

CS306: Computer Networks

Instructor: Mahavir Jhawar. Office # 310, Science Block. mahavir.jhawar@ashoka.edu.in.

Teaching Assistant: Koushik Varma

Course Description:

- Data communication fundamentals: Channel characteristics, transmission media, modulation.
- Direct Link Networks: Encoding, synchronization, framing, error detection, reliable transmission, multiple access media, local area networks (LANs), MAC protocols, Wireless networks.
- LAN Extension: Switches, packet switching.
- Internetworking: Routers, the Internet Protocol, routing problem.
- End-to-end Protocols (transport layer protocols): UDP, TCP.
- Application-level protocols: HTTP, FTP, SMTP, DNS, Socket Programming

Course Format: In addition to the two 90-minutes weekly lectures, the course will also have a mandatory 60-minute session per week. A regular 60-minute slot will be decided in the first week of the course. This session will be used primarily to hold weekly test and to enforce concepts and techniques learned in class.

Textbook: The following books can be used to supplement class lectures and handouts:

- **Computer Networking: A Top-Down Approach.** James F. Kurose and Keith. W Ross. Pearson Publishers.
- **Computer Networks: A Systems Approach.** Larry L. Peterson and Bruce S. Davie. Morgan Kaufmann Publishers.

Grading: The rubric to calculate your grade in this course is given in Fig. 1.

Evaluation Type	Weightage	Letter Grade	Percentage Bracket
Mid Term	20%	F	<40
Assignments	60%	D-	40-44
Final Term	20%	D	45-49
Grading Policy		D+	50-54
		C-	55-59
		C	60-64
		C+	65-69
		B-	70-74
		B	75-79
		B+	80-84
		A-	85-94
		A	>94

Figure 1: Grading Rubric

“Assignments” - will include all or some of the following: theory/programming home work, in-class quizzes, weekly in-class tests and course project.

Late homework policy: Late or improperly submitted homework will not be accepted. If you know in advance that you will be unable to submit your homework at the correct time, you must make special arrangements ahead of time. Theory assignments must be written neatly and well organized. If its not readable, it wont be graded. You should strongly consider starting with a rough draft, especially on problems requiring a proof. You might consider taking the opportunity to learn LATEX.

Academic dishonesty: Many students find it helpful to consult their peers while doing assignments. This practice is legitimate and to be expected. However, it is not acceptable practice to pool thoughts and produce common answers. To avoid this situation, it is suggested that students not write anything down during such talks, but keep mental notes for later development of their own. Students who allow their files or assignments to be copied are as guilty of academic dishonesty as those who copy and will be treated accordingly. Major occurrences of academic dishonesty, such as the submission of work that is not the students own, will be dealt with according to the Ashoka University’s academic honesty document.

How much work is expected: The amount of work will vary, depending on your background and the ease with which you follow mathematical ideas. However, 10-12 hours per week is a good guess.