Visual Development

Academic Year: (2023 / 2024) **Review date: 02-06-2022**

Department assigned to the subject: Computer Science and Engineering Department

Coordinating teacher: LLORENS MORILLO, JUAN BAUTISTA

Type: Electives ECTS Credits : 6.0

Year : 4 Semester :

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

Programming (1st year / 1st semester)
Algorithms and Data Structures (1st year / 2nd semester)
Software Engineering (2nd year / 1st semester)
Software Development (2nd year / 2nd semester)

DESCRIPTION OF CONTENTS: PROGRAMME

- Software development paradigms
- Evolution of visual development environments
- Visual modeling languages
- Programming languages for visual components.
- Design of systems based on visual components.

LEARNING ACTIVITIES AND METHODOLOGY

THEORETICAL-PRACTICAL CLASSES (2,5 ECTS). In them the knowledge to be acquired by the students will be presented. They will receive the class notes and will have basic reference texts to facilitate the follow-up of the classes and the development of the subsequent work. Exercises will be solved by the student that will serve as self-evaluation and to acquire the necessary skills. Classes of problems, in which the problems proposed to the students will be developed and discussed.

WORKSHOPS AND/OR LABORATORY PRACTICES (0.5 ECTS).

TUTORIALS (1.0 ECTS). Individualized assistance (individual tutorials) or in group (collective tutorials) to the students by the professor.

INDIVIDUAL OR GROUP WORK OF THE STUDENT (2.0 ECTS).

ASSESSMENT SYSTEM

The evaluation of the course will consist of partial deliveries and a final practice where all the knowledge acquired in the course is applied. The evaluation system includes the assessment of the directed academic activities and practices according to the following weighting.

CONTINUOUS EVALUATION (70%). In this evaluation will be valued the Works, Presentations, Debate Performance, Class Exhibitions, Exercises and Laboratory Practices.

FINAL EXAM (30%). In which the knowledge, skills and abilities acquired throughout the course will be globally assessed.

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

BASIC BIBLIOGRAPHY

- J.D. Meier, Alex Homer, David Hill et al. Patterns & practices Application Architecture Guide 2.0, Microsoft Corporation 2009.
- Stevens, P Using UML: Software Engineering with Objects and Components (2nd Edition), Addison-Wesley, 2006.

- Thomas M. Shortell (ed) INCOSE Systems Engineering Handbook: A Guide for System Life Cycle Processes and Activities, Wiley, 2015

ADDITIONAL BIBLIOGRAPHY

- Cathleen Shamieh Systems Engineering For Dummies, Wiley, 2011

BASIC ELECTRONIC RESOURCES

- Functional Mock-up Interface . FMI Site: https://fmi-standard.org/
- INCOSE . INCOSE Site: https://www.incose.org/
- Object Management Group . OMG SysML Site: http://www.omgsysml.org/