

Academic Year: ( 2020 / 2021 )

Review date: 10-07-2020

Department assigned to the subject: Computer Science and Engineering Department

Coordinating teacher: PRIETO GONZALEZ, LISARDO

Type: Basic Core ECTS Credits : 6.0

Year : 1 Semester : 1

**REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)**

Nothing

**OBJECTIVES**

BC1. Students have demonstrated to possess and understand knowledge in an area of study that starts from the base of high school education and is usually found at a level that, although supported by advanced textbooks, also includes some aspects that imply knowledge from the vanguard of their fields of study.

BC2. Ability to transmit information, ideas, problems, and solutions to a specialized and non-specialized public.

GC1. Be able to manage, identify, gather, and interpret relevant information on issues related to business in the digital age.

GC2. Know how to design, plan, and align the evolution of technology (Systems and Information and Communication Technologies) concerning the organization of the company and its development.

TC1. Be able to assess the reliability and quality of information and its sources ethically using such data, avoiding plagiarism, and by the academic and professional conventions of the study area.

LR1. After this course, students will be able to understand the importance of IT systems in a company, how computer and communications systems can enhance business productivity, and how ICT can help to transform the business models of a company.

LR2. Understand the role of Information Systems in organizations.

LR3. Know the concept of Computers and Information Systems.

LR4. Identify the contributions of Information Systems within the value chain in organizations.

LR5. Know and understand the main elements in a Business Information System.

LR6. Know the main types of Information Systems in organizations.

LR7. Make informed decisions regarding the use of information technology in businesses within the scope of responsibility.

LR8. Know the significant models of the Distributed Systems and Services paradigm.

**Acronyms**

BC: Basic Competence

GC: General Competence

TC: Transversal Competence

LR: Learning Result

**DESCRIPTION OF CONTENTS: PROGRAMME****Didactic unit I - Information System fundamentals**

1. Introduction to Computing
2. Applications of Informatics in the enterprise
3. Computer platforms
4. Operating systems
5. Storage systems and databases
6. Computer networks and the Internet
7. Software and system libraries
8. Programming tools

**Didactic unit II - Information Systems in the enterprise**

9. Components of an Enterprise Information System (ERP, CRM, SCM, BI, and so on and so forth)
10. Architecture of an Enterprise Information System
11. The Internet, the Web, and the paradigm of Cloud Computing
12. From Systems to Services: Service-Oriented Architecture

## LEARNING ACTIVITIES AND METHODOLOGY

LA1. THEORETICAL-PRACTICAL CLASSES. Where the knowledge that students should acquire will be presented. They will receive the scores and will have basic texts of reference to ease the follow-up of classes and the development of subsequent work. Students will solve exercises and practical problems. Workshops and evaluation tests will be carried out to acquire the necessary skills.

LA2. TUTORIALS. Individualized assistance (individual tutorials) or group assistance (collective tutorials) to students by the lecturer.

LA3. INDIVIDUAL OR GROUP STUDENT WORK.

DM1 THEORY CLASS. Exposition of the topics in lecturer's class with support of computer and audiovisual media, where the subject main concepts are developed, and materials and bibliography are provided to complement the students' learning process.

DM2. PRACTICES. Resolution of practical cases, problems, and so on and so forth, posed by the lecturer and oriented individually or in groups.

DM3. TUTORIALS. Individualized assistance (individual tutorials) or group assistance (collective tutorials) to students by the lecturer. For subjects of 6 credits, there will be provided 4 hours with 100% of attendance.

### Acronyms

LA: Learning Activity

DM: Development Methodology

## ASSESSMENT SYSTEM

AS1. FINAL EXAM. In which the knowledge, skills, and abilities acquired throughout the course will be assessed globally.

AS2. CONTINUOUS ASSESSMENT. Exercises, presentations, performance in debates, exhibitions in class, practices and the work in workshops throughout the course will be scored.

### Acronym

AS: Assessment System

**% end-of-term-examination:** 55

**% of continuous assessment (assignments, laboratory, practicals...):** 45

## BASIC BIBLIOGRAPHY

- Ralph Stair, George Reynolds Fundamentals of Information Systems, 7th Edition (ISBN-13: 978-1305108110), Cengage Learning, 2016

- Smallwood, R.F. Information Governance: Concepts, Strategies and Best Practices (ISBN 978-1-118-21830-3), Wiley, 2014

## BASIC ELECTRONIC RESOURCES

- Jaime Busquets et al. . IT Fundamentals for Business Professionals (Professional Certificate Program - Universitat Politècnica de Valencia): <https://www.edx.org/professional-certificate/upvalenciav-it-fundamentals-for-business-professionals>

- Jong-Moon Chung . Emerging Technologies: From Smartphones to IoT to Big Data (Specialized program - 6 courses - Yonsei University): <https://www.coursera.org/specializations/emerging-technologies>