
Course Information

- Instructor: Aleksandar Kolarov
- Email: aleksandar.kolarov@njit.edu
- Office Hours: Tuesday 5:30-6:00 pm, 326 ECEC (x5205)
- Required Text: *Data Networks*, by D. Bertsekas and R. Gallager, Prentice-Hall, 1992.
- Grading: The course grade will be based on 5 problem sets (total 5%), a midterm (40%), and a final exam (55%).
- Midterm Exam: 10/22/2013
- Final Exam: The final exam will take place during finals week.
- Problem sets are due at the beginning of class. As a general rule the penalty on a homework turned in up to a week late will be 50% and no homework will be accepted beyond 1 week past its due date. Students may discuss the problem sets with one another, but **solutions should be written up separately.**

Course Outline

- Week 1: Introduction to networking and to 7-layer OSI architecture (Chapter 1)
- Weeks 2-3: Physical layer and data link control (Chapter 2, HW set 1)
- Weeks 4-7: Introduction to queuing theory (Chapter 3, HW sets 2 and 3)
- **Week 8: Midterm exam**
- Weeks 9-11: Multiple access schemes (Chapter 4, HW set 4)
- Weeks 12-13: Routing algorithms (Chapter 5, HW set 5)

What is ECE783 about?

- Understand the basic principles of networking:
 - Description of existing networks, and networking mechanisms
 - Understanding of networks modeling and analysis tools
- Covers:
 - Terminology, layering concept, physical layer, data link layer, basics of queuing theory, medium access control (MAC), algorithmic aspects of routing, flow control (window/rate control)
- Very limited coverage of higher layers (applications, compression, TCP/IP programming, etc.)