

Spring 2020

## IT 120-004: Introduction to Networking Technology

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# IT120 Introduction to Network Technology

## General Information

### Course Description

IT 120 is an introduction to the basics of networking. Topics to be covered include: the layered model, network hardware and technologies, network protocols, wired and wireless networks, and TCP/IP. This is an introductory networking course and is oriented toward freshman and sophomores.

Upon completion of this course, students are able to:

- Evaluate the advantages and disadvantages of various local area networks and transmission media
- Manipulate IP addresses and simulate router operation
- Describe certain application layer protocols and describe how to provide network security

The textbook addresses all of the objectives of the CompTIA Security+ Certification Exam. The purpose of the course is not to prepare you for the exam and you are not required to take it. However, you may be able to pass the exam with some extra preparation.

### Instructor

Joan Kettering

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Office Hours: Monday and Thursday 2:00 – 4:00 and by appointment

### Resources

Textbook: Meyers, Managing and Troubleshooting Networks (5th Edition), McGraw Hill, 2018  
ISBN-13: 978-1260128505 ISBN-10: 1260128504

An e-book is available from the bookstore, from the publisher at

<https://www.mhprofessional.com/9781260128505-usa-mike-meyers-comptia-network-guide-to-managing-and-troubleshooting-networks-fifth-edition-exam-n10-007-group>, or from Amazon.

The previous (fourth edition) of the textbook is similar, but it renumbers some chapters. The fifth edition is recommended, but you can probably get by with the fourth edition. The associated lab manual and CD are not required.

The class web page is on Canvas. (<http://canvas.njit.edu>) Notes, labs, homework assignments and solutions will be posted on the web page.

## Grading

Your term grade will be based on exams, quizzes, lab reports and homework.

Midterm	23%	One 230 point exam
Final	24%	One 240 point exam
Quizzes	20%	2 quizzes, each worth 100 points
Labs	5%	10 labs at 5 points each
Practical Exam	1%	1 lab-based exam worth 10 points
Homework	27%	9 homework assignments at 30 points each

Grades are assigned based on the sum of the points you earn (1000 total points).

A:	Greater than or equal to 900 points
B+	850 – 899 points
B:	800 – 849 points
C+	750 – 799 points
C	700 – 749 points
D	600 – 699 points
F:	0 - 599 points

I may curve up when assigning grades, but I will under no circumstances curve down. For example, you may earn an A if you have 898 points, but you will not earn lower than a B+ if you have 850 points. I will not assign incompletes unless there are extraordinary circumstances.

## Exams and Quizzes

The midterm will be during a regular class period and the final will be during Finals Week. The final is not cumulative and covers the material from the midterm until the end of the class. Quizzes will be given during class and will last about 45 minutes. The purpose of the quizzes is to force you to keep up with the material and to assess your readiness for the midterm and final. Make-up exams and quizzes will not be given unless there is a reason for missing the scheduled time beyond your control.

Exams and quizzes will be closed book and closed notes, but you will be given some reference material. Calculators are permitted, but you may not use your phone or any networked computing device as a calculator.

## Class Preparation and Meetings

PowerPoint notes and other resources will be available on the class Canvas page before each class. I expect you to do the assigned reading and review the notes *before* you come to class. You will get more out of the class if you have spent some time thinking about the material in advance. This course covers a lot of material quickly. Don't let yourself get behind!

Attendance is highly correlated with good performance in the class, so I will record attendance for every class. Up to 20 points of extra credit are available for attendance as shown below.

Miss 0 - 5 classes	20 points
Miss 6 - 10 classes	10 points
Miss > 10 classes	0 points

Absences may be excused for athletics, religious holidays, illness, court, military obligation or family emergencies if you contact me before the missed class.

I expect you to be on time.

## **Homework**

Homework is due almost every week. Most homework problems will be paper-and-pencil, but some problems may require computer use. Solutions will be provided on the class Canvas page.

Unless otherwise specified, homework should be submitted as hardcopy and is due at the beginning of class on the due date. If you cannot attend class, you may submit your homework via e-mail no later than the beginning of class on the due date. I strongly prefer hard-copy homework, so please do not e-mail your homework if you plan to come to class. If you submit homework by e-mail, you should get an acknowledgement from me within 24 hours. Follow up if you do not.

Late homework will not be accepted in any circumstances after the solutions are posted, which is usually the day after the due date. Late homework may be accepted before that if it is late for a reason beyond your control.

Homework is a large component of your semester grade. I weight homework so heavily because:

- It forces you to work on this class every week
- It is your opportunity to learn how to do the questions that will be on the quizzes and exams
- You should be able to earn most of the points on every homework set, because you have a whole week and full access to the text, class notes, and me.

The downside of heavily weighing homework, of course, is that not turning in homework will significantly hurt your semester grade.

You may, if you wish, work on homework in a study group. Each person in the group must turn in a homework paper and each paper must have a note indicating who is in the study group. You will have to do problems similar to the homework on the tests and quizzes individually, so just copying someone else's solution without understanding will hurt your test and quiz grades.

## **Labs**

This class meets in a laboratory. Do not bring food or drink into the lab.

We will do several hands-on labs during the semester. Some labs will use only the computers and some will use the switches and routers. Read each lab ahead of time, perform each lab and turn in the worksheet before you leave class on the day of the lab.

There are 11 labs in the semester, but I assume only 10 are submitted for grading purposes. This means that you can miss one lab without affecting your semester grade. If you prefer, the eleventh lab can be used for extra credit.

The lab will be open for a few hours a week (times to be announced) so you can make up a missed lab or use the equipment for your own project.

There will be a hands-on practical exam worth 10 points near the end of the semester. The exam will be open book and open notes, but you will have a limited amount of time.

## **Honor Code**

Academic Integrity is the cornerstone of higher education and is central to the ideals of this course and the university. Cheating is strictly prohibited and devalues the degree that you are working on. As a member of the NJIT community, it is your responsibility to protect your educational investment by knowing and following the academic code of integrity policy that is found at:

<http://www5.njit.edu/policies/sites/policies/files/academic-integrity-code.pdf>.

Please note that it is my professional obligation and responsibility to report any academic misconduct to the Dean of Students Office. Any student found in violation of the code by cheating, plagiarizing or using any online software inappropriately will result in disciplinary action. This may include a failing grade of F, and/or suspension or dismissal from the university. If you have any questions about the code of Academic Integrity, please contact the Dean of Students Office at [dos@njit.edu](mailto:dos@njit.edu)

## **Modifications to this Syllabus**

Students will be consulted about any changes to the course policies in this syllabus.

The schedule is a guide. Topics will be covered in the order specified, but may move to either the class before or the class after if the class moves faster or slower than I expect. I do not expect the exam, quiz, and homework due dates to change unless we miss a class. The latest schedule information will be on the class Canvas page.