

Academic Year: ( 2022 / 2023 )

Review date: 23-05-2022

Department assigned to the subject: Mechanical Engineering Department

Coordinating teacher: REVILLA TORREJON, ANTONIO JAVIER

Type: Compulsory ECTS Credits : 6.0

Year : 3 Semester : 2

**DESCRIPTION OF CONTENTS: PROGRAMME**

- 1 - Management Information Systems vs. Business Processes
  - 1.1.- Management Information Systems. Concept, Typology
  - 1.2.- Business processes vs. Functions
  - 1.3.- Business processes and Management Information Systems
  - 1.4.- Business transactions and Information transactions
- 2 - Interfunctional Business Processes and Integrated Information Systems (ERP)
  - 2.1.- Integration challenges in interfunctional business processes
  - 2.2.- Functional MIS
  - 2.3.- Interfunctional Business Processes and Integrated Information Systems (ERP)
  - 2.4.- Common Database. Implications
- 3 - ERP procurement and selection
  - 3.1.- ERP make vs. buy decision
  - 3.2.- The ERP market. Concentration. Typology
  - 3.3.- Commercial ERP systems vs. Open Source systems
  - 3.4.- ERP selection and procurement process
  - 3.5.- Selection of the Database Management System (DBMS)
- 4 - ERP customization
  - 4.1.- Current process design vs. implicit design within the ERP. Challenges and approaches
  - 4.2.- Adapting the current practice. Business Process Reengineering (BPR)
  - 4.3.- Adapting the ERP. Parameterization vs. customization.
- 5 - ERP implementation
  - 5.1.- ERP implementation projects
  - 5.2.- Gradual vs. Big Bang implementation approaches
  - 5.3.- Key players. Consultants, internal teams
  - 5.4.- ERP post-implementation
- 6 - ERP infrastructure
  - 6.1.- Alternative approaches to ERP infrastructure deployment
  - 6.2.- Implications of adopting IaaS (Infrastructure as a Service) approaches
  - 6.3.- Implications of adopting SaaS (Software as a Service) approaches
- 7 - IS-supported decision making. Approaches
- 8 - Key challenges: Privacy, data protection, ...
- 9 - Practical cases

**ASSESSMENT SYSTEM**

SE1. END-OF-TERM EXAMINATION, which will evaluate globally the knowledge, skills, and competences acquired in the module.

SE2. CONTINUOUS ASSESSMENT, based on submitted reports, partial tests, and case studies completed throughout the semester

<b>% end-of-term-examination:</b>	60
<b>% of continuous assessment (assignments, laboratory, practicals...):</b>	40

**ADDITIONAL BIBLIOGRAPHY**

- Laudon, K.C.; Laudon, J.P. Management Information Systems: Managing the Digital Firm, Prentice Hall, 2017

