	Bakı Mühəndislik Universiteti	**Fənn sillabusu**

Sənədin kodu: BEU-FR-001-EN	**Təsdiq tarixi:**	**Revizya olunma № / Tarixi:**	**Səhifə №** 1/2

SYLLABUS

Approved by
Head of department
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"_____" _____ 20

Course Content	**Faculty:**	Engineering
	Department:	INHA-BEU DDP
	Speciality(ies)/Course(s):	Electronics
	Subject code and name:	Operating Systems
	Education Year - Semester	2022 – 2023 / 2
	Level:	bachelor
	Language:	En
	Compulsory / Elective:	Elective
	Prerequisite:	
	Instructors:	Rasim Mahmudov
	Email:	ramahmudov@beu.edu.az
	Phone:	+99455-705-92-89
	Consulting Hours and place:	Wednesday, 12:00 - 14:00, Place: 312

Subject hours				**Credits**	
Theory	**Seminar**	**Laboratory**	**Total**	**Credit**	**ECTS**
2	1				

Learning Objectives:	The course will start with a brief historical perspective of the evolution of operating systems over the last fifty years and then cover the major components of most operating systems. This discussion will cover the tradeoffs that can be made between performance and functionality during the design and implementation of an operating system. Particular emphasis will be given to three major OS subsystems: process management (processes, threads, CPU scheduling, synchronization, and deadlock), memory management (segmentation, paging, swapping), and file systems; and on operating system support for distributed systems.
Learning Outcomes and Competences:	You will have an opportunity to learn a lot of practical information about how programming languages, operating systems, and architectures interact and how to use each effectively. This course is the first time you will learn about how concurrency and distributed systems communicate and work correctly. This knowledge will help you to more effectively use and manipulate computers and computer programs.
Text books and/or References:	Andrew S. Tanenbaum, *Modern Operating Systems*, 4th ed., 2011 Tanenbaum , Modern Operating System

	Student workload	**Methods**	**Percent**
Assessment Criteria	**Midterm Activity -1**	Task/Quiz	15%
	Midterm Activity -2	Task/Quiz	15%
	Attendance	-	10%
	Midterm Individual Activity	Task/Quiz	10%
	Laboratory Work	-	-
	Final Exam	Quiz	50%

Week	**Subjects**	**Reading**	**Theory**	**Seminar**	**Laboratory**
1	Introduction to Operating Systems, Overview, Windows, Linux competition	Ch.1, Ch.2.1-2.4	2	1	

2	Installing and configurating Windows 7 and first shell, command (cmd).	Ch. 8.2.3-8.2.4	2	1	
3	Create, Read dir, files using command line interface.	Ch. 6	2	1	
4	Installing/Reading Linux Kernel (Gentoo, Ubuntu, OpenSuse) and simple terminal commands	Ch. 3.1, 3.2	2	1	
5	Processes (What is process, history of OS, data structures for process, fork, exec, exit, wait)	Ch. 3.3	2	1	
6	Scheduling, Deadlocks	Ch. 3.4	2	1	
7	Memory Management, Swapping, Variable Partitions	Ch. 4.1, 4.2	2	1	
8	Virtual Memory, Paging, Page Replacement Strategies	Ch. 4.3	2	1	
9	File Systems	Ch. 5.1	2	1	
10	I/O, Devices, Device Drivers, P Plug-n-Play, Streams	Ch. 5.2, 5.3	2	1	
11	Disks	Ch. 5.4	2	1	
12	Disks, Network Terminals	Ch. 5.4, 5.7	2	1	
13	OS Security Issues	Ch. 9	2	1	
14	Student presentation, final review		2	1	
15	Repetition all previous topics		2	1	

Evaluation criteria:

91 – 100 grades	excellent	A
81 – 90 grades	very good	B
71 – 80 grades	good	C
61 – 70 grades	sufficient	D
51 – 60 grades	satisfactory	E
<51 grades	unsufficient	F

Instructor: Rasim Mahmudov — Signature:

(Name, surname, middle name) — Date : 02.02.23