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

MIS 306 Computer Networks							
Course Name	**Course Code**	**Period**	**Hours**	**Application**	**Laboratory**	**Credit**	**ECTS**
Computer Networks	MIS 306	1	3	0	0	3	4

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

Course Objective

Main objectives of this course to gain abilities about the following concepts:

Introduction to computer networks, network programming, network security and the Internet.

- HTTP, FTP, SMTP, DNS.
- Socket programming; client/server model; peer-to-peer networking.
- TCP and UDP.
- IP and Internet routing.
- Error control and multiple access.
- Ethernet and wireless networks.
- Local area networks.

Learning Outcomes

1) Introduction to basic computer network terminology and able to comprehend layered network architectures and the layer interfacing.

- Understand names and basic functionality of network devices. Grasp the hierarchical architecture of Internet
- Learn peering and service relations between network layers, protocols (Ethernet and wireless) and encapsulation
- Identify the performance metrics for computer networks
- Identify the problem with network troubleshooting

2) Understand the Application, Transport, Network, Data Link and Physical Layers contemporary TCP/IP based computer networks

- Learn the encapsulation
- Understand the interfaces
- Computer networking protocols at each layer
- Layered architecture and end-to-end communication
- Introduction to Network Security

Course Outline
Introduction to the concept of network technologies; • OSI reference model, communication using the TCP/IP protocol, devices (switches) in layer 2 and routers running on layer 3 are introduced. • After the devices in the 3rd layer are taught, WAN (wide area network) and routing technologies. • Analyze network, network troubleshooting and network security issues

Weekly Topics and Related Preparation Studies		
Weeks	**Topics**	**Preparation Studies**
1	Course Introduction	–
2	Protocols and Models	–
3	Switching	–
4	Network Layer	–
5	Basic Router Configuration	–
6	Transport Layer	–
7	Application Layer	–
8	**MIDTERM EXAM**	
9	Network Security	
10	Network Security	–
11	Network Security	–
12	WAN	–

13	QoS	–
14	Network Management and Troubleshooting	–
15	**FINAL EXAM**	

Textbook(s)/References/Materials:
Textbook: Taylor, M. D. CompTIA® Network+ N10-006 Cert Guide Deluxe Edition.
Supplementary References:
Other Materials:

Assessment		
Studies	**Number**	**Contribution margin (%)**
Attendance	1	10
Lab		
Class participation and performance	1	10
Field Study		
Course-Specific Internship (if any)		
Quizzes / Studio / Critical		
Homework		
Presentation		
Projects		
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	2	32
Laboratory	5	1	5
Application			
Course-Specific Internship (if any)			
Field Study			
Study Time Out of Class	16	1	16
Presentation / Seminar Preparation			
Projects			
Reports			
Homework			
Quizzes / Studio Review	10	1	10
Preparation Time for Midterm Exams / Midterm Jury	**1**	**20**	**20**
Preparation Period for the Final Exam / General Jury	**1**	**30**	**30**
Total Workload	**(113/30 = 3,76)**		**113**

Course' Contribution Level to Learning Outcomes						
Nu	**Learning Outcomes**	**Contribution Level**				
		1	**2**	**3**	**4**	**5**
LO1	Learn OSI reference model					X
LO2	Learn to communication using the TCP/IP protocol					X
LO3	Learn the devices (switches) in layer 2 and routers running on layer 3 are introduced					X
LO4	Understand WAN (wide area network) and routing technologies					X
LO5	Analyze network and do network troubleshooting					X
LO6	Handle network security issues					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**	**LO5**	**LO6**	
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.	x	x	x	x	x	x	**5**
2	Develop and manage databases suitable for collecting, storing, and updating data.	x	x	x	x	x	x	**5**
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.	x	x	x	x	x	x	**5**
5	Be able to use up-to-date programming languages.	x	x	x	x	x	x	**5**
6	Be able to take part in teamwork or lead a team using knowledge of project management processes.							
7	Know ethical and legal rules, and use professional field knowledge within the scope of ethical and legal rules.							
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.							
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.	x	x	x	x	x	x	**5**
Total Effect								**25**

Policies and Procedures
Web page: https://www.ostimteknik.edu.tr/management-information-systems-english-1241/915
Exams: The exams aim at assessing various dimensions of learning: knowledge of concepts and theories and the ability to apply this knowledge to real-world phenomena, through analyzing the situation, distinguishing problems, and suggesting solutions. The written exams can be of two types, ie. open-ended questions, which can also be in the form of problems or multiple-choice questions.
Assignments: Quizzes and Homework (Assignments) might be applicable. Scientific Research Ethics Rules are very important while preparing assignments. The students should be careful about citing any material used from outside sources and reference them appropriately.
Missed exams: Any student missing an exam needs to bring an official medical report to be able to take a make-up exam.
Projects: A group project with teamwork is welcome.
Attendance: Attendance requirements are announced at the beginning of the term. Students are usually expected to attend at least 70% of the classes during each term.
Objections: If the student observes a material error in his/her grade, he/she has the right to place an objection to the Faculty or the Department. The claim is examined and the student is notified about its outcome.