



S-38.188 Computer Networks (3 cr) Spring 2004

Pasi Lassila, Jouni Karvo & Eeva Nyberg

Networking Laboratory

S-38.188 - Computer Networks - Spring 2004

General information

- Mandatory subscription through TOPI

<https://webtopi1.hut.fi>

- Course homepage

<http://www.netlab.hut.fi/opetus/s38188/2004>

- Personnel:

- Lectures:

- Pasi Lassila (e-mail: pasi.lassila@hut.fi)
- Jouni Karvo (e-mail: jouni.karvo@hut.fi)

- Exercises: Eeva Nyberg (e-mail: eeva.nyberg@hut.fi)

Course material

- **Course book:**
 - Larry. L. Peterson and Bruce S. Davie, “Computer Networks: A Systems Approach”, 2nd edition, Morgan Kaufman Publishers, San Fransisco, USA, 2000, 748 p.
 - price: £31.95 (Amazon UK), main building’s book shop may also have it
 - 1st ed. is basically OK, but course requirements based on 2nd ed.
 - updated 3rd ed. is also out now, but course is still based on 2nd ed.
- **Other material**
 - lecture slides delivered as a compendium via Edita
 - lectures also available **electronically** (via the web pages)
 - NOTE ! Printing the material on the university’s printers is strickly forbidden!

3

Lectures & assignments

- **Lectures** (2 hours/week):
 - On Mondays between 14 - 16 in hall S1 (13 times)
 - First lecture: January 19, last lecture: April 19
 - Lectures are given in Finnish
 - slides in English
- **Homeworks**
 - Mandatory!
 - Consists of three parts
 - Done in pairs (pair can not be changed during course)
 - **NOTE!** Last year’s (or earlier) homeworks are not accepted any more

4

Homework schedule

- Homework, part 1
 - will appear Thu, February 5
 - must be returned by Wed, March 10
 - delay measurements over Internet, TCP simulation on paper
- Homework, part 2
 - will appear Thu, March 4
 - must be returned by Wed, March 24
 - “guided tour” of ns2 simulation tool featuring TCP congestion control
- Homework, part 3
 - will appear Thu, March 11
 - must be returned by Wed, April 28
 - independent ns2 work on TCP congestion control

5

Exercise classes

- To be used as “question hours” for doing the homeworks
- Part 1:
 - Wed, February 11 (week 7), at 12-14, hall S5
 - Wed, March 3 (week 10), at 12-14, hall S5
- Part 2:
 - Wed, March 10 (week 11), at 12-14, hall S5
 - Wed, March 17 (week 12), at 12-14, hall S5
- Part 3:
 - Wed, March 24 (week 13), at 12-14, hall S5
 - Wed, March 31 (week 14), at 12-14, hall S5
 - Wed, April 21 (week 17), at 12-14, hall S5

6

Course completion

- To complete the course, you **must**
 - Pass the exam
 - 1st exam on Wed, May 12, at 16 - 19, in halls S2 and S4
 - + two retrial examinations (Sep/Oct 2003, Dec/Jan 2004)
 - **and** make the homeworks
- Grading based both on exam and homeworks

7

Schedule

19.1.	Introduction
26.1.	Link layer review and LAN technologies
2.2.	Interconnecting nets – Internet
9.2.	Routing in Internet
16.2.	IPv6 and Multicast
23.2.	Transport layer in Internet (UDP, TCP,...)
1.3.	TCP congestion control
8.3.	Name service (DNS)
15.3.	Applications (non-realtime and realtime)
22.3.	Network management (SNMP)
29.3.	Security
5.4.	Mobility (Mobile IP, ad hoc nets, WLAN hot spots)
19.4.	QoS in Internet (IntServ, DiffServ)

8