OSTIM TECHNICAL UNIVERSITY
FACULTY OF ECONOMICS AND ADMINISTRATIVE SCIENCES
MANAGEMENT INFORMATION SYSTEMS DEPARTMENT
COURSE SYLLABUS FORM

MIS 403 Cyber Security							
Course Name	**Course Code**	**Period**	**Hours**	**Application**	**Laboratory**	**Credit**	**ECTS**
Cyber Security	MIS 403	7	3	0	0	3	4

Language of Instruction	English
Course Status	Elective
Course Level	Bachelor
Learning and Teaching Techniques of the Course	Lecture, Question-Answer, Problem Solving

Course Objective

This course aims to enable students to know the basic concepts of security security, to have theoretical and practical knowledge about cyber attack and cyber defense tools and methods, and to have the ability tohave the security of systems in critical infrastructures.

Learning Outcomes

Students who are successful in this course;

1. Will be able to discuss the technologies used in the world of cyber security,
2. Will be able to ensure computer and network security,
3. Explain the relationship between ethics and information law and countermeasures and cyber security,
4. Will be able to propose appropriate solutions to different security vulnerabilities.

Course Outline
This course; introduction to cyber security and basic concepts, historical development of computer security, physical security and cyber security, threats, vulnerability and attack concepts, network and internet security, cyber actors and attack methods, cyber defense methods, attack detection and response, kinetic war and cyber war, security in mobile and social media environments, personal and corporate data security management, critical information systems and country security, IT legislation and law dimension, the impact of cyber security on the economy, human factor in cyber security and ethics.

Weekly Topics and Related Preparation Studies		
Weeks	**Topics**	**Preparation Studies**
1	Introduction to cybersecurity and basic concepts, historical development of computer security.	–Presentations and Lecture Notes
2	Concepts of physical security and cybersecurity, threats, vulnerabilities and attacks.	–Presentations and Lecture Notes
3	Network and Internet Security.	–Presentations and Lecture Notes
4	Cyber actors and attack methods.	–Presentations and Lecture Notes
5	Cyber defense methods, attack detection and response.	–Presentations and Lecture Notes
6	Kinetic warfare and cyber warfare.	–Presentations and Lecture Notes
7	Case Study Simulation.	–Presentations and Lecture Notes
8	**MIDTERM EXAM**	
9	Security in mobile and social media environments.	–Presentations and Lecture Notes
10	Personal and corporate data security management.	– Presentations and Lecture Notes
11	Critical information systems and homeland security.	– Presentations and Lecture Notes
12	Informatics legislation and law dimension.	– Presentations and Lecture Notes
13	The impact of cybersecurity on the economy.	– Presentations and Lecture Notes
14	The human factor and ethics in cybersecurity.	– Presentations and Lecture Notes
15	**FINAL EXAM**	

Textbook(s)/References/Materials:
Textbook: Quinn Kiser (2020). Cybersecurity: A Simple Beginner's Guide to Cybersecurity, Computer Networks and Protecting Oneself from Hacking in the Form of Phishing, Malware, Ransomware, and Social Engineering: Independently published , first edition.
Supplementary References: Zach Codings (2019). Computer Programming And Cyber Security for Beginners: This Book Includes: Python Machine Learning, SQL, Linux, Hacking with Kali Linux, Ethical Hacking. Coding and Cybersecurity Fundamentals, first edition.
Other Materials: https://www.w3schools.com/cybersecurity/ https://www.futurelearn.com/courses/introduction-to-cyber-security

Assessment		
Studies	**Number**	**Contribution margin (%)**
Attendance		
Lab		
Class participation and performance		
Field Study		
Course-Specific Internship (if any)		
Quizzes / Studio / Critical		
Homework		
Presentation		
Projects	1	20
Report		
Seminar		
Midterm Exam/Midterm Jury	**1**	**30**
General Exam / Final Jury	**1**	**50**
Total		**100**
Success Grade Contribution of Semester Studies		**50**
Success Grade Contribution of End of Term		**50**
Total		**100**

ECTS / Workload Table			
Activities	**Number**	**Duration (Hours)**	**Total Workload**
Course hours (Including the exam week): 16 x total course hours)	16	4	64
Laboratory			
Application			
Course-Specific Internship (if any)			
Field Study			
Study Time Out of Class	16	1	16
Presentation / Seminar Preparation			
Projects	5	1	5
Reports			
Homework	15	1	15
Quizzes / Studio Review			
Preparation Time for Midterm Exams / Midterm Jury	1	10	10
Preparation Period for the Final Exam / General Jury	1	10	10
Total Workload	**(120/30 = 4)**		**120**

Course' Contribution Level to Learning Outcomes						
Nu	**Learning Outcomes**	**Contribution Level**				
		1	**2**	**3**	**4**	**5**
LO1	Discuss the technologies used in the world of cybersecurity.					X
LO2	To ensure computer and network security.					X
LO3	To be able to explain the relationship between ethics and information law and countermeasures and cyber security.					X
LO4	To be able to propose appropriate solutions to different security vulnerabilities.					X

	Relationship Between Course Learning Outcomes and Program Competencies (Department of Management Information Systems)					
Nu	**Program Competencies**	**Learning Outcomes**				**Total Effect (1-5)**
		LO1	**LO2**	**LO3**	**LO4**	
1	Recognize and distinguish the basic concepts such as data, information, and knowledge in the field of Management Information Systems and know the processes to be followed for data acquisition, storage, updating, and security.					
2	Develop and manage databases suitable for collecting, storing, and updating data.					
3	As a result of his/her ability to think algorithmically, and easily find solutions to problems concerning basic business functions.					
4	Learn programming logic, and have information about current programming languages.					
5	Be able to use up-to-date programming languages.					
6	Be able to take part in teamwork or lead a team using knowledge of project management processes.				x	**3**
7	Know ethical and legal rules, and use professional field knowledge within the scope of ethical and legal rules.			x		**5**
8	Know the fundamental areas of business administration namely management and organization, production, finance, marketing, numerical methods, accounting, etc., and have the knowledge and skills to work in-depth in at least one of them.					
9	Be able to solve the problems encountered in the field of internet programming by designing web applications.				x	**3**
10	Develop and manage logistics and supply chain management activities					
11	Adapt his/her theoretical knowledge and the experience he/she will gain through practice at the departments of businesses such as information technologies, R&D, and management to real life.					
12	Be able to develop strategies that will provide a competitive advantage with					

	his/her advanced knowledge of management strategies and management functions.					
13	Develop a business idea, commercialize the business idea, and design and manage his/her venture using entrepreneurial knowledge.					
14	By using English effectively, they can follow, read, write, speak and communicate universal information in the field of management information systems in a foreign language with professional competence.					
Total Effect						**11**

Policies and Procedures
Web page: https://www.ostimteknik.edu.tr/management-information-systems-754
Exams: Exams aim to assess various dimensions of learning, including; is the ability to apply this knowledge in a business environment by distinguishing problems and proposing solutions through knowledge and situation analysis of concepts and theories. Exams may consist of several types, these are; multiple choice, fill-in-the-blank, matching, true-false and open-ended questions.
Assignments: The rules of scientific research ethics are very important when preparing assignments. Students should pay attention to these rules about citation when using sources, reference them appropriately and avoid plagiarism.
Missed exams: Any student who misses an exam must bring an official medical certificate in order to take the make-up exam. A medical report must be obtained from a state hospital.
Projects: While preparing the project, students are expected to prepare their projects with groups of two or three people. When the project is delivered, both the application itself and the steps followed during the development of the application should be reported and delivered.
Attendance: Attendance conditions are announced at the beginning of the semester. Students are generally expected to attend at least 70% of classes each semester.
Objections: If the student finds a material error in his grade, he has the right to appeal to the Faculty or Department. The claim is examined and the student is informed about the result.