

IZMIR INSTITUTE OF TECHNOLOGY
COMPUTER ENGINEERING PROGRAM
COMPUTER NETWORKS

CENG312

2022-23 Spring

Instructor:
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Course Schedule: Friday 13:30-16:15

Teaching Assistants:
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Catalog Course Content: Overview of computer networks: Network architecture and the ISO-OSI model. Circuit switching, packet switching. Network topology: Connectivity analysis, delay analysis and backbone analysis. Physical layer: Transmission and multiplexing, terminal handling, errors. Data link layer and link protocols. Network layer: Routing and congestion, satellite and packet radio networks, local networks. Transmission and session layer, presentation layer, application layer. Ethernet, token ring networks, protocols, discussion of some networks and their properties, network planning and management.

Recommended Text Books:

- Computer Networking: A Top-Down Approach 8th edition, Jim Kurose, Keith Ross, Pearson, 2022.
- Computer Networks, Ed.5, A.J. Tanenbaum, Prentice-Hall, 2011.

Tentative Course Outline:

Week	Date	Topic	Exams	HWs
1	10.Mar	Introduction Internet, Network edge (hosts, access network, physical media), Network core (packet/circuit switching, internet structure)		
2	17.Mar	Introduction Performance (loss, delay, throughput), protocol layers, service models, security		
3	24.Mar	Application Layer		
4	31.Mar	Application Layer		
5	7.Apr	Transport Layer		HW1
6	14.Apr	Transport Layer		
7	21.Apr	NO LECTURE		
8	28.Apr	Network Layer		HW2
9	5.May		MT	
10	12.May	Network Layer		
11	19.May	NO LECTURE		HW3
12	25.May	Data Link Layer		
13	1.June	Data Link Layer		
14	8.June	Queuing Analysis		HW4
15	15.June	Wireless and Mobile Networks		
16	22.June	Final Exam (Date: 7 July 2023 Time:13:30)	Final	

Grading:

MT : 30%
Final exam : 40%
HWs : 30%
Attendance : required but will not be graded.

CENG312 course will be managed mainly via 'MS Teams'.

You are required to follow all announcements and guidelines in due course.