

**NYU**TANDON SCHOOL
OF ENGINEERING

Department of Electrical & Computer Engineering
ECE–GY 5373: Internet Architecture & Protocols – Syllabus

Fall 2019
Wednesday, 3:20 pm – 5:50 pm

Instructor: Shivendra Panwar, Course wiki site: <http://hyperion.poly.edu:8080/wiki>

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Office: 370 Jay Street, 9th floor

Office hours: Wednesday 5-7 pm, Thursday 5-7 pm, and Monday 5-7 pm

Office phone: 646-997-3740

Lab Instructors: assigned to each lab session; lead lab instructor, Muhammad Affan Javed (“Affan”), maj407@nyu.edu.

Overview: This course introduces basic networking technologies and protocols in a set of lectures and laboratory experiments. It covers the following topics:

- Data link layer protocols: Ethernet, PPP, IEEE 802.11.
- The Internet Protocol Suite: IP, ARP, RARP, ICMP, IGMP, UDP and TCP.
- LAN Interconnection: Bridges (spanning tree algorithm), Routers, Gateways.
- Application protocols: FTP, SMTP, HTTP, DHCP, SNMP.
- Ping and traceroute programs.

Course Prerequisites: Students must have completed ECE-UY 3613 (Communication Networks) or equivalent undergraduate course.

Textbook

TCP/IP Essentials - A Lab Based Approach, by S. Panwar, S. Mao, J. Ryoo, and Y. Li
Cambridge Press, ISBN-10: 052160124X or ISBN-13: 978-0521601245.

- This book will also be used as the instruction book for the labs.
- Each student is required to have his/her own copy of the textbook.

Laboratory Description: A telecommunication networks laboratory, located in LC-004, has been set up to provide the students with basic equipment such as HP PCs running the Linux Ubuntu 14.04, Ethernet Local Area Networks (LANs), Ethernet hubs, router/bridges (Cisco), and also the associated software. Other equipment may be added to this list based on availability and need.

Grading & Exams

- Midterm exam: 30%
- Final exam: 40%
- Labs: 20%
- Quizzes: 10%



- The Instructor reserves the right to change the weightages above

Exam type: open-book with printed textbook, lecture slides, any hand-written notes.

Course Work

All students are required to have access to the [NYU Classes](#) website for course logistics and content: announcements, homework, solutions, class notes, etc. **Note** lab reports are assigned and collected by lab instructors from each lab session.

In addition to lab report assignments, there will be four sets of homework questions provided as study reference. Homework questions will not be graded, but solutions will be made available.

Collaboration

Students are encouraged to discuss the labs, and homework with each other. However, except for team projects, your written submission, lab reports and exam papers, must be your own work. The first violation of this policy will result in zero point on that assignment and a reduction in your final grade (for example, from B+ to B). A second violation will result in an F grade. For additional information see [NYU Academic Integrity Policy](#).

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