

# TOROS ÜNİVERSİTESİ

Faculty Of Engineering  
Electrical And Electronics Engineering (English)

## Course Information

SECURITY OF INFORMATION SYSTEMS					
Code	Semester	Theoretical	Practice	National Credit	ECTS Credit
		Hour / Week			
CSE413	Fall	3	0	3	5

<b>Prerequisites and co-requisites</b>	
<b>Language of instruction</b>	English
<b>Type</b>	Elective
<b>Level of Course</b>	Bachelor's
<b>Lecturer</b>	Ins. Volkan Kadir GÜNGÖR
<b>Mode of Delivery</b>	Face to Face
<b>Suggested Subject</b>	
<b>Professional practise ( internship )</b>	None
<b>Objectives of the Course</b>	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.
<b>Contents of the Course</b>	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
				<b>125</b>