

Relevant Course : loosely organized along the Internet protocol stack

Relevant Department : Computer Science Engineering

Relevant Semester : 3 to 8

Prerequisite : Data Structures and Algorithms

The content of the course is loosely organized along the Internet protocol stack. The course will cover all the five layers of the stack: Physical, Data-Link, Network, Transport and Application layers in depth. Actual content as covered as part of the layers is detailed below. Where necessary, the principle behind the concepts, the thought process that goes behind along with real-world examples are emphasized. Plenty of practice problems to help you apply what you learn.

Course Content

1. Introduction, history and Layering
2. Physical Layer: Theory, Encoding techniques
3. Link Layer: Framing, Error detection and recovery, Reliability, Multiple Access, Ethernet, Token Ring, Switching
4. Network Layer: Addressing, Routing, IP
5. Transport Layer: Reliability and Congestion Control
6. Application Layer: DNS, Web/HTTP, Email, FTP

The Computer Networks course require that you watch **VIDEO LECTURES** of the material, **BEFORE** the interactive session. This is **MANDATORY**. The interactive session will involve Q&A as well as problem solving. You have been provided a login on <http://bodhitree3.cse.iitb.ac.in/> which has the videos. If you have trouble accessing this, write to bodhitree@cse.iitb.ac.in with the subject line "[QEEE: BodhiTree Login Issue]".