Course Syllabus

Code - Course Title	**BOP212 - Computer Hardware**
Course Type	IV. SEMESTER
Laboratory + Practice	2+0
ECTS	**2.0**
Language of Instruction	Türkçe
Course Type	Required Courses
Course Instructor(s)	ÖĞR. GÖR. PERİHAN ÖNDEŞ

Mode of Delivery	This course is conducted exclusively through face-to-face instruction.
Place of Delivery	On Campus
Used Educational Platforms	Face-to-face
Prerequisites	There is no prerequisite or co-requisite for this course.
Courses Recomended	There are no prerequisite courses recommended for this course.
Recommended Resources	Visual-aided lecture notes and presentations prepared by the instructor; manufacturer user manuals for the motherboard, processor, and other hardware units.
Work Placement	The course does not have an internship component.
Aims of the Course	The aim of this course is to provide students with the knowledge and skills regarding the recognition of hardware and peripheral devices that constitute a computer, the selection of appropriate and compatible components, computer assembly, wired and wireless network and internet hardware, basic maintenance and troubleshooting, and protection against viruses.

Course Syllabus

Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 1	**LO-1** **LO-3**	Introduction to computer systems and computer architecture	Lecture, Question & Answer
Week - 2	**LO-1** **LO-2**	Case, power supply, and motherboard	Lecture, Demonstration
Week - 3	**LO-1** **LO-2**	Microprocessors	Lecture, Demonstration
Week - 4	**LO-1** **LO-2**	Internal memories	Lecture, Demonstration
Week - 5	**LO-1** **LO-2** **LO-5**	External memories and storage units	Lecture, Demonstration
Week - 6	**LO-1** **LO-2** **LO-5**	Graphics cards and display units	Lecture, Demonstration
Week - 7	**LO-1** **LO-5**	Input and output units	Lecture, Demonstration
Week - 8	**LO-2** **LO-5**	Ports, data buses, and portable systems	Lecture, Demonstration
Week - 9	**LO-6**	Computer networks and wired networks	Lecture, Demonstration
Week - 10	**LO-6**	Wireless networks and hardware	Lecture, Demonstration

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Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 11	LO-6	The Internet and internet hardware	Lecture, Question & Answer
Week - 12	LO-3 LO-4	Assembly techniques, component selection, and compatibility	Problem Solving, Demonstration, Practice/Practical Work/Workshop
Week - 13	LO-8	Maintenance, repair, and troubleshooting	Case Study, Problem Solving, Demonstration
Week - 14	LO-7	Computer viruses and protection software	Lecture, Demonstration, Practice/Practical Work/Workshop

Learning Outcomes

#	Learning Outcome
1	Can explain the hardware components that make up a computer system according to their functions.
2	Can compare hardware units according to their technical specifications.
3	Can assemble computer hardware components in accordance with occupational safety regulations.
4	They can recommend a computer system consisting of components that are compatible and suitable for the intended purpose of use.
5	Can explain the connection interfaces and standards of peripheral units.
6	Can explain the hardware used in wired networks, wireless networks, and internet access.
7	Can implement appropriate protection methods against computer viruses.
8	Can identify the potential causes of common hardware failures.

Sustainable Development Goals

✓ Industry, Innovation and Infrastructure ✓ Responsible Production and Consumption

Course Theme

✓ Communication Technologies and the IoT

AKTS Workload

Activity	Duration (Hour)	Count	Workload
Teorik Derse Katılım	2.00	14	28
Sınıf Dışı Çalışma (Ön Hazırlık & Pekiştirme Amaçlı)	1.00	8	8
Ödevler	1.00	5	5
Proje - Rapor - Sunum Hazırlama	0.00	0	0
Ara Sınav Hazırlığı (sınav süresi dahil)	3.00	1	3
Final Sınavı Hazırlığı (sınav süresi dahil)	6.00	1	6

AKTS Workload

Activity	Duration (Hour)	Count	Workload
Uygulama (Laboratuvar, Müzik/Enstrüman Uygulaması, Atölye/Saha Çalışması vb.)	0.00	0	0
Staj Uygulaması	0.00	0	0
		Calculated ECTS	**2.0**

Assessment Method and Passing Requirements

✓ Multiple Choice Test ✓ True-False Test ✓ Homework