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| IT Management |

Academic Year: (2023 / 2024)   **Review date: 27-04-2023**

Department assigned to the subject: Computer Science and Engineering Department

Coordinating teacher: VALLS FERRAN, JOSE MARIA

Type: Electives ECTS Credits : 6.0

Year :   Semester :

OBJECTIVES

 - To learn the basic concepts on Computer Management
 - To understand the concept of information and its representation for automated processing
 - To understand the fundamentals of relational databases
 - To learn about information systems and their relationship with financial and business management
 - To know the communication systems in business management
 - To know the features of the decision support systems
 - To understand the elements involved in database design and use
 - To understand the importance of communications, notably the Internet, in business management
 - To understand how decision support systems may help increasing the competitiveness of a company
 - To use Internet technologies for management
 - To apply decision support systems to corporate decision problems
 - To apply database knowledge to analysis, design and implementation of a relational database
 - To acquire the ability to operate office applications related to this field
 - To acquire the ability to analyze and evaluate reports generated by office applications
 - To be able to evaluate the usefulness of information systems
 - To be able to evaluate the usefulness of decision support systems

DESCRIPTION OF CONTENTS: PROGRAMME

Theoretical content:

Unit 1. General Concepts in Computing

 1.Introduction. General Concepts
 2.History of Computers
 3. Hardware.
 4.Communications and Computer networks
 5. Software. Algorithms and Programs
 6. Programming Languages

Unit 2. Structure of Information and its Representation
 1. Introduction
 2. Data codification. Numerical and alphanumerical systems.
 3. Data and Data Types. Arithmetic and boolean operations
 4. Data Structures. Single and Structured Data

Unit 3. Applications for Computational Management
 1. Introduction
 2. Text processors, Presentations and web editing tools, Spreadsheets
 3. Macro programming

Unit 4. Databases
 1. Data Management
 2. Concept of database
 3. Database management systems
 4. Database design
 5. The relational model

6. Decision Support Systems. Multidimensional Databases.

Unit 5. Communications and networks in business management
  1. Telecommunicacion systems and transmission networks
  2. Network bases office systems
  3. Security in networking, Electronic Commerce

Applied content:

Application of Spreadsheets. Macro Programming.
Databases, design and implementation.

LEARNING ACTIVITIES AND METHODOLOGY
The theoretical content will be lectured in the theoretical classes (main group) and by professor guidance in the practical classes.
Due to the special situation caused by COVID-19, during this semester the teaching will be bimodal. That means that the theory classes will be online and the practical classes will be face-to-face.
Theory classes will be oriented towards acquisition of informatics required for the student's professional development.
Practical classes will be oriented towards guided incremental acquisition of use and application of spreadsheets and databases.
The 6 ECTS credits detailed allocation to different activities can be found in the weekly work schedule that can be downloaded from this page.

ASSESSMENT SYSTEM
The final grade will be obtained through continuous evaluation and a final exam.
The Continuous Evaluation will allow to evaluate the learning process of the students and will be worth 70% of the final mark.
The continuous evaluation consists of:
-    A partial exam about the theory : 10% of the final mark.
-    A set of practical works and exercises: 60% of the final mark.
-    A partial exam on the practical works made by the student: 10% of the final mark.
The final exam will be compulsory and will include several theoretical-practical questions about the content of the subject: 30% of the final mark.
No minimum grade in the final exam will not be required in order to pass the course.

% end-of-term-examination:	30
% of continuous assessment (assigments, laboratory, practicals…):	70

ADDITIONAL BIBLIOGRAPHY
  - JACKSON, Mary, Advanced Modelling in Finance using Excel and VBA, John Wiley & Sons, Incorporated, 2004