Information Systems

Academic Year: (2022 / 2023)   **Review date: 20/05/2022 12:23:16**

Department assigned to the subject: Computer Science and Engineering Department

Coordinating teacher: CALLE GOMEZ, FRANCISCO JAVIER

Type: Compulsory ECTS Credits : 6.0

Year : 1 Semester : 1

OBJECTIVES

- Acquire and understand knowledge the basis and opportunity to be original in the development and / or application of ideas, often in a research context.
- Students will learn how to apply the both knowledge acquired and their skills in problem solving in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their area of ¿¿study.
- Students will be able to integrate knowledge and face the complexity of formulating judgments based on information that, being incomplete or limited, includes reflections on social and ethical responsibilities linked to the application of their knowledge and judgments.
- Students will know how to communicate, both to specialized and non-specialized audiences, their conclusions and the ultimate knowledge and reasons sustaining them, in a clear and unambiguous way.
- Students will acquire learning skills allowing them to continue studying in a largely self-directed and autonomous way.
- Ability to understand and apply methods and techniques in the field of Computer Engineering in financial markets.
- Ability to conceive, design or create, implement and put into practice a substantial process of development or creation of software for financial markets.
- Ability to apply the knowledge acquired and to solve problems in new or unfamiliar environments within broader and multidisciplinary contexts, and to be able of integrating this knowledge.
- Capacity to elaborate, properly and with a certain originality, written compositions or motivated arguments, to write plans or work projects.
- Analyze and evaluate the main ICTs applied in the financial sector.
- Participate in the development of financial software, from its conception in the analysis phases, to its implementation and integration with other systems.
- Implement algorithms and classic techniques of financial markets environment, following the established procedures and standards at each momento.
- Analyze and understand the main tools for handling, storing, accessing and reviewing large amounts of data.

Learning results
Understand the use of Information Systems in the Financial Markets
Know the main Technological Standards
Understand the main technologies of the financial sector
Get an overview of the main Finalist Products
Ability of analyzing the technological infrastructures set for the Financial Markets
Understand the main Application Examples
Understand the requirements in infrastructure to implement financial information systems

DESCRIPTION OF CONTENTS: PROGRAMME

INFORMATION SYSTEMS:
- Introduction to the Investment Banking ecosystem
- Products and Systems
- Electronic markets and practices (Front Office)
- Middle Office systems and Risk Control

- Machine learning and its application to Global Markets
- Introduction to Backoffice Systems
- Overview of GTB.- The Corporate Client

LEARNING ACTIVITIES AND METHODOLOGY

Theoretical sessions: Theoretical presentations accompanied by learning materials, such as presentation supporting slides. Total hours: 50. Presence: 100%
Theoretical-practical sessions: Combination of theoretical classes accompanied by the resolution of practical exercises. Total hours: 16. Presence: 100%
Practical assignments: Practical cases to be developed in specific laboratory sessions. Total hours: 8. Presence: 100%
Tutorials: Face-to-face and/or remote tutorials (through videoconference). Total hours: 12.5. Presence: 100%
E-learning activities: Forum of the course, discussion forums, visualization of pre-recorded contents, and other e-learning training activities. Total hours: 40. Presence: 0%
Individual student work: Individual learning activities that complement the rest (both face-to-face and non-face-to-face), as well as exam preparation. Total hours: 50. Presence: 0%

Teaching methodology
- Lecturing with support of computer and audiovisual media, in which the main concepts of the subject are developed and the bibliography is provided to complement the students' learning.
- Critical reading of texts recommended by the lecturer: Press articles, reports, manuals and academic papers, either for further discussion in class, or to extend and consolidate the knowledge of the subject.
-Resolution of practical cases, problems, etc., proposed by the lecturer and to be attained either individually or in teams.
-Exhibition and discussion in class, under the lecturer's moderation, of topics related to the content of the subject, as well as discussion on practical cases.
-Elaboration of work and reports individually or in teams.
-Specific e-learning activities, including watching to videos, tutorials, self-correction activities, participation in forums, and any other online teaching mechanism the lecturer deems appropriate.

ASSESSMENT SYSTEM

% end-of-term-examination/test:	60
% of continuous assessment (assigments, laboratory, practicals…):	40

Final exam: 60% (minimum mark: 5 out of 10)

Work done during the course: 30%

Class Participation: 10%