

**University of Technology**  
**Computer Engineering Department**  
**Academic Year 2023-2024**  
**3<sup>st</sup> Year- first semester- Network Branches**



CE-CN343	ADVANCE COMPUTER NETWORK	2 Hr/Week	2 Units
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Contents of syllabus	Hours
<b>Overview of Computer network fundamentals</b>	<b>2</b>
<b>IP addresses IPV6 ADDRESS MAPPING (Mapping Logical to Physical Address: ARP ,Mapping Physical to Logical Address: RARp, BOOTP, and DHCP)(ICMP)</b>	<b>5</b>
<b>Wired LANs IEEE Protocols (Ethernet-Token Bus-Token Ring)</b>	<b>2</b>
<b>Random Access Techniques Pure Aloha Slotted Aloha CSMA/CD,CSMA/CA</b>	<b>3</b>
<b>LAN Application and Configurations Hardware Connection and Interfacing</b>	<b>3</b>
<b>Connection LANs ,Backbone Networking and Virtual LANs (Hub – Repeater –Bridge –Gateway),Backbone network, Virtual LANs , Bridge</b>	<b>3</b>
<b>Switching Techniques , Circuit Switching , Message Switching , Packet Switching</b>	<b>4</b>
<b>ATM------(2st_semester)ch19-ATM_Later Architecture ATM LAN , ATM MAN ,ATM WAN</b>	<b>4</b>
<b>High Speed Network FDDN ISDN</b>	<b>4</b>

**References:**

**Textbook:**

**Computer Networks, a System approach, 4th Edition, by Larry Peterson, MK 2007**

**TCP/IP Protocol Suite, 4rd edition, by B. A. Forouzan, McGraw Hill 2010**

**( focus on the internet with nice illustration animations)**

