OSTIM TECHNICAL UNIVERSITY
FACULTY OF ENGINEERING

COURSE SYLLABUS FORM
2020-2021

CENG 305 Computer Organization							
Course Name	**Course Code**	**Period**	**Hours**	**Application**	**Laboratory**	**Credit**	**ECTS**
Computer Organization	CENG305	1	4	0	0	4	5

Language of Instruction	English
Course Status	Compulsory
Course Level	Bachelor
Course Lecturer(s)	
Learning and Teaching Techniques of the Course	Lecture, Discussion, Question Answer, Practice

Course Objective

Teaching computer systems, processor, memory types and working principles, and give information about performance evaluation.

Learning Outcomes

1. Defines computer architectures
2. Defines processors and differences
3. Have knowledge about memory types and principles
4. Have knowledge about buses, pipelines and command structures
5. Have knowledge about different computer structures
6. Have knowledge about cooling strategies
7. Be able to compare performances

Course Outline

Weekly Topics and Releated Preparation Studies	
Weeks	Topics
1	Basic Information
2	Computer Architecture
3	Processors and differences
4	Memory types and principles
5	Buses and controllers
6	Pipelines
7	Command Structures
8	MidTerm
9	Command Structures
10	Input Output Organization
11	Cluster
12	Grid
13	Cloud
14	Cooling
15	Performance measurement
16	Evaluation

Textbook(s)/References/Materials:
Up to date information on the internet, hardware materials
Stallings, W., (2006). Computer Organization & Architecture: Designing for Performance.

Assessment		
Studies	**Number**	**Contribution margin (%)**
Continuity		
Lab		
Application		20
Field Study		
Course-Specific Internship (if any)		
Quizzes / Studio / Critical		
Homework		
Presentation		
Projects		
Report		
Seminar		
Midterm Exams / Midterm Jury	1	30
General Exam / Final Jury	1	50
	Total	**100**
Success Grade Contribution of Semester Studies		50
Success Grade Contribution of End of Term		50
	Total	**100**

Relationship Between Course Learning Outcomes and Program Competencies							
Nu	**Learning Outcomes**	**Contribution Level**					
		1	**2**	**3**	**4**	**5**
1	An ability to apply knowledge of science, mathematics, and engineering.				x	
2	An ability to design energy systems, components, or processes to meet industrial needs.					
3	An ability to work with multi-disciplinary teams.					
4	An ability to identify, formulate, and solve engineering problems.				x	
5	Take responsibility to solve unpredictable and complex problems encountered in applications as an individual and as a member of a team					
6	plan and manage activities in teamwork				x	
7	An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.					x
8	Can do research on interdisciplinary fields.					

ECTS / Workload Table			
Activities	**Number**	**Duration (Hours)**	**Total Workload**
Course hours (Including the exam week: 16 x total course hours)	16	3	48
Laboratory			
Application	5	6	30
Course-Specific Internship			
Field Study			
Study Time Out of Class			
Presentation / Seminar Preparation			
Projects			
Reports			
Homeworks			
Quizzes / Studio Review			
Preparation Time for Midterm Exams / Midterm Jury	1	20	20
Preparation Period for the Final Exam / General Jury	1	30	30
Total Workload	**(ECTS 128/25 = 5,12)**		**128**