



NEW YORK CITY COLLEGE OF TECHNOLOGY

THE CITY UNIVERSITY OF NEW YORK

Department of Computer Engineering Technology

300 Jay Street, Brooklyn, NY 11201-1909

EMT2455: Data Communications (Sections D442 and E355) - Fall 2013

Syllabus

General Information

Instructor: Prof. Benito Mendoza, PhD

Section D442: Thursday 2:30pm - 5:00pm

Section E355: Friday 6:00pm - 8:30pm

Office: V614

Office Hours: Wednesday 12:00- 1:00, Friday 10:00-11:00, or by appointment.

Email: bmendoza@citytech.cuny.edu

Phone: 718-260-5885

Website: <http://openlab.citytech.cuny.edu/members/bmendoza/>

Prerequisite Courses: EMT1250 and EMT2370

Additional Suggested Reference Book:

- [CompTIA Network+ N10-005 Authorized Cert Guide. Kevin Wallace. Pearson, 2011, ISBN-10: 0789748215](#)
- [Networking Essentials, 3/E. Jeffrey S. Beasley, Piyasat Nilkaew. Pearson, 2013, ISBN-10: 0789749033](#)

Required Material



LabSim Title: Network Pro
(Network+ N10-005)

Exam#: N10-005

ISBN#: 978-1-935080-43-5

Course Overview

This course introduces the foundations of data communications with applications in engineering technology. It provides a basic understanding of data communication systems and practical examples of communications networks. Topics include core network concepts, standards, physical layer propagation, a small Ethernet PC network, other LAN technologies, Wide Area Networks (WANs), TCP/IP internetworking, security, network management and systems administration, and network applications for computer-based control of devices. In particular, this semester will focus on the content required to obtain the **CompTIA's Network+** and **TestOut's Network Pro** certifications.

Course Learning Outcomes

Upon completing this course, the learner will be able to meet these overall objectives:

- Identifying network cable and network types
- Identifying common network standards
- Selecting and installing network interface cards
- Identifying wired and wireless network components
- Setting up a wired or wireless network
- Managing static and IP addressing
- Managing network protocols
- Configuring network security
- Managing network traffic
- Configuring remote access to a network
- Troubleshooting common network issues

The purpose of the course is to provide the student with the equivalent knowledge of an entry-level network administrator with 9-12 months of experience.

About the Certifications

The purpose of a networking certification is to validate and demonstrate that the recipient has the required networking skills and experience to manage a basic network infrastructure. This course meets the specification of two industry certification programs:

- [TestOut's Network Pro](#) certification measures the student's ability to perform real-world job skills using the Windows operating system and common networking hardware.
- [CompTIA's Network+](#) certification is an international vendor neutral certification with a broad based knowledge base. Many other vendor-specific certifications require Network+ certification (or its equivalent) as a foundation.

Prerequisites

The knowledge and skills that a learner must have before attending this course are as follows:

- Knowledge of PC hardware installation and configuration.
- Knowledge of using and administering a Windows client computer.

Grading

Online home assignments: 50%

- Quizzes: 25%
- Labs: 25%

In-class assignments, labs, and exams: 50%

- Networking Labs: 15%
- In-class quizzes: 15%
- Mid Term Exam: 10%
- Final Exam: 10%

Reading Assignments

- There will be a take home reading assignments every week. The reading assignments will be evaluated with the corresponding online take home quizzes and labs (from TestOut LabSim).
- The student can answer the quiz with open notes at home. Every quiz has to be completed by Thursday night. The minimum pass grade is 80. The student has as many as needed attempts to pass the quiz. The system will take the average score from those attempts as final grade for the quiz.
- **The online labs have to be successfully completed in order to have access to the labs in the classroom.**
- **You have to pass all the quizzes to have opportunity to take the Mid Term and the Final Exam; the minimum pass grade for those quizzes is 80%.**
- **If for any reason you miss a class, it is your responsibility to complete the corresponding the online reading assignments, quizzes and labs.**

In-class Exams

- The Mid Term exam will cover modules **1 to 5 from LabSim Network Pro** training material
- The final exam will be a practice test covering all the content expected in a real Network Pro or Network+ exam.

In-class Networking Lab Assignments

The in-class laboratory work has to be completed in the classroom time. No late submissions. Lab assignments are graded on a scale from 0 to 3 according to the following criteria:

Criteria	Grade
Successfully completed the lab assignment	3
Made a legitimate attempt to complete the lab assignment	2
Attended the lab, but made no effort to complete the assignment	1
Did not attend the lab	0

Technology Prerequisites

1. You must register for the CUNY Portal, <http://www.cuny.edu>
2. You must enter your current/correct email address in Blackboard
3. You must have access to and be able to use the Netscape and/or Internet Explorer browsers versions 4.0 or above.
4. You will need an email account and must be comfortable using it.
5. You need access to a computer with at least 128MB RAM and an Internet connection via a minimum of a 28.8 modem preferably high speed Internet.

Notes

1. The instructor reserves the right to modify this outline anytime.