UAB
Universitat Autònoma de Barcelona

Corporate Software Project Management

Code: 102175
ECTS Credits: 6

2024/2025

Degree	Type	Year
2500003 Business and Information Technology	OT	4

Contact

Name: Maria Gloria Estape Dubreuil

Email: gloria.estape@uab.cat

Teachers

Jaume Subiras Pugibet

(External) (Jaume.Subiras@uab.cat)

Teaching groups languages

You can view this information at the end of this document.

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.

Competences

- Demonstrating creativity and initiative.
- Developing in an effective way the analysis and design techniques and methodologies of information systems in a business environment.
- Effectively applying techniques and methodologies of analysis and design of information systems to the determination of the specific requirements of an organisation and to their translation into a computing solution, understanding the difficulties and suitability of the implementation.
- Students must be capable of collecting and interpreting relevant data (usually within their area of study) in order to make statements that reflect social, scientific or ethical relevant issues.
- Students must be capable of communicating information, ideas, problems and solutions to both specialised and non-specialised audiences.
- Take sex- or gender-based inequalities into consideration when operating within one's own area of knowledge.

Learning Outcomes

1. Applying the methodologies of analysis of information systems to the determining of the specific requirements of an organisation and its effective design.
2. Communicate using language that is not sexist.
3. Demonstrating creativity and initiative.
4. Effectively applying techniques and methodologies of analysis and design of information systems to the determination of the specific requirements of an organisation and to their translation into a computing solution, understanding the difficulties and suitability of the implementation.
5. Propose projects and actions that incorporate the gender perspective.
6. Students must be capable of searching and analysing information of different sources.
7. Using the more effective and up-to-date technical means in oral and written communication.

Content

The course will be developed around six 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, amongothers, will be discussed. Furthermore, security issues in the development and implementation of software will also be considered.

Unit 5. Incremental systems development methodologies: Agile

In this topic, development models such as Agile, SCRUM and others, aiming to reduce the deadlines for the delivery of software products, will be presented. In particular, both the principles of the Scrum methodology and its advantages and disadvantages will be studied in depth.

Unit 6. Service management: ITIL

Once the projects move to productive environments, it is necessary to maintain them and therefore to look for models allowing to effectively manage incidents. ITIL is presented as the main management methodology used in production departments. The different services available are studied in its version 4.0

Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Development of Case studies	20	0.8	1, 4
Theoretical classes	25	1	1, 4
Type: Supervised			
To train students in tools and agility in making effective presentations	2	0.08	7
Tutorials	14	0.56	1, 4
Type: Autonomous			
Individual work	48	1.92	1, 4, 5
Preparation of study cases, teamwork and oral presentations	38	1.52	1, 2, 4, 6, 7

Learning will be based on theoretical classes, case development and study and drafting on various teamwork assignments during the course.

Within the course lectures, the case methodology will be used as a teaching tool, with the participation of students.

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Assessment

Continous Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
A. Learning exercises	10%	0	0	1, 4
B. Case studies, individual tests and teamwork	50%	0	0	1, 2, 3, 4, 5, 6, 7
C. Final exam	40%	3	0.12	1, 4

Assessment will take into account the following items:

- Problem-based learning exercise(s), teamwork and classroom presentation of the results.
- Individual tests and practical cases and teamwork, plus a subjective evaluation by the teacher based on his/her perception of the participation and implication of the student in the subject throughout the course.
- Final written exam on relevant concepts and aspects of the course

Evaluation criteria

Each of the assessment items has a different weight to the final grade of the subject. The final grade of the subject is obtained from the following calculation:

N = 50% (work done during the course) + 40% (final test) + 10% (questionnaires)

The value of N will only be calculated if the student has scored a minimum of 4.5 points out of 10 in each of the three items. In this case, the student passes the course whenever N>=5, fails if N<3.5 and can enter the retake process otherwise.

The marks obtained from teamwork during the course will always be on an individual level, and not necessarily coincident with the grade of the work itself, since individual aspects such as the students' participation in the resolution and its defense will also be considered.

CAUTION:

1. A student having participated in at least two of the three assessment cathegories cannot be considered "Non evaluable"

2. This subject does NOT offer the option for comprehensive evaluation.

Calendar of evaluation activities

The dates of the evaluation activities (exercises, assignments ...) will be announced well in advance during the semester.

The dates of the final exam is scheduled in the assessment calendar of the Faculty.

"The dates of evaluation activities cannot be modified, unless there is an exceptional and duly justified reason why an evaluation activity cannot be carried out. In this case, the degree coordinator will contact both the teaching staff and the affected student, and a new date will be scheduled withinthe same academic periodto make up for the missed evaluation activity." ***Section 1 of Article 115. Calendar of evaluation activities (Academic Regulations UAB)****.* Students of the Faculty of Economics and Business, who in accordance with the previous paragraph need to change an evaluation activity date must process the request by filling out an Application for exams' reschedule at
https://eformularis.uab.cat/group/deganat_feie/application-for-exams-reschedule

Grade revision process

After all grading activities have ended students will be informed of the date and way in which the course grades will be published. Students will be also be informed of the procedure, place, date and time of grade revision following University regulations.

Retake Process

"To be eligible to participate in the retake process, it is required for students to have been previously been evaluated for at least two thirds of the total evaluation activities of the subject." Section 3 of Article 112 ter. The recovery (UAB Academic Regulations). Additionally, it is required that the student achieves an average grade of the subject between 3.5 and 4.9.

The date of the retake exam is posted in the calendar of evaluation activities of the Faculty. Students taking this exam and passing will get a grade of 5 for the subject. The students having not passed the retake exam will be graded using his/her final exam grade, and hence, will fail the course.

Irregularities in evaluation activities

Despite other disciplinarymeasures deemed appropriate, and in accordance with current academic regulations, *"whenever a student makes any irregularity that could lead to a significant variation in the grade of an evaluation activity, it will be graded with a 0, regardless of the disciplinary process that can be instructed. In case of occurrence of various irregularities in the evaluation of the same subject, the final grade of this subject will be 0".* ***Section 10 of Article 116. Results of the evaluation. (UAB Academic Regulations).***

Bibliography

Álvarez García, A., de las Heras del Dedo, R. & Lasa Gómez, C. (2011). *Métodos Ágiles y Scrum*. Anaya Multimedia

Lutchen, M.D. (2005). *Dirigir las TI como un negocio*. McGraw-Hill

Phillips, J. (2010). *IT Project Management: On Track from Start to Finish*. McGraw-Hill

Pressman, R. (2010). *Ingeniería del software* (7ª ed.). McGraw-Hill

Stephens, R. (2015). *Beginning Software Engineering*. Wiley

(2017). *La guía de los fundamentos para la dirección de proyectos (Guía del PMBOK).* Project Management Institute.
https://ebookcentral-proquest-com.are.uab.cat/lib/uab/detail.action?pq-origsite=primo&docID=5185018.

(2019). *ITIL 4 edition.* AXELOS Limited

Complementary material will be added to the subject's website on the virtual campus at the discretion of the subject's faculty. This same virtual space will be the reference in the publication of work material for the development of the course.

Software

No specific software is expected to be used.

Language list

Name	Group	Language	Semester	Turn
(PLAB) Practical laboratories	201	Catalan	second semester	afternoon
(TE) Theory	20	Catalan	second semester	afternoon