Engineering for digital transformation

Academic Year: (2023 / 2024)   **Review date: 21-04-2023**

Department assigned to the subject: Computer Science and Engineering Department

Coordinating teacher: SANCHEZ SEGURA, MARIA ISABEL

Type: Electives ECTS Credits : 3.0

Year : 4 Semester :

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

No previous requirements.

SKILLS AND LEARNING OUTCOMES

Complement the basic, transversal and compulsory knowledge of the Degree according to the student's preferences.

OBJECTIVES

Learn and apply techniques to help identify digital transformation solutions aligned with the business and strategic objectives of organisations.

DESCRIPTION OF CONTENTS: PROGRAMME

-The role of the Software Engineer within the digital transformation of business process.
-Software engineering economics and the digital transformation
-Tools for risk management in the digitalization process
-Application to a real case study

LEARNING ACTIVITIES AND METHODOLOGY

Seminars and lectures supported by computer and audiovisual aids.
Practical learning based on cases and problems, and exercise resolution.
Individual and group or cooperative work with the option of oral or written presentation.
Individual and group tutorials to resolve doubts and queries about the subject.
Internships and directed laboratory activities.

ASSESSMENT SYSTEM

In addition to serving as a training activity, the practicals and exams have the dual purpose of being a measure for the assessment system. The evaluation system includes the assessment of the directed academic activities and practicals according to the following weighting.
Examination (if continuous assessment has been followed): 10%.
Practical work: 90%, of which:
    -With the presence of the lecturer: 45%
    -Without the presence of the teacher: 45%

% end-of-term-examination:	10
% of continuous assessment (assigments, laboratory, practicals…):	90

BASIC BIBLIOGRAPHY

 - Maria-Isabel Sanchez-Segura, Antonio de Amescua-Seco, Fuensanta Medina-Dominguez, German Dugarte-Peña, Arturo Mora-Soto Knowledge, People, and Digital Transformation: Approaches for a Sustainable Future. Tittle of the participation: Altus: A Process-Oriented Knowledge Governance Maturity Model. Pages 133-162., Springer. ISBN: 1431-1941, 2020
 - Maria-Isabel Sanchez-Segura, Germán Dugarte-Peña, Antonio de Amescua, Fuensanta Medina-Domínguez. Exploring how the intangible side of an organization impacts its business model, Kybernetes, 2020

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 - María-Isabel Sánchez-Segura, Fuensanta Medina-Domínguez, Antonio de Amescua, German-Lenin Dugarte-Peña Knowledge governance maturity assessment can help software engineers during the design of business digitalization projects, Journal of Software: Evolution and Process, 2020
 - P. Bourque and R.E. Fairley Guide to the Software Engineering Body of Knowledge, Version 3.0, IEEE Computer Society. www.swebok.org, 2014