uc3m Universidad Carlos III de Madrid

Communication systems and networks for security and emergency

Academic Year: (2019 / 2020) Review date: 27-04-2019

Department assigned to the subject: Signal and Communications Theory Department

Coordinating teacher: ARTES RODRIGUEZ, ANTONIO

Type: Compulsory ECTS Credits: 6.0

Year: 4 Semester: 1

OBJECTIVES

The powers intended that students acquire are:

- Ability to analyze and specify the fundamental parameters of a communications system.
- Ability to evaluate the advantages and disadvantages of different technological alternatives for deployment or implementation of communications systems in the field of security, from the point of view of signal space, disturbances and noise and the analogue modulation and digital.
- Ability to understand the design, deployment, organization and management of systems, networks and telecommunications infrastructure in the context of security, responsible for continuous improvement.
- Ability to understand the design, deployment, organization and management of information systems and communications security of areas, and environmental enclosures.
- Ability to analyze, encode, process and transmit multimedia information using techniques analog and digital signal processing.
- Ability to understand the specification, implementation and maintenance of systems, equipment, heads and facilities of television, audio and video security systems.
- Ability to extract and merge information from audiovisual signals and otherwise.

This requires achieving learning outcomes are summarized below. learning outcomes corresponding to optional subjects that will contribute to further progress are also included in the mastery of the subject:

- Understanding and mastery of basic concepts of linear systems and related functions and transforms.
- Understanding and mastering the techniques of transmission and the basic parameters of a communications system.
- Understanding and mastering the mechanisms of propagation and transmission of electromagnetic waves and their corresponding sending and receiving devices.
- Understanding and mastery of information systems and communications security of areas, and environmental enclosures.

% end-of-term-examination:	60
% of continuous assessment (assignments, laboratory, practicals):	40

BASIC BIBLIOGRAPHY

- Antonio Artés, Fernando Pérez González, Jesús Cid, Roberto López Valcarce, Carlos Mosquera y Fernando Pérez Cruz Comunicaciones Digitales, Pearson, 2007