TOROS ÜNİVERSİTESİ

Faculty Of Engıneerıng
Computer And Software Engıneerıng

Course Information

OPERATING SYSTEMS					
Code	**Semester**	**Theoretical**	**Practice**	**National Credit**	**ECTS Credit**
		Hour / Week			
CSE301	Fall	3	0	3	4

Prerequisites and co-requisites	None
Language of instruction	English
Type	Required
Level of Course	Bachelor's
Lecturer	Asst. Prof. Dr. Maryam Eskandari
Mode of Delivery	Face to Face
Suggested Subject	
Professional practise (internship)	None
Objectives of the Course	This course aims at teaching the students the hardware and software architecture of operating systems
Contents of the Course	Basic architecture of operating systems, hardware and software requirements and application areas of operating systems

Learning Outcomes of Course

#	Learning Outcomes
1	Students will be able to distinguish different styles of operating system design.
2	Students will understand device and I/O management functions in operating systems as part of a uniform device abstraction.
3	Students will understand the main principles and techniques used to implement processes and threads as well as the different algorithms for process scheduling.
4	Students will understand the main mechanisms used for inter-process communication.

Course Syllabus

#	Subjects	Teaching Methods and Technics
1	History of operating systems and introduction to operating systems	Lecture, discussion, presentation
2	Hardware requirements of operating systems	Lecture, discussion, presentation
3	Processes and process management mechanisms	Lecture, discussion, presentation
4	Basic process scheduling algorithms and their comparison	Lecture, discussion, presentation
5	Interprocess communication	Lecture, discussion, presentation
6	Memory management, real and virtual memory	Lecture, discussion, presentation
7	Midterm	Lecture, discussion, presentation
8	Mechanisms for creating virtual memory	Lecture, discussion, presentation
9	Paging and segmentation in memory management	Lecture, discussion, presentation
10	I/O systems and memory hierarchy	Lecture, discussion, presentation
11	Basic principles of the operation of I/O systems, sequential and random access techniques	Lecture, discussion, presentation
12	Sharing of I/O systems between user processes and virtual I/O systems	Lecture, discussion, presentation

13	Basic file system structure for operating systems	Lecture, discussion, presentation
14	Logical file system and its mapping to physical I/O, sharing and security concerns	Lecture, discussion, presentation
15	Logical file system and its mapping to physical I/O, sharing and security concerns-Continue	Lecture, discussion, presentation
16	Final Exam	Lecture, discussion, presentation

Course Syllabus

#	Material / Resources	Information About Resources	Reference / Recommended Resources
1	Operating System Concepts, Abraham Silberschatz, Peter Baer Galvin, Addison-Wesley		

Method of Assessment

#	Weight	Work Type	Work Title
1	40%	Mid-Term Exam	Mid-Term Exam
2	60%	Final Exam	Final Exam

Relationship between Learning Outcomes of Course and Program Outcomes

#	Learning Outcomes	Program Outcomes	Method of Assessment
1	Students will be able to distinguish different styles of operating system design.	3,4	1,2
2	Students will understand device and I/O management functions in operating systems as part of a uniform device abstraction.	3,4	1,2
3	Students will understand the main principles and techniques used to implement processes and threads as well as the different algorithms for process scheduling.	3,4	1,2
4	Students will understand the main mechanisms used for inter-process communication.	3,4	1,2

PS. The numbers, which are shown in the column Method of Assessment, presents the methods shown in the previous table, titled as Method of Assessment.

Work Load Details

#	Type of Work	Quantity	Time (Hour)	Work Load
1	Course Duration	14	3	42
2	Course Duration Except Class (Preliminary Study, Enhancement)	14	4	56
3	Presentation and Seminar Preparation	0	0	0
4	Web Research, Library and Archival Work	0	0	0
5	Document/Information Listing	0	0	0
6	Workshop	0	0	0
7	Preparation for Midterm Exam	1	2	2
8	Midterm Exam	1	1	1
9	Quiz	0	0	0
10	Homework	0	0	0
11	Midterm Project	1	5	5
12	Midterm Exercise	0	0	0
13	Final Project	1	5	5
14	Final Exercise	0	0	0
15	Preparation for Final Exam	1	2	2
16	Final Exam	1	1	1