

## 30362 - Information Systems II

### Información del Plan Docente

<b>Academic Year</b>	2016/17
<b>Academic center</b>	110 - Escuela de Ingeniería y Arquitectura
<b>Degree</b>	438 - Bachelor's Degree in Telecommunications Technology and Services Engineering
<b>ECTS</b>	6.0
<b>Course</b>	4
<b>Period</b>	Second semester
<b>Subject Type</b>	Optional
<b>Module</b>	---

### **1.Basic info**

#### **1.1.Recommendations to take this course**

#### **1.2.Activities and key dates for the course**

### **2.Initiation**

#### **2.1.Learning outcomes that define the subject**

#### **2.2.Introduction**

### **3.Context and competences**

#### **3.1.Goals**

#### **3.2.Context and meaning of the subject in the degree**

#### **3.3.Competences**

#### **3.4.Importance of learning outcomes**

### **4.Evaluation**

### **5.Activities and resources**

#### **5.1.General methodological presentation**

**The learning process that is designed for this subject is based on the following:**

Learning activities are focused on working with real information systems and will allow students to build their own learning in a context similar to an actual working environment related to information systems. Professional lectures, problem-based learning and the development of a project are the teaching strategies used during this course. However, these strategies are difficult to develop without a conceptual basis. Interactive lectures will provide this base.

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### 5.2.Learning activities

The program offered to the student to help him to achieve the expected results includes the following activities ...

#### Interactive lectures

The goal of interactive lectures is to present to students the importance of information management in organizations, the major types of information systems, business environment and organizations, the impact of computers in different topics (technological, organizational, ethical, etc.) in organizations, and any other specific aspects of information systems that can not be developed in other activities. Students participation will be encouraged to engage in activities related to the contents of the lecture during the class.

#### Problem-based learning

A problem is a description of an actual event happened that describes a complex situation related to an information system. During the class, a real problem will be presented, supported by different resources, and students will be asked to propose a solution or to debate the issue. The resolution of some problems may involve autonomous work out of the class (fieldwork, preparation of a summary, etc.).

#### Professional talks

If they are available, some experts will lecture about their daily experience with real information systems. These talks will allow students to contrast the knowledge acquired during problem-based learning activities and interactive lectures with the experience of experts.

#### Development of a project

The development of a project is a work group whose specific objective is the installation and customization of a real information system. It allows the student to acquire experience in working with an information system in a context close to daily job. This activity also allows students to develop skills related to teamwork and management of working groups.

### 5.3.Program

The program of the course consists of two parts.

#### Part I: The ecosystem of Information Systems

This part analyzes its importance in organizations, the technology involved, the life cycle of an information system, and related topics (security, legislation). Also it addresses other aspects of information systems, their relationship with the R & D funding, and the implications related to ethics and society.

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- **Importance of Information Systems in organizations** .
- **Technology involved** (Hardware and software, applications, databases and data centers, networks, Internet, Web and its applications, data integration).
- **Development of Information Systems** (life cycle, security, legislation).
- **Implications of an Information System** (technological innovation, public and private funding, ethical and social considerations).

### Part II: Types of Information Systems

This part presents the different types of information systems with examples of actual Information Systems Engineer you will be to join an organization.

- **Enterprise Systems** (transaction processing (TPS), integrated systems (ERP), management information systems (MIS), functional systems (SCM, CRM, ...), e-commerce / mobile (B2B, B2C, C2C))
- **Decision Making** (decision support systems (DSS), groupware (GDSS); executive information systems (EIS))
- **Knowledge Management** (knowledge management systems (KMS), expert systems, information retrieval)
- **Other Information Systems** (SCADA, HIS, GIS, ...)
- **New trends**

### 5.4.Planning and scheduling

#### Calendar of sessions and presentation of works

The schedule of the course will be defined by the academic calendar in each of the centers where this course is taught.

The sessions will have an approximate total duration of 60 hours divided between lectures, problems and laboratory practice. The schedule of all classes and dates practice sessions will be announced in advance in the website of the degree.

The project will be delivered at the end of the term. The deadlines will be available at the beginning of the course.

#### Student work

The course consists of 6 ECTS credits, of which 2.4 credits correspond to classes and 3.6 credits to autonomous work. Therefore, the dedication of a student in order to achieve the learning outcomes in this course is estimated in 150 hours (60 of the in the classroom and 90 of autonomous work) distributed as follows:

- 55 hours in the classroom (lectures, professional seminars, problem solving activities, and laboratory assignments).
- 55 hours of group work.
- 35 hours of individual study.
- 5 hours in evaluation activities.

### 5.5.Bibliography and recommended resources