Course guides

32040 - MAX - Advanced Mechanisms on Networks Security

Unit in charge: Barcelona School of Telecommunications Engineering
Teaching unit: 744 - ENTEL - Department of Network Engineering.
Degree: MASTER'S DEGREE IN NETWORK ENGINEERING (Syllabus 2009), (Optional subject).
DOCTORAL DEGREE IN NETWORK ENGINEERING (Syllabus 2007). (Optional subject).
ERASMUS MUNDUS MASTER'S DEGREE IN PHOTONICS ENGINEERING, NANOPHOTONICS AND
BIOPHOTONICS (Syllabus 2010). (Optional subject).
MASTER'S DEGREE IN NETWORK ENGINEERING (Syllabus 2006). (Optional subject).

Academic year: 2015  ECTS Credits: 5.0  Languages: English

LECTURER

Coordinating lecturer: MIGUEL SORIANO IBAÑEZ
Others: Jordi Forné Muñoz
Oscar Esparza Martín
José Luis Muñoz Tapia
Josep Pegueroles Vallés

PRIOR SKILLS

Knowledge of communication networks (functioning, related protocols, etc.). Elemental knowledge of Number Theory and basic cryptography.

TEACHING METHODOLOGY

The teaching methodology includes:

- Theoretical lectures. The teacher will present the main concepts, as a summary, so that the student can acquire the general context of the subject with the adequate detail level. These sessions will foster interactivity and discussion of the different proposed problems, in order to interconnect the presented concepts.
- Development of a research/application project.
- Work in groups
- Public presentation and defense of the projects.

LEARNING OBJECTIVES OF THE SUBJECT

Identify mechanisms and solutions necessary to provide security in different scenarios (networks and services) with different requirements, availability and capacity.

CONTENTS

Introduction

Review
Fair non repudiation

Security Aspects in Ubiquitous Computing

P2P Security

Group Communications Security

Key Management in MANETs

Privacy

Security in electronic voting

**GRADING SYSTEM**

- Research/application project (40 %)
- Final Exam (60%)