Electrical and Computer Engineering Syllabi   NJIT Syllabi

Fall 2023

ECE 429 - COMPUTER COMMUNICATIONS LAB

Rami Rashid

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Hellen and John C. Hartmann Department of Electrical and Computer Engineering

New Jersey Institute of Technology

ECE 429 Computer Communications Laboratory

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Instructor: Rami Rashid

Email: raa62@njit.edu

Time: Wednesday 6:00-10:00 pm

Class Location: 101 C - FMH Building

Office Hour: Wednesday 5:00-6:00 pm. Any other time, please send me an email

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Prerequisites: ECE 422 Computer Communication Networks

Textbook: No textbook. A Laboratory Manual will be provided

Credits: 2

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Course Catalog Description:

Experiments with different protocols and standards used in the TCP/IP computer communications, including Ethernet/802.3 standard, Address Resolution Protocol (ARP), Internet Protocol (IP), Transport Control Protocol (TCP), User Datagram Protocol (UDP), and others. Exercises with network measurements and virtualization tools, and configurations of some commercial routers are included.

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Syllabus:

- Introduction to Linux
- Chapter 1: Introduction to the Computer Communications Laboratory
- Chapter 2: Tools for Examination of Communication Protocols
- Chapter 3: Communication at Data-Link Layer
- Chapter 4.a: Communication at the Network Layer (Part I)
- Chapter 4.b: Communication at the Network Layer (Part II)
- Chapter 5: Configuration of Cisco 891 Routers
- Chapter 6: Beyond the Application Layer: Socket Programming
- Final Exam
- Final Project

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Grading Policy:

- Lab Reports and Performance   40%
- Quizzes   30%
- Final Exam   20%
- Final Project   10%

Attendance is mandatory to receive the credits

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Honor Code*:* Any violation of the NJIT Honor Code will be brought to the immediate attention of the Dean of Students.