

Degree	Type	Year	Semester
2501232 Business and Information Technology	OT	4	0

Contact

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Use of languages

Principal working language: catalan (cat)
Some groups entirely in English: No
Some groups entirely in Catalan: Yes
Some groups entirely in Spanish: No

Teachers

Isidre Fabregues Aladren

Prerequisites

Although there are no specific prerequisites for this course, it is advisable to have previously completed most subjects of the first three degree years, and, most particularly, Technology Innovation Projects in the sixth semester. It is one of the electives that can lead to a mention in the fourth year, and therefore its content relates directly to the last formative stage of the degree.

Objectives and Contextualisation

Corporate software development projects are not isolated projects. They are inserted in rich, changing, competitive business environments. Frequently these projects are a core part of the management of the firm, having a large impact on their perceived income.

The process of creation of corporate software is a complex one. It requires a broad base of knowledge and skills to successfully analyze, design, program, test and implement a given project. Both psychological and economic management are essential.

The aim of this course is therefore to present corporate software development projects and the processes needed to carry them out successfully.

The process of creation of corporate software is based not only on the life cycle theory, but also in the proper management of suppliers and contracts. The course includes the most relevant methodologies for developing corporate software. However, the major focus of the course is on the business aspects of corporate software development, with special attention to information systems planning and management on the part of the teams, taking into account its business environment.

After completing the course students will be able to analyze the fundamentals of corporate software development, taking into account actors (stakeholders), processes involved and project objectives. They will also be able to correctly define its scope, make risk analysis and prepare documentation for a good bid. Additionally, they would have the basic knowledge to be able to manage suppliers and subcontractors.

Content

The course will be developed around five units, as detailed below.

Unit 1. Development of Information Systems in Organizations

The unit provides an approximation to the peculiarities of IS in business organizations. It develops a number of general aspects which will be used to start the course and to describe the characteristics and complexity of the subject. Some of the points to be developed include: Developing a Plan for Information Systems; Risk in implementing ICT; dilemmas between buying and building software applications; aspects of outsourcing.

Unit 2. Systems Development Life Cycle

This unit introduces the basic methodologies for the development of software applications. The aim is to know and understand a number of clearly defined and distinct work phases that have to be performed, starting from the conceptualization of a business need, and until the required software is in place providing service to users. Given the orientation of the course, the main aspects to be considered are Software Requirements Specification and Functional Analysis; other stages will be stated and discussed superficially.

Unit 3. ICT Project Management

In continuity with the preceding third-year course, Technological Innovation Projects, the unit shall analyze the peculiarities of project management in information technology. Although developing software is an engineering task, as shown in the previous unit, there is also a need to define and use a project management methodology. The unit will therefore cover topics such as organization and roles of the team, risk management, project management offices. It will also discuss the general aspects to be considered in the tender of ICT projects.

Unit 4. Models of Quality Management in Software Development.

As important as delivering a project on time is its appropriate product quality. In the unit various models such as ISO, CMMI, among others, will be discussed. Furthermore, security issues in the development and implementation of software will also be considered.

Unit 5. Innovative Technologies

As a final unit, some alternative development methods aiming to reduce time-to-market in delivering software products, such as Agile, SCRUM and others, will be presented. Similarly, methodologies aimed at the development of web and mobile applications will also be discussed.