

*Communication Networks: Tech/Arch/Protocol*

**Instructor:** Dr. Scott Nettles

**Course Description:** This is an introductory course in Computer Networking. It covers all basic components of modern networks, including: link level technologies such as Ethernet, token rings, and wireless Ethernet; switching technologies such as bridges and ATM; internetworking including IP; the transport layer, including TCP and RPC; and congestion control. Time permitting we will also consider security, quality of service, high-performance networks, and/or multimedia. Although IP and TCP are primary examples used in the course, it is NOT a course on TCP/IP!

**Syllabus:** No knowledge of networking is assumed, but students are expected to have a good understanding of computer systems and algorithms. There will be several tests and a final project. Students will have the option of programming a significant network protocol for this final project, but this is not required, and in general, no programming is required for the class. However, students will achieve maximum benefit if they do the programming project.

Despite the relatively light prerequisites, this is a graduate-level course about a very technical topic. My experience is that students who have both strong technical abilities AND significant backgrounds in computer science and engineering do best in this class and do not consider the class to be overly difficult. If you have both a weak background and are uncertain of your technical abilities, I encourage you NOT to take this class. In the past, I have found that a significant number of students are not able handle the material, and thus receive poor grades. If you are uncertain of your ability to do well, please leave the space open for students who will do well.