1	This course aims at making the students to achieve basic security skills and how to use them in the design and implementation of computer systems and networks	1	1,2
2	Ability to use techniques and modern engineering tools necessary for engineering practice	1	1,2
3	Ability to create algorithmic solutions to inspect, improve and enhance existing systems by means of analytical approaches	1	1,2
4	Ability to implement designs by experiments	1	1,2

PS. The numbers, which are shown in the column Method of Assessment, presents the methods shown in the previous table, titled as Method of Assessment.

Work Load Details

#	Type of Work	Quantity	Time (Hour)	Work Load
1	Course Duration	14	3	42
2	Course Duration Except Class (Preliminary Study, Enhancement)	0	0	0
3	Presentation and Seminar Preparation	0	0	0
4	Web Research, Library and Archival Work	0	0	0
5	Document/Information Listing	0	0	0
6	Workshop	0	0	0
7	Preparation for Midterm Exam	0	0	0
8	Midterm Exam	0	0	0
9	Quiz	0	0	0
10	Homework	0	0	0
11	Midterm Project	0	0	0
12	Midterm Exercise	0	0	0
13	Final Project	0	0	0
14	Final Exercise	0	0	0

15	Preparation for Final Exam	1	83	83
16	Final Exam	0	0	0
				125