

**GOVERNMENT ENGINEERING COLLEGE, DAHOD**  
**(GUJARAT TECHNOLOGICAL UNIVERSITY)**  
**COMPUTER ENGINEERING**  
**B. E. SEMESTER: VIII**  
**LESSON PLANNING YEAR 2016**

Subject Name : Advance Computer Networks (Department Elective-2)  
Subject Code : 180704

<b>Sr. No.</b>	<b>Topics</b>	<b>Total Hrs</b>
1	<b>Optical Networking</b> <ul style="list-style-type: none"> <li>• Introduction to Optical Networking</li> <li>• SONET / SDH Standard</li> <li>• DWDM</li> </ul>	02
2	<b>ATM: The WAN Protocol</b> <ul style="list-style-type: none"> <li>• Introducing ATM Technology</li> <li>• Introducing Faces of ATM</li> <li>• Explaining the basic concepts of ATM Networking</li> <li>• Exploring the B-ISDN reference model</li> <li>• Explaining the Physical Layer</li> <li>• Explaining the ATM Layer</li> <li>• Explaining the ATM Adaptation Layer</li> <li>• Exploring ATM Physical interface</li> <li>• Choosing an Appropriate ATM Public Service</li> </ul>	06
3	<b>Packet Switching Protocols</b> <ul style="list-style-type: none"> <li>• Introduction to Packet Switching</li> <li>• Introduction to Virtual Circuit Packet Switching</li> <li>• Introduction to X.25</li> <li>• Introducing switched multimegabit data service</li> </ul>	04
4	<b>Protocols and Interfaces in Upper Layers of TCP/IP</b> <ul style="list-style-type: none"> <li>• Introducing TCP/IP suite</li> <li>• Explaining Network Layer Protocols</li> <li>• Explaining Transport Layer Protocol</li> <li>• Explaining Application Layer Protocol</li> </ul>	04
5	<b>Routing in the Internet</b> <ul style="list-style-type: none"> <li>• Introduction to Intra-domain and inter-domain routings</li> <li>• Unicast Routing Protocols</li> <li>• Multicast Routing Protocols</li> </ul>	06
6	<b>Other Routing Techniques</b> <ul style="list-style-type: none"> <li>• Introduction to traffic Engineering</li> <li>• IP over ATM</li> <li>• Multiprotocol Label Switching</li> <li>• Storage Area Network</li> </ul>	06
7	<b>Network Management and Services</b> <ul style="list-style-type: none"> <li>• Introduction to Network Management</li> <li>• Standard Network Management Protocol</li> </ul>	04

8	<b>Traffic Engineering Basics</b> <ul style="list-style-type: none"> <li>• Introduction to traffic Engineering</li> <li>• Requirement Definition for Traffic Engineering</li> <li>• Traffic Sizing</li> <li>• Traffic Characteristics</li> <li>• Protocols</li> <li>• Time and Delay Consideration</li> <li>• Connectivity</li> <li>• Availability, Reliability, and Maintainability</li> <li>• Throughput Calculation</li> </ul>	07
9	<b>Multimedia over Internet</b> <ul style="list-style-type: none"> <li>• Introduction to Multimedia Services</li> <li>• Explaining Transmission of Multimedia over the Internet</li> <li>• Explaining IP Multicasting</li> <li>• Explaining VOIP</li> </ul>	05
10	<b>Introduction to the Cisco IOS.</b> <ul style="list-style-type: none"> <li>• The Cisco Router User Interface</li> <li>• Command Line Interface (CLI)</li> <li>• Router and Switch Administrative Functions</li> <li>• Router Interfaces</li> <li>• Viewing, Saving, and Erasing Configurations</li> </ul>	04
11	<b>IP Routing.</b> <ul style="list-style-type: none"> <li>• Routing Basics</li> <li>• The IP Routing Process</li> <li>• Configuration IP Routing in Our Network</li> </ul>	04
12	<b>Dynamic Routing Protocols.</b> <ul style="list-style-type: none"> <li>• Routing Protocol Basics</li> <li>• Routing Information Protocol (RIP)</li> <li>• Interior Gateway Routing Protocol (IGRP)</li> <li>• Verifying Your Configurations</li> </ul>	04
13	<b>Layer 2 Switching.</b> <ul style="list-style-type: none"> <li>• Before Layer 2 Switching</li> <li>• Switching Services</li> <li>• Spanning Tree Protocol (STP)</li> <li>• LAN Switch-Types</li> </ul>	04