

Networks and Internet Programming

Course Outline



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Course Goals

Upon completion of this course, you should be able to:

- Use Java Input/Output streams and Java exception handling.
- Implement practical network protocols, for client and server side, using Java networking APIs.
- Write multithreaded network programs considering the problem of multithreads synchronization.
- Present the final work (project) and make a demo.



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Textbook

- **Java™ Network Programming and Distributed Computing, David Reilly and Michael Reilly, M ISBN: 0-201-71037-4, Publisher: Addison Wesley Professional, 2002.**
- **Java Network Programming, Elliotte Rusty Harold, O'Reilly, Fourth Edition, 2013.**
- **Internetworking with TCP/IP Vol. I: Principles, Protocols, and Architecture, Douglas Comer, Prentice Hall, 4th edition Vol 1 (February 22, 2000).**
- **TCP/IP and Related Protocol, Uyles Black, McGraw-Hill, 1998.**
- **Microsoft Windows 2000 Network and Operating System: Microsoft Press, 2000.**



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Personnel

- Instructor: Eng. Asma Abdel Karim.
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 - Sun, Wed 3:00 – 4:00



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Grading

- Assignments 20%
- Midterm Exam 20%
- Project 10%
- Final Exam 50%



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Academic Honesty

- You are allowed to discuss assignments with other students in the class.
 - Getting verbal advice/help from people who have already taken the course is also fine.
- However, any sharing of code is not acceptable.
 - Under no circumstances may you hand in work done with or by someone else under your own name.



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Course Outline

- Basic Network Concepts
- Java Overview
- Internet Addressing
- Streams
- User Datagram Protocol (UDP)
- Transmission Control Protocol (TCP)
- Multi-Threaded Applications



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