IT 120 - Introduction to Networking Technology
Course Syllabus

Instructors

Section 001

Lori Watrous-deVersterre

Office: GITC 3803 Suite Room 3807

Phone: 973.596.5688

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Office Hours:

- See Canvas course information for standard open office hours, or by appointment

Section 003

Omar A. Woodruff

Office: TBD

Phone: 908-868-3583

Email: oaw6@njit.edu

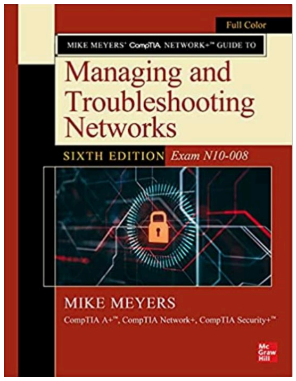
Office Hours:

- Monday: 8:30 am - 4:30 pm (remote only)
- Tuesday & Thursday: 10 - 11:30 am, 3 - 5 pm

**subject to change (typically with advance notice)*

Please put IT 120 and the course section in the subject of your email. This will ensure we respond more quickly to your email.

Text: MANAGING AND TROUBLESHOOTING NETWORKS, 6th edition, Mike Meyers, McGraw Hill, 2022, ISBN: 978-1-264-26903-7



Note: 1st 2nd 3rd & 4th editions of this textbook should not be used. The 5th edition has significant differences, and the order of chapters are different and not recommended.

The 6th edition is the version used in class.

Tutoring: See Canvas for ACM and YWCC mentoring programs by visiting https://computing.njit.edu/tutoring.

Canvas: Additional material and resources is found on the Canvas class website, (https://canvas.njit.edu). It will be updated as the course progresses and contains the most recent information.

Schedule

Section 001:

- Mondays and Wednesdays
- 8:30am - 9:30am
- GITC 1202

Section 003:

- Tuesdays and Thursdays
- 8:30am - 9:30am
- GITC 1202

Course Description: IT 120 is an introduction to the basics of networking in a modern operating system environment. Emphasis is placed on the application and management of networking technology. 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 sophomore

Prerequisites: None **Credits:** 3

Calendar

Day	Topics	Exams
Week 1 **September 2, 4**	**Layered Model** • Functions of the layers • Protocols • Binary and Hexadecimal & Boolean Logic	
Week 2 **September 9, 11**	**Physical Layer** • Repeaters & Hubs • Topology • Installing a physical network • Cabling	
Week 3 **September 16, 18**	**Data Link Layer** • CSMA/CD • Ethernet Basics • Modern Ethernet • MAC addresses • Bridges	**Quiz 1: Layered Model & Physical Layer**
Week 4 **September 23, 25**	**Data Link Layer** • CSMA/CA • Wireless networks • Wireless access points • 802.11 WiFi	
Week 5 **September 30, October 2**	**Data Link Layer** • Wide Access Networks • Modems, DSL, Cable Modems • Satellite, Wireless, Fiber • Using remote access	**Quiz 2: Data Link Layer**
Week 6 **October 7, 9**	**Network Layer** • IP addresses and dotted decimal • ARP • Class-ful IP Addresses and masks	
Week 7 **October 14, 16**	**Network Layer** • Static, Dynamic, & Private IP addresses • DHCP • MTU and Fragmentation • Subnetting • CIDR Class-less IP Addresses	**Quiz 3: Masks & Network Layer**
Week 8 **October 21**	**MIDTERM October 27th**	**In-Person Exam, Closed book** (Makeup Exams available)
Week 9 **October 28, 30**	**Network Layer** • NAT • Routers • Forwarding • Routing	

LAST DAY TO WITHDRAW November 10th			
Week 10 **November 4, 6**	**Network Layer** • IPv6 IP Addresses • Using and moving to IPv6		
Week 11 **November 11, 13**	**Transport Layer** • Ports • TCP and UDP	**Application Layer** • DNS • Sockets • HTTP	**Quiz 4: Subnetting & IPv6**
Week 12 **November 18, 20**	**Networks** • VPN • Virtual LANs • Multilayer Switch	**Security Standards** • Security components & standards	
Week 13 **December 2, 4**	**Security** • Managing Risk • Protecting Your Network		**Quiz 5: Transport & Application Layers**
Week 14 **December 9, 11**	**Data Centers**		
Week 15 **December 15- 20**	**FINAL EXAM**		**In-Person Exam, Closed book (NO MAKEUP EXAMS WILL BE GIVEN!!!)**

*Note: Schedule is subject to change. Refer to Canvas for the most recent information.

Grading Policy

Final grades will be based on:

Midterm	24%	*240 points*
5 Quizzes	5%	*50 points*
Final	26%	*260 points*
Labs	10%	*100 points*
Homework (5 assignments)	25%	*250 points*
Current Events	10%	*70 points to present* *30 points to provide constructive criticism*
Total	100%	*1000 points*

A	*900 -1000 points*
B+	*850 – 899 points*
B	*800 – 849 points*
C+	*750 – 799 points*
C	*700 – 749 points*
D	*600 – 699 points*
F	*0 - 59 points*

Grading Policy (cont.)

Grades are based solely on the points you earn. 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.

Assignments (Homework)

Homework for this class consists of 5 homework assignments. Their purpose is to help you keep up with the material and assess your readiness for the midterm and final.

Homework is usually due at midnight (**11:55pm**) on the due date specified on the schedule. It is submitted via Canvas electronically. Late homework **WILL** be accepted for partial credit, with 10 points from the original grade removed.

In most cases, homework is graded online and returned to you electronically via Canvas with comments and the grade posted on Canvas. I will also post the solutions online via a PDF document. Submit homework as a **Word** or **PDF** document.

Handwritten assignments are not accepted except when outlined in the assignment.

Project (Current Event Presentation):

A **current event**, presented by each student, on changes in networking technology is required. This broad topic can cover protocols, hardware, or applications that are specific to networking technology. The assignment is designed to have you research and locate a recently published, professionally written, article that is relevant to networking technology today.

The presenter must email to the instructor **at least 4 days** prior to the start of class with a link to the article, a 1-2 paragraph summary of the article and any material they will use to describe the technology and query the class' response. The purpose of this assignment is to give you practice in presenting technical information in a clear and simply explained manner that can be disseminated to both technical and non-technical audiences. This is a crucial skill for an information technology professional to master in order to be effective in the business world. Further project details are provided in class and on Canvas.

Participation

Unlike most courses, I do not take attendance. Life happens, and we all learn in different ways. It is up to your discretion whether you come to lectures or not. I **strongly encourage** you to attend lectures and/or office hours, but they are not strictly mandatory. In-person presentations and quizzes **ARE** mandatory, however.

For quizzes, they will be in-person and on paper, so if you miss one, you may ask for a make-up quiz during office hours up to one week after the initial quiz.

For current event presentations, constructive criticism can be done online, and their deadline for submission is the end of that lecture's week. So if you miss a presentation, you can still get full points.

The Golden Rule: I will work with you if you work with me. We're all professionals here. :)

Academic Integrity Policy

"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"

All your assignments must constitute original work. These assignments may **NOT** be done in collaboration with anyone else (unless otherwise approved). No credit will be given for any assignment that is copied—in part or in its entirety—from another person. **Both people involved will receive no credit.**

Note, however, that you may "talk" about assignments with each other, but such discussions must remain at a conceptual level. In summary, keep in mind:

- Do NOT ask to see another person's assignment, particularly a finished assignment.
- Do NOT pass your assignment around to other members of the class.
- Do NOT submit duplicate assignments. Even partially duplicate assignments will NOT be accepted.
- If the instructor is at all **uncomfortable about the originality of your work**, no credit will be given.
- Do NOT submit an assignment used for previous assignments in this or other courses.

TURNITIN Policy

NJIT uses Turnitin.com, a service that helps prevent plagiarism on student papers. I will be using the Turnitin.com service at my discretion to determine the originality of student work. If I submit your work to Turnitin.com, it will be stored by Turnitin.com in their database as long as their service remains in existence. If you object to this storage, **you must let me know no later than two weeks after the start of this semester.** Note, I may utilize other services and techniques to check for plagiarism and inappropriate AI usage.

AI Usage Policy:

Policies for the usage of AI language models tools, such as ChatGPT, to generate new content are as follows:

- You must use AI-assisted tools for learning responsibly alongside your critical thinking and writing skills

- To generate content as a starting point to inform **your** work, brainstorm ideas, and prepare notes for **your** writings just as you do with your textbooks, library resources, and web materials.

- AI-generated text in submitted assignments must use quotation marks and be appropriately cited.
- Make sure the information provided is factual

- Such tools **must not write a significant portion** of your essays or assignments. This behavior is considered cheating.

Student Absences for Religious Observations

NJIT is committed to supporting students observing religious holidays. Students must notify their instructors in writing of any conflicts between course requirements and religious observances, ideally by the end of the second week of classes and no later than two weeks before the anticipated absence. All instructors must include a reminder on the course syllabus about this notification process.

All instructors are required to provide academically reasonable accommodations, allowing students to complete missed assignments, exams, quizzes, or other coursework within the term. Instructors are encouraged to consider the NJIT religious holiday calendar and exercise cultural sensitivity when scheduling assessments or major assignments. You may find the NJIT religious holiday calendar at https://www.njit.edu/inclusive/religious-and-spirituality-resources.

All instructors must ensure that students are not penalized for properly documented absences and maintain confidentiality regarding religious observances. For questions or additional guidance, please review the NJIT religious observances policy at https://www.njit.edu/registrar/njit-policy-student-absences-religious-observances or contact the Office of Inclusive Excellence at inclusiveexcellence@njit.edu.