Universidad Zaragoza

Year : 2019/20

27652 - ICT and Databases

Syllabus Information

Academic Year: 2019/20
Subject: 27652 - ICT and Databases
Faculty / School: 109 - Facultad de Economía y Empresa
Degree: 450 - Degree in Marketing and Market Research
ECTS: 5.0
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 designed for this subject is based on the use of active methodologies that require student participation, by proposing and solving exercises and problems, developing and presenting papers, etc. In the the computer lab sessions, the student will work with the computer autonomously following the guidelines given by the teacher in order to develop the skills and abilities required by the course.

4.2.Learning tasks

The course includes the following learning tasks:

- Lectures. The teacher will combine theory sessions with the active methodologies that encourage student participation and involvement in the development of the class.
- Practice sessions. Sessions in the computer lab, where the teacher will propose exercises about the different applications that the student must learn to handle.

4.3.Syllabus

THEORETICAL PART

1. Introduction.

1.1 The current Information Society.

1.2 Databases and Marketing. Requirements, objectives and strategic use.

2. Fundamentals of Databases.

2.1 Before databases. Data files.

2.2 Source of databases.

2.3 Defining database.

2.4 Characteristics of databases.

2.5 The DBMS (Database Management System Data).

2.6 Users of Databases.

2.7 Evolution of databases. Databases models.

3. Relational Databases.

3.1 The Relational Model. Features and advantages.

3.2 Fundamental concepts of relational databases.

3.3 Design Database. Standardization.

4. Information Systems.

4.1 Definition of Information Systems, Objectives.

4.2 Elements of Information Systems.

4.3 Systems government.

? Systems Security. Technical and organizational measures needed.

? Guarantee of privacy and confidentiality.

? Compliance with standards.

4.4 Quality, Audit and Certification.

4.5 Information Systems in Cloud Computing. Advantages and risks of cloud computing.

? Definition of Cloud Computing.

? Features. Strengths and weaknesses.

5. Other challenges in data processing.

5.1 Big Data.

5.2 Business intelligence.

PRACTICAL PART

1. Design, creation and updating of databases.

? Design and creation of tables.

? Relations between tables.

? Integrity constraints. Validation rules.

? Design for consultation of databases. Selection criteria. Ordination.

? Updates.

? Development of forms and reports.

? Advanced options.

2. Development of customized applications for databases management.

? Interface Design.

? Modular structure.

? Programming with wizard.

3. WORK / PROJECT: Design and development of a database and an application for its management.

4. Use of the GanttProject tool for project planning

4.4.Course planning and calendar

Further information concerning the timetable, classroom, office hours, assessment dates and other details regarding this course, will be provided on the first day of class or please refer to the Faculty of Economics and Business website (https://econz.unizar.es/)

4.5.Bibliography and recommended resources