CSE 4905/5600-002: Networking and Distributed Systems Laboratory

Course Information

Time and location: Wed.: 3:30pm-4:45pm, ITEB C45
Jun-Hong Cui (jcui@engr.uconn.edu)
Instructor: Office: ITEB 267
Phone: (860) 486-8951
Instructor office hours: By appointment
Teaching assistants:
So Le (sonle@engr.uconn.edu)
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Teaching assistant office hours: TBD

Objectives

In this class, students will learn how to put "principles into practice" via well designed hands-on-networking labs, accompanied by lectures (based on needs). The class will cover router and end-system labs in the areas of single segment IP networks, multiple segment IP networks and static routing, dynamic routing protocols (RIP, OSPF and BGP), LAN switching, transport layer protocols: UDP and TCP, NAT, DHCP, DNS, and SNMP. State of the art Cisco routers will be explored in the class.

Upon successful completion of the class, students will gain a deep understanding of complex networks including network architectures, protocol design and system implementation. Students will accumulate valuable network system experiences which are highly demanded in advanced networking studies and research as well as industry job market.

Course Prerequisites

- CSE3300 (245), Computer Networks and Data Communications, or equivalent, and permission of the instructor.

Textbook

Class Meetings

The labs are due at a rate of roughly **one lab every two weeks**. A short pre-lab Q&A and lab report are required for each lab. These labs will be done in a networked lab setting consisting of two racks of equipment. Each rack has 4 Cisco2600-family routers, 4 hubs, and 4 Linux hosts.

We will meet once a week (Wed., 3:30pm-4:45pm, in ITEB C45). In each of the class meetings, either the instructor presents some background knowledge for the labs (based on needs), or we form as a group to discuss progress, problems encountered, successes achieved, etc.

Because this course is largely self-directed, self-discovery lab work, **you will need to be motivated, conscientious, and organized in order to complete this course successfully.** Moreover, the labs are self-paced, and you will do them in the lab at a time of your own choice. TAs will arrange for times to be in the lab and help you if needed. See their office hours at the beginning of this syllabus.

Lab Location

ITEB C45: Room 45 at the concourse level of the ITE Building. You will need the combination to the lab, which can be obtained from the instructor when you show up in the first class. Please carefully follow the instructions to well use and maintain the lab.

Useful Links

- [A.Rodriguez, J. Gatrell, J. Karas, R.Peschke. TCP/IP Tutorial and Technical Overview, IBM Redbook](#) (HTML, PDF)
- [Network Sorcery](#)
- [GNU Zebra Manual](#)
- [Full Standard RFCs](#)
- [All RFCs](#)
- [FreeBSD Man Pages](#)

Grading

There are 6 labs for this course. There are NO exams. The labs are fun and challenging, and with effort can be done well. If you put in the time to do the labs, do them well, and do them on time, you will get a **GOOD** grade in this course. Lab reports will be graded.
The pre-labs will not be graded but will be checked to make sure you have made a reasonable effort. You can also do one optional lab for extra credits.

**Late Policy**

No excuse (except doctors’ written approvals) will be accepted. Lab reports handed in late will **lose 10% daily** of the maximum possible credit.

**Academic Integrity**

We will follow the [University Policy on Academic Integrity](#) regarding any cheating and plagiarism. Take the time to familiarize yourself with the contents of this page, as you are responsible for its contents.