Computer Programming of Applications

Academic Year: (2019 / 2020)   **Review date: 11-04-2018**

Department assigned to the subject: Computer Science and Engineering Department

Coordinating teacher:

Type: Electives ECTS Credits : 6.0

Year :   Semester :

DESCRIPTION OF CONTENTS: PROGRAMME

I ¿ Programming foundations and techniques
1. Programming fundamentals
1.1. Computer architecture
1.2. Information representation in a computer
1.3. Programming languages
1.4. Program compilation and execution
1.5 Impact of programming in my business: Case studies
2. Programming techniques
2.1. Program elements: data and algorithms
2.2. Basic programming tools: algorithms, flow diagrams and pseudocode.
2.3. Programming paradigms
2.4. Object-oriented programming
2.5 Programming techniques for my business
II ¿ Data type definition and operations
3. Data types
3.1. Basic data types
3.2. Arrays
3.3. Enumerated
3.4. Objects
3.5. Basic Input/Output
3.6. Comments
3.7. Operators
3.8. Conversions
III ¿ Flow control and subprograms
4. Control structures
5. Methods: functions and procedures
IV ¿ Implementation of programs with the Java programming language
6. The Java programming language
6.1 Success case studies of Java in business domains
7. Debugging and tracing programs
7.1. Common programming errors
7.2. Debugging techniques
7.3 Source code Quality as a driver for successful businesses

% end-of-term-examination: 60

% of continuous assessment (assigments, laboratory, practicals…):   40