Course Number: CS656 **Course Title:** Internet and Higher-Layer Protocols

Instructor: Dr. Lay

Email: lay@njit.edu

Office: GITC 4401

Phone: 973-596-2654

Office Hours: Check Canvas after the semester begins

Course Description

This course studies the architecture and protocols of modern computer networks. Topics to be covered include addressing, performance measurement metrics, application-layer protocols, transport-layer protocols, networking-layer protocols, link-layer protocols, and wireless and mobile networking. Upon successful completion of the course, students will have gained a deep understanding of the fundamental concepts and principles of designing and implementing modern computer networks.

Textbook and Materials

Kurose, J. & Ross, K. *Computer Networking: A Top-Down Approach*. Pearson, 7th edition, 2016, ISBN: 978-0133594140 (You can also use the 6th edition; ISBN: 978-0132856201)

Attendance & Class Participation:

This is one of the core courses for CS program. Students are strongly encouraged to attend every class. Significant constructive class participation will heavily impact assignment of final grades.

Ethics and Integrity:

Each student is expected to write her/his own assignments. Students may work in groups to discuss the issues, but when it comes time to write, students MUST submit their own work product.

Cell Phone and Laptop PC Policy

- 1. Do not use your laptop PC during the quizzes and exams.
- 2. Turn cell phone to silent mode or vibration mode during the class
- 3. Turn off the cell phone during the quizzes and exams.

Quizzes:

After each class, a quiz may be given for the materials taught last week and before. There is no make-up for quizzes. There will be 10 quizzes, Types of questions: True/False, Multiple choices, Fill in the blanks, and calculations.

All quizzes are closed note and closed book, only scientific/engineer calculator is allowed.

NO makeup for any reason. If your absence is legitimate, you will need approval from the Dean of the Students. And only so I will waive the quiz to be counted into total grades.

How to prepare quizzes:

To prepare the quizzes and exams you will need to read textbook, at least once. Power-point slides and the notes below slides are good summaries of textbook. Make sure you go over the definition of "Key Terms" at the end of each chapter.

Grading:

Graded Tasks	Points
Labs	100
Homework	100
Quizzes	150
Project	100
Midterm Exam	250
Final Exam	300
	Total: 1000

The final grade will be calculated based upon the following points:

Grading Policies

Grading Policies A 85% and above B 65% and above (B+ 75% and above) C 45% and above (C+ 55% and above) F otherwise

Extra credit: Often some students approached me for extra credit, or extra assignments when they have not done well in the exams. Here I want to set a rule: the extra credit, or extra assignments will only be considered for students who have actively participated in the classroom and Piazza discussions. That means you answer my questions, you ask me questions, or answer questions from other students.

Schedule:

Note: schedule may be fine-tuned with additional topics of interest Week 1,2: CH1 Week 3,4: CH2 Week 5,6: CH3-A Week 7: Midterm Week 8,9: CH3-B Week 10,11: CH4 Week 12,13: CH5 Week 14,15: CH6

Lab Report:

Recording: You will need to record all your terminal activities into a video, convert it to a MP4 file. You should include your voice while you record it so make it easy for me to understand what you are doing with command lines.

Only if you don't have a preferred software for this purpose, it is suggested that you use Zoom or Microsoft Teams, host a meeting, then record it. For this reason, you are allowed to partner with another class student so you two can join an online meeting, record each other's Lab or Homework activities. But still each student needs to create a MP4 just including the individual work, not a "group" or "team" report.

Requirements:

- 1. MP4 file format only. All other formats are unacceptable.
- 2. State the name of you and the name of the homework.
- 3. Save the file name as FirstName.LastName.Lab##, or FirstName.LastName.HW##
- 4. Upload it to Canvas assignment answer area.

Grading Rubrics

Maximum points Each: 10 0 Grade: MP4 file cannot be played, or no MP4 file or not submitted If MP4 is playable: 20% - Quality of the video and audio 80% – Completeness: the topic. (How many questions have you answered?)

Project: To be determined.