COMPUTER OPERATING SYSTEMS

1	Course Title:	COMPUTER OPERATING SYSTEMS
2	Course Code:	BMB3004
3	Type of Course:	Compulsory
4	Level of Course:	First Cycle
5	Year of Study:	3
6	Semester:	6
7	ECTS Credits Allocated:	5.00
8	Theoretical (hour/week):	3.00
9	Practice (hour/week):	0.00
10	Laboratory (hour/week):	0
11	Prerequisites:	
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Dr. Ögr. Üyesi Metin BİLGİN
15	Course Lecturers:	
16	Contact information of the Course Coordinator:	Bilgisayar Müh. Bölüm Binası, 1. kat, oda 3 Tel.:+90 (224) 275 52 63 email: metinbilgin at uludag.edu.tr
17	Website:	
18	Objective of the Course:	The objective of this lecture is to enable the students to describe the basic tasks of operating systems and explain the process management and memory management services of operating systems in detail
19	Contribution of the Course to Professional Development:	
20	Learning Outcomes:	

	1	To define the basic tasks of operating systems.
	2	To define the basic concepts related to operating systems.
	3	To compare processes and threads.
	4	To compare the performances of process scheduling algorithms.
	5	To detect and solve deadlock problems in process execution.
	6	To explain basic memory management strategies.
	7	To compare memory management mechanisms.
	8	To detect the interactions between the modules of operating systems.
	9	To make detuctions based on available information.
	10	To analyze and solve problems.

21	Course Content:	

	Course Content:	
Week	Theoretical	Practice
1	History of operating systems and introduction to operating systems	
2	Hardware requirements of operating systems	
3	Processes and process management mechanisms	

4	Basic process scheduling algorithms and their comparison	
5	Interprocess communication	
6	Memory management, real and virtual memory	
7	Mechanisms for creating virtual memory	
8	Paging and segmentation in memory management	
9	I/O systems and memory hierarchy	
10	Basic principles of the operation of I/O systems	
11	Sequential and random access techniques	
12	Sharing of I/O systems between user processes and virtual I/O systems	
13	Basic file system structure for operating systems	
14	Logical file system and its mapping to physical I/O, sharing and security concerns	
22	Textbooks, References and/or Other Materials:	Silberschatz A., Galvin P. B., Gagne G., "Operating System Concepts", 8th Edition,Wiley, 2010.
23	Assesment	

TERM LEARNING ACTIVITIES	NUMBER	WEIGHT		
Midterm Exam	1	40.00		
Final Exam	1	60.00		
Contribution of Term (Year) Learning Activities to Success Grade		40.00		
Contribution of Final Exam to Success Grade		60.00		

24 ECTS / WORK LOAD TABLE

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	3.00	42.00
Practicals/Labs	0	0.00	0.00
Self study and preperation	0	0.00	0.00
Homeworks	14	7.00	98.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Measurement and Evaluation Techniques Used in the Course	1	2.00	2.00
Others	0	0.00	0.00
Final Exams	1	2.00	2.00
Total Work Load			144.00
Total work load/ 30 hr			4.80
ECTS Credit of the Course			5.00

25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
ÖK1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

ÖK5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

LO: Learning Objectives   PQ: Program Qualifications

Contribution Level:	**1 very low**	**2 low**	**3 Medium**	**4 High**	**5 Very High**