



Меѓународен Универзитет Визион - International Vision University
 Universiteti Ndërkombëtar Vizion - Uluslararası Vizyon Üniversitesi

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SYLLABUS

COURSE NAME	COURSE CODE	SEMESTER	COURSE LOAD	ECTS
OPERATING SYSTEMS	CEN-2007	4	180	6

Prerequisite(s)	None
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Course Language	Macedonian, Turkish, English
Course Type	Required
Course Level	First Cycle
Course Lecturer	
Course Assistants	
Classroom	
Extra-Curricular Office Hours and Location	

Course Objectives	The theory of today's operating systems is to give the concepts of processes and threads, memory management, filing system and I/O principles.
Course Learning Outcomes	<p>1-Can give a brief history of previous operating systems and explain how modern operating systems work.</p> <p>2-Defines the operating systems structurally.</p> <p>3-will be able to design the core units of the operating system such as process, thread, scheduling and interprocess-communication units by using different techniques.</p> <p>4-will be able to evaluate the results of memory management, I/O techniques and filing systems.</p> <p>5-will be able to apply security and protection measures to a computer.</p> <p>6-Multimedia can implement units for networking and distributed operating systems.</p>
Course Contents	Introduction. Processes and threads; processes, threads, scheduling and interprocess communication. memory management; simple memory management techniques, virtual memory management technique, operating system policies for virtual memory management and segmented memory structure. filing systems; files, folders, filing system implementation and sample filing systems. Input/Output (I/O) ; I/O software and hardware principles, layered I/O structure, disks, clocks, terminals and graphical interface units. dead-locking; resources, deadlock, deadlock detection and recovery, deadlock avoidance and deadlock prevention. Multi-media operating systems. Security. Distributed and network operating systems.

WEEKLY SUBJECTS AND RELATED PREPARATION STUDIES

Week	Subjects	Related Preparation
1	Introduction to operating systems	Related Chapters of Course Sources
2	Processes-Threads	Related Chapters of Course Sources
3	Threads-Process and thread description	Related Chapters of Course Sources
4	deadlocks	Related Chapters of Course Sources
5	Interprocess communication	Related Chapters of Course Sources
6	Memory Management	Related Chapters of Course Sources
7	Midterm	Related Chapters of Course Sources
8	Virtual Memory	Related Chapters of Course Sources
9	Virtual Memory management policies	Related Chapters of Course Sources
10	File systems	Related Chapters of Course Sources
11	File system and saving , Filing and backup systems	Related Chapters of Course Sources
12	Filing system Management	Related Chapters of Course Sources
13	Entry-Exit Management	Related Chapters of Course Sources
14	Security and Protection	Related Chapters of Course Sources
15	Final exam	Related Chapters of Course Sources

ECTS / WORKLOAD TABLE

Presentation / Seminar			
Hours for off-the-classroom study (Pre-study, practice)	14	3	42
Midterm Exam	1	12	12
Final examination	1	14	14
Total Work Load			
ECTS		6	

GENERAL PRINCIPLE RELATED WITH COURSE

Dear Students,

In order to be included in the lesson, learn the lesson fully and achieve the success you deserve, you must come to each lesson prepared by reading the sections related to the subjects to be covered from the basic and supplementary textbooks. We expect you to meticulously comply with the lesson hours, not to interrupt the lessons unless it is absolutely necessary, to participate actively in the lesson, to communicate fully with your teacher and classmates, and to be active by participating in the discussions in the class. Unethical behaviors that may occur both in classes and in exams will be acted upon within the framework of the relevant regulation. Attendance will be taken at the time your teacher requests, at the beginning, middle or end of each lesson. Students who attend all classes during the semester will be given a 15-point attendance grade in addition to the exam grade.

SOURCES

COMPULSORY LITERATURE		
No	Name of the book	Author's Name, Publishing house, Publication Year
1	Modern Operating System, (Çağdaş İşletim Sistemleri)	Enrdu S.Tanenbaum (2010), Mikena - Bitola
2	İşletim Sistemleri ve Sistem Programlama	Mutlu Avcı, Buse Melis Özyıldırım , Onur Ülgen KARAHAN KİTABEVİ ,2016
3	Modern Operating System, (Çağdaş İşletim Sistemleri)	Enrdu S.Tanenbaum (2010), Mikena - Bitola

ADDITIONAL LITERATURE		
No	Name of the book	Author's Name, Publishing house, Publication Year
1	Operating System Concepts 9-th edition	Abraham Silberschatz (2012) Viley
2	Operating System,internals and Design Principles	Prentice Hall (2014),
3	Operating System Concepts 9-th edition	Abraham Silberschatz (2012) Viley

EVALUATION SYSTEM

Underlying the Assessment Studies	NUMBER	PERCENTAGE OF GRADE
Attendance/Participation	15	%10
Project / Event	1	%20
Mid-Term Exam	1	%35
Final Exam	1	%35
TOTAL	17	%100

ETHICAL CODE OF THE UNIVERSITY

In case students are cheating on exams or preparation the same, it is not making reference to the source to be used in studies, as for example in assignments, projects and presentation (plagiarism), in accordance with legislations by Ministry of Education and Science of the Republic of North Macedonia and International Vision University, apply relevant disciplinary rules. International Vision University students are expected never attempts in this kind of behavior.