Redes de Comunicação 2021/2022

T00
Course Presentation

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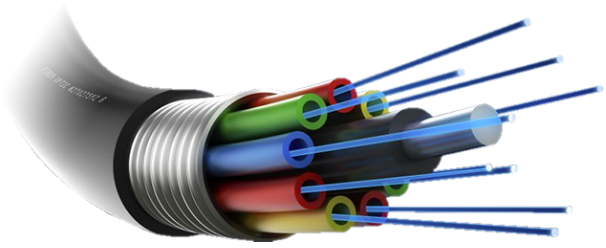
University of Coimbra

Slides adapted from Prof. Jorge Granjal 2020/2021

Outline



Organization

T and TP classes

Vasco Pereira
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PL classes

Karima Velasquez
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Office:

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Contact teachers

- Use your official DEI or UC mail
- In subject refer the name of the course (e.g. "RC")

Challenges!

Is it possible to understand how the Internet works?

The Internet is arguably the largest engineered system ever created by the mankind!
Billions of users connect via laptops, tablets, smartphones, also Internet-connected devices (servers, sensors, web cams, game consoles, etc.)

Are there any guiding principles and principles that can provide a foundation to help us in this process?
The Internet is such a large and complex system!

Are networking technologies and tools interesting and fun to learn and use ?

Course contents

1. Computer Networks and the Internet
2. Application Layer
3. Transport Layer
4. Network Layer
5. Link Layer

Schedule (T, TP and PL)

	T	TP	PL
14-Feb-22	Presentation + IP addressing	IP addressing	Introdução ao GNS3
21-Feb-22	Computer Networks and the Internet	IP addressing + GNS3; Assignment 01	Assignment 01support
28-Feb-22	Application Layer (1)	Delay, loss and throughput; Assignment 02	Discussão da Ficha 1
07-Mar-22	Application Layer (2)	TCP e UDP	Assignment 02 support
14-Mar-22	Transport Layer (1)	TCP vs UDP - Assignment 03	Assignment 03 support
21-Mar-22	Transport Layer (2)	TCP sockets	Assignment 03 evaluation
28-Mar-22	Network Layer (1)	UDP sockets	Assignment 04 support- TCP
04-Apr-22	Network Layer (2)	Test	Assignment 04 support- UDP
11-Apr-22	*Easter holidays*	*Easter holidays*	*Easter holidays*
18-Apr-22	*Easter – 18th is still Easter holidays*	*Easter – 18th is still Easter holidays*	Intermediate project evaluation
25-Apr-22	*Monday – 25th April holiday*	*Monday – 25th April holiday*	Assignment 04 evaluation
02-May-22	Link Layer (1)	Windows and Linux network programming	Assignment 5
09-May-22	Link Layer (2)	IP Subnetting (exercises)	Project support
16-May-22	Reviews	Delay, loss and throughput (exercises)	Final project evaluation

May be subject to changes along the semester

Evaluation Rules

Exams: 11 points (in 20)

- Final Exam: 9 points
- Interim Test: 2 points
- Pass threshold: 40% (of total grade)
- Plagiarism implies exclusion from course (Não Admitido)

Practical component of the course: 9 points (in 20)

- Four (4) projects to be performed individually or in groups of 2 students, total of 4 points (1 point each)
- Practical assignment (individually or in groups of 2 students): 5 points (in 20)
  - Meta 1 (with defense): 0.5 Points
  - Final delivery (with defense): 4.5 Points
- Pass threshold of the practical component (Lab projects + Practical assignment): 40%

Bibliography

J. Kurose and K. Ross, "Computer Networking – a top-down approach", Pearson.

W. Richard Stevens, "TCP/IP Illustrated", Addison-Wesley.

Richard Stevens "Unix Network Programing", Prentice Hall International.

(other documentation will be recommended during the semester)