

CS 757

Computer Networks

Instructor: Prof. Jörg Liebeherr
jorg@cs.virginia.edu

University of Virginia

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Contact Information

- **Instructor:** Prof. Jorg Liebeherr, 209 Olsson, 982-2228 (office), jorg@cs.virginia.edu (email).
- **Course hours:** Tuesday and Thursday, 1100-1215, MEC 216
- **Office hours:** Monday 11-12, or by appointment via email.
- **Website:** <http://www.cs.virginia.edu/~cs757/>
 - Download the lecture slides
 - Download handouts, lab manuals, homeworks, etc.
 - Refer to the website frequently

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Prerequisites and Required Skills

- The course does not assume prior knowledge of networking. However, the course will move relatively fast.
- **Expected Skills:** The course is not suited for students without good programming skills (C,C++, Java) and without basic calculus and probability skills.

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Reading

- **There is no required textbook.**
 - There is a set of books put on reserve at the Science and Engineering Library
 - There is an extensive list of research papers
- **If you have not taken a course in networking, the following optional textbooks is recommended:**
 - Computer Networking: A Top-Down Approach Featuring the Internet by J. Kurose, K. W. Ross, 3rd edition, Addison-Wesley 2004.

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Topics

Content

- Review of Important Networking Concepts (1 week)
- Examples of Networks (2 weeks)
 - - Telephone network, IP network, ATM network, switched Ethernet networks
- Overlay Networks (2 weeks)
- Architecture of Packet Switches (1 week)
- Flow and Congestion Control Algorithms (2 weeks)
- Quality-of-Service (2 weeks)
- Multiaccess and wireless networks (2 weeks)

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Evaluation

- 2 Exams (each 25 %)
 - 1st exam: October 5
 - 2nd exam: December 2
- Assignments (10 %)
- Class Participation (10%)
- Project (30 %)

- The assignments are programming assignments or paper reviews
- The project is a group project with a significant software development effort. The project will start after the Reading Holiday and will be due in the last week of classes.

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Honor Policy

- I trust every student in this course to fully comply with all of the provisions of the UVA honor system.
- All alleged honor violations brought to my attention will be forwarded to the Honor Committee. If, in my judgment, it is beyond a reasonable doubt that a student has committed an honor violation with regard to a given exam, that student will receive an immediate grade of 'F' for that exam, irrespective of any subsequent action taken by the Honor Committee.

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Pledge Policy

- You may DISCUSS a homework assignment with anyone in the class. You can discuss what a question means, how you might go about solving it, or even how you did solve it. You can discuss any material from the book or lecture that you consider relevant to the homework with anyone.
- You MAY NOT do any of the following: - LOOK at homework solutions written by anyone in the class. - COPY someone else's code or lab report or lab data, other than your partner's.
- There are no restrictions on what you can discuss with the instructor.
- You do not have to write the pledge on your homeworks, although we will not mind if you do. Whether or not you do write it, we consider the pledge to be implicit when you hand in your homework.

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