Comunicações Móveis

1º Semestre, 2024/2025

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Mobile Networks

- Professors
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	Segunda	Terça	Quarta	Quinta	
9:00				CM 04.3.30 dcorujo@ua.pt Daniel Nunes Corujo TP1 (TP)	CM 04.3.31 fontes@ua.pt Francisco Manuel Marques Fontes TP2 (TP)
9:30					
10:00					
10:30					
11:00					
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15:00					
15:30					
16:00				CM 04.3.31 ruilaa@ua.pt Rui Luís Andrade Aguiar TP3 (TP)	
16:30					
17:00					
17:30					
18:00					
18:30					

Planning

- 14 weeks scheduled for theoretical and practical classes
  - Information in elearning…
  - English language in slides
- Each class
  - ~50% of time: Theoretical and preparation for the…
  - ~50% of time: Practical work
- Each practical work
  - A step-by-step guide (with some “thinking” points for students)
  - Last ~10-15min → A quizz about the practical work (Graded!)

Objectives

- Develop concepts associated to different types of mobile networks
  - Overall perspective of different wireless networks
  - Integration into a future vision, with heterogeneous environments.
    - “5G”-alike world.
  - Focus on networking, system and protocol aspects
    - IT-integration aspects mostly in other subject
  - Students should be able to:
    - understand new technologies and concepts of wireless communications;
    - be able to use their knowledge to react to the current changes in wireless networks
    - understand future mobile network integrated systems;

Program

1. Mobile Communications: Multicast, Broadcast, Radio vs IP, Satellite
2. Wireless network models: IEEE802 architecture, Wi-Fi, Bluetooth
3. (Wide) Wireless Sensor networks: ZigBee, LoRa, SigFox
4. Mobile Networks and associated systems
5. Mobile Communications systems evolutions: the Future!

Evaluation criteria

- Theory: 60%
  - Exam at the normal season
  - Final exame (a.k.a. exame de recurso) will contain all subjects as well
- Practical: 40%
  - 25%: Written mini-test about the practical works (21/11)
  - 15%: Practical Quizzes

Organization

- All information to be displyed in e-learning
  - Announcements
  - Classes handoout
  - Practical works
  - Evaluation and grades
- Summaries in paco.