32148 - AXCP - Evaluation of Packet Switched Networks

Coordinating unit: 230 - ETSETB - Barcelona School of Telecommunications Engineering

Teaching unit: Universitat Politècnica de Catalunya

Academic year: 2015

Degree: ERASMUS MUNDUS MASTER'S DEGREE IN PHOTONICS ENGINEERING, NANOPHOTONICS AND BIOPHOTONICS (Syllabus 2010). (Teaching unit Optional) MASTER'S DEGREE IN NETWORK ENGINEERING (Syllabus 2009). (Teaching unit Optional)

ECTS credits: 2,5

Teaching languages: English

Teaching staff

Coordinator: MONICA AGUILAR IGARTUA

Others: MONICA AGUILAR IGARTUA
        ESTEVE PALLARÉS SEGARRA
        ISABEL MARTIN FAUS

Prior skills

General knowledge about communication networks: Internet protocols, mechanisms and algorithms implemented in communication networks. Basic knowledge about Markov processes.

Teaching methodology

This course includes lectures, discussion, exercises and practices in the laboratory.

Learning objectives of the subject

Review of the main concepts about Quality of Service on communication networks.
Evaluate a packet switched network using a fluid flow model with On-Off sources.
Evaluate multimedia services using Reward Markov Chains.
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#### Content

| -Review of the main concepts about Quality of Service on communication networks. | **Learning time:** 62h 30m  
Theory classes: 14h  
Practical classes: 8h  
Laboratory classes: 2h  
Guided activities: 2h  
Self study: 36h 30m |
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| -On-Off sources. Buffer content evaluation using a fluid flow model. Loss probability. | **Learning time:** 62h 30m  
Theory classes: 14h  
Practical classes: 8h  
Laboratory classes: 2h  
Guided activities: 2h  
Self study: 36h 30m |
| -Evaluation of multimedia services using Reward Markov Chains | **Learning time:** 62h 30m  
Theory classes: 14h  
Practical classes: 8h  
Laboratory classes: 2h  
Guided activities: 2h  
Self study: 36h 30m |

#### Qualification system

- 40% exposition and discussion in class
- 40% exercises
- 20% practices

#### Bibliography