

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)**  
9-5-81, Ibrahimbagh, Hyderabad-500031, Telangana State  
**DEPARTMENT OF INFORMATION TECHNOLOGY**

**SYLLABUS FOR B.E. IV SEMESTER**  
**INTRODUCTION TO COMPUTER NETWORKS**  
**(Open Elective-II)**  
**(for other Departments)**

Instruction: 1 Hrs /week	SEE Marks : 40	Course Code : <b>OE430IT</b>
Credits : 1	CIE Marks: 30	Duration of SEE : 2 Hrs

<b>Course Objectives</b>	<b>Course Outcomes</b>
<b>The course will enable the students to:</b>	<b>At the end of the course student will be able to:</b>
This course will enable the students to learn the basics of Computer Networks	<ol style="list-style-type: none"><li>1. Describe different types of computer networks</li><li>2. Explain the standards related to internet and its administration.</li><li>3. Compare and contrast TCP/IP and OSI model</li><li>4. Use basic networking commands</li></ol>

**Unit – I**

**Data Communications:** Components, Data Representation, Data Flow

**Networks:** Network Criteria, Physical Structure

**Network Types:** Local Area Network, Wide Area Network, Switching, The Internet, Accessing the Internet

**Internet History:** Early History, Birth of Internet, Internet Today

**Standards & Administration:** Internet Standards, Internet Administration

**Unit – II**

**Protocol Layering:** Scenarios, Principles of Protocol Layering, Logical Connections

**TCP/IP Protocol Suite:** Layered Architecture, Layers in TCP/IP Protocol Suite, Description of each Layer, Encapsulation & Decapsulation, Addressing, Multiplexing & Demultiplexing

**The OSI Model:** OSI vs TCP/IP, Lack of OSI Model's Success

**Using Networking Commands:** ping, ipconfig/ifconfig, telnet, traceroute, ftp

**Learning Resources**

1. Data Communications and Networking, 5<sup>th</sup> Edition, Behrouz A. Forouzan, McGraw Hill Education (India) Edition-2013.
2. [https://onlinecourses.nptel.ac.in/noc18\\_cs38/preview](https://onlinecourses.nptel.ac.in/noc18_cs38/preview)