Programming techniques

Academic Year: (2018 / 2019) **Review date: 10/05/2018 18:24:02**

Department assigned to the subject: Computer Science and Engineering Department

Coordinating teacher: RUIZ MEZCUA, MARIA BELEN

Type: Compulsory ECTS Credits : 6.0

Year : 2 Semester : 2

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

None

OBJECTIVES

In a generic way, the subject aims for the student to acquire a series of knowledge, skills and abilities in relation to the basic elements of programming. Data structure, syntax, pseudocode.
Additionally students will acquire skills to propose solutions to solve problems in teams.
RA OF THE MATTER
Possess knowledge of the basic concepts of programming
Possess basic knowledge of the syntax of a programming language
Basic ad generals competences: CG1,CG2, CG7, CB4
Cross Competences: CT1,CT3, CT4
Specific competences: CE4, CE8, CE10

DESCRIPTION OF CONTENTS: PROGRAMME

1. Introduction- Programming languages- Compilation and execution of programs
2. Fundamentals of programming- Paradigms of programming- Elements of a program: data and algorithms- Basic programming tools: algorithms,
flow charts and pseudocode
3. Programming in Python - Python language features Data types
4. Entry and Exit
5. Flow Control - Bleeding Conditional - Loops
6. Functions, Libraries and Modules

LEARNING ACTIVITIES AND METHODOLOGY

Acquisition of theoretical and practical knowledge (3 ECTS) with theoretical classes, tutorials, to forums and chats of the global classroom platform, seminars and workshops on tools, problem solving the case studies, both individually and in groups

Acquisition of competences and skills (3 ECTS) in solving problems, proposing a solution, writing the pseudocode, programming in python and presenting the solution to the class..

The days and hours of the tutorials can be viewed in the space dedicated to the subject in Aula Global

ASSESSMENT SYSTEM

% end-of-term-examination/test:	50
% of continuous assessment (assigments, laboratory, practicals…):	50

- Exam: 50%. Given that this subject has a large component of presentation of new knowledge, the acquisition of cognitive and attitudinal skills is of great importance. The evaluation system is based mainly on the measurement of these competences. These competences are med

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% of continuous assessment (assigments, laboratory, practicals…):	50

- Continuous evaluation: Exercises and Practice: 50%.
The instrumental competences are evaluated through the resolution of different practical cases. The practices are developed throughout the course and will be practices to sole in team and practices to be solved all alone. Thus there will be an individual practice that will have a weight of 20% and a team practice that will weigh 30%.

BASIC BIBLIOGRAPHY

- Peña, Rosalía Resolución de problemas para ingenieros con Python® estructurado, ibergaceta, 2016

BASIC ELECTRONIC RESOURCES

- . The Python Wiki: http:// //wiki.python.org/moin/FrontPage

- Bartolomé Sintes Marco . Esta página forma parte del curso Introducción a la programación con Python : http:// //www.mclibre.org/consultar/python/