

Academic Year/course: 2020/21

30362 - Information Systems II

Syllabus Information

Academic Year: 2020/21

Subject: 30362 - Information Systems II

Faculty / School: 110 - Escuela de Ingeniería y Arquitectura

Degree: 438 - Bachelor's Degree in Telecommunications Technology and Services Engineering

ECTS: 6.0

Year: 4

Semester: Second semester

Subject Type: Optional

Module: ---

1. General information

1.1. Aims of the course

1.2. Context and importance of this course in the degree

1.3. Recommendations to take this course

2. Learning goals

2.1. Competences

2.2. Learning goals

2.3. Importance of learning goals

3. Assessment (1st and 2nd call)

3.1. Assessment tasks (description of tasks, marking system and assessment criteria)

4. Methodology, learning tasks, syllabus and resources

4.1. Methodological overview

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.

4.2. Learning tasks

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 cannot 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 workgroup 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 a daily job. This activity also allows students to develop skills related to teamwork and management of working groups.

4.3. Syllabus

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.

1. **Importance of Information Systems in organizations.**
2. **The technology involved** (Hardware and software, applications, databases and data centers, networks, Internet, Web and its applications, data integration).
3. **Development of Information Systems** (life cycle, security, legislation).
4. **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.

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

4.4. Course planning and calendar

Calendar of sessions and presentation of works

Further information concerning the timetable, classroom, office hours, project and work deadlines, assessment dates and other details regarding this course will be provided on the first day of class or please refer to the EINA website and/or the web page of the course at Moodle.

Student work

The course consists of 6 ECTS credits. Therefore, the dedication of a student in order to achieve the learning outcomes in this course is estimated in 150 hours distributed as follows:

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

4.5. Bibliography and recommended resources

http://biblos.unizar.es/br/br_citas.php?codigo=30362&year=2019