



T.C.

ESKİŞEHİR OSMANGAZİ ÜNİVERSİTESİ

FACULTY OF SCIENCES

MATHEMATICS AND COMPUTER SCIENCES DEPARTMENT



COURSE INFORMATION FORM

Course Name	Course Code
Hardware	821617011

Semester	Number of Course Hours per Week		Credit	ECTS
	Theory	Practice		
7	3	0		5

Course Category (Credit)				
Basic Sciences	Engineering Sciences	Design	General Education	Social
	X			

Course Language	Course Level	Course Type
Turkish	Undergraduate	Elective

Prerequisite(s) if any	None
Objectives of the Course	<ul style="list-style-type: none">•Will be able to omprehend functions of computer parts and interactions with each other.• Will be able to have knowledge on basic operation principle of computer• Will be able to have knowledge on basic hardware components of computer• Will be able to comprehend relation between hardware and software• Will be able to describe hardware terms
Short Course Content	Hardware. Things to know for maintenance-repair. Server hardware. Game consoles. Von Neumann architecture. Hardware-operating system relationship. Hardware-based computer security

Learning Outcomes of the Course		Contributed PO(s)	Teaching Methods *	Measuring Methods **
1	Students will understand the fundamental techniques and concepts of hardware.	1	1, 6	A
2	Students will learn about computer hardware components and their functions.	2	1, 2	A
3	Students will gain practical knowledge in hardware design and configuration.	3	1, 6	A
4	Students will develop the ability to identify, analyze, and solve problems related to hardware.	4	1, 10	A
5	Students will gain experience in hardware topics through individual work and research.	5	11	A

***Teaching Methods** 1:Expression, 2:Discussion, 3:Experiment, 4:Simulation, 5:Question-Answer, 6:Tutorial, 7:Observation, 8:Case Study, 9:Technical Visit, 10:Trouble/Problem Solving, 11:Individual Work, 12:Team/Group Work, 13:Brain Storm, 14:Project Design / Management, 15:Report Preparation and/or Presentation

****Measuring Methods** A:Exam, B:Quiz, C:Oral Exam, D:Homework, E:Report, F:Article Examination, G:Presentation, I:Experimental Skill, J:Project Observation, K:Class Attendance; L:Jury Exam

Main Textbook	Güngörsün, T., Canay, Ö., "Bilgisayar Donanımı ve Bileşenleri", Değişim Yayınları (2016).
Supporting References	Güngörsün, T., Canay, Ö., "Bilgisayar Donanımı ve Bileşenleri", Değişim Yayınları (2016).
Necessary Course Material	None

Course Schedule	
1	Definition and Historical Development of Computers
2	Definition and Structure of Hardware
3	Processor, Hard Disk, Memory, Motherboard, ROM Memory
4	Input Devices: Keyboard and Mouse
5	Output Devices: Monitor and Printer
6	Output Devices: Monitor and Printer
7	Drivers
8	Midterm Exam
9	Other Peripheral Devices
10	Starting the Computer
11	Network and Application Software
12	Network and Application Software
13	BIOS and BIOS Settings
14	BIOS and BIOS Settings
15	BIOS and BIOS Settings
16,17	Final Exams

Calculation of Course Workload			
Activities	Number	Time (Hour)	Total Workload (Hour)
Course Time (number of course hours per week)	14	3	42
Classroom Studying Time (review, reinforcing, prestudy,...)	14	3	42
Homework	5	3	15
Quiz Exam			
Studying for Quiz Exam			
Studying for Oral Exam			
Report (Preparation and presentation time included)			
Project (Preparation and presentation time included)			
Presentation (Preparation time included)			
Mid-Term Exam	1	2	2
Studying for Mid-Term Exam	1	20	20
Final Exam	1	2	2
Studying for Final Exam	1	30	30
Total workload			138
Total workload / 30			4,6
Course ECTS Credit			5

Evaluation	
Activity Type	%
Mid-term	50
Quiz	
Homework	
Bir öge seçin.	
Bir öge seçin.	
Final Exam	50
Total	100

RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO) (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low)		
NO	PROGRAM OUTCOME	Contribution
1	The ability to apply knowledge of Mathematics and Computer Sciences	2
2	To have sufficient theoretical and practical knowledge of Mathematics at international level	3
3	The ability to describe, model, and solve mathematical problems in Mathematics and related subjects	2
4	The skill to solve and design a problem process in accordance with a defined target	2
5	Skills to analyze data, interpret and apply to other data, and use these data on a computer	3
6	The skill to use modern techniques and computational tools needed for mathematical applications	3
7	The skill to work within the discipline and interdisciplinary teams	3
8	The ability to improve oneself by following developments in modern, scientific, and technological subjects as well as Mathematics and Computer Sciences	2
9	The skill to communicate orally and in writing in a clear and concise manner, with individual work skills and the ability to independently decide and think analytically	3
10	The skill to have professional and ethical responsibility	2
11	The skill to have consciousness for quality issues and scientific research	2
12	The skill to be sensitive to environmental issues related to problems and development of the living area and consistent in social relations	2
13	Ability to solve problems in the working life by finding appropriate algorithms via mathematical modeling and writing computer programs	2
14	The skill to develop the design of software systems at different complexity levels	2
15	The recognition of the necessity of life-long learning and the ability to apply life-long learning	3

LECTUTER(S)				
Prepared by	Doç. Dr. Özer Çelik			
Signature(s)				

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