Universitat Autònoma de Barcelona

2019/2020

Enterprise Resource Planning (ERP)

Code: 102147
ECTS Credits: 6

Degree	Type	Year	Semester
2501232 Business and Information Technology	OB	3	1
2501233 Aeronautical Management	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: No
Some groups entirely in Spanish: No

Other comments on languages

There is a significant amount of materials in Spanish

Teachers

Xavier Verge Mestre

Prerequisites

Although it is not compulsory, it is recommended to have previously studied the subjects 104609 - Business Process Management and 102148-Introduction to information systems. If this is not the case, it is important to have the following concepts clear:

- Processes and process management in an organization
- the basic concepts of information systems
- corporate management systems (ERP, CRM, SCM, BI, MES, KMS, etc.)

Attendance to face-to-face sessions from the beginning of the course is key to ensuring that SAP practices can be performed at the time and under the appropriate conditions. Failure to meet this requirement may entail the exclusion of practices.

Objectives and Contextualisation

The information systems and the technologies that support them interrelate with the various functional areas (production, human resources, accounting, finance and marketing) and provide the organization with flexibility and responsiveness for its competitiveness Therefore, it is necessary to train professionals with business and economic knowledge that not only dominate the technological processes of information management in organizations but also be able to integrate this knowledge to help the organization achieve its Goals and missions, improving management control; the quality and quantity of information available for decision making; and formulating new proposals for value generation.
Therefore, the basic objective of the subject is to give a clear vision of the role played by ERPs in business

management, as they add value to the business, what are the most common difficulties in their implementation and how to improve the probabilities that It's really a success.

Competences

Business and Information Technology

- Appropriately drawing up technical reports according to the customer's demands.
- Communicating with experts of other fields and non-experts.
- Demonstrating a comprehension of the business information systems, taking into account their three specific dimensions (informational, technological and organisational) and being active in the specification, design and implementation of said systems.
- Demonstrating a concern for quality in the objectives and development of the work.
- Demonstrating the ability to plan in accordance to the objectives and available resources.
- Developing in an effective way the analysis and design techniques and methodologies of information systems in a business environment.
- Students must be capable of analysing, summarising, organising, planning and solving problems and making decisions.
- Using the more effective and up-to-date technical means in oral and written communication.

Aeronautical Management

- Communication.
- Develop software of low or medium complexity.
- Personal work habits.
- Thinking skills.
- Use knowledge of the fundamental principles of mathematics, economics, information technologies and psychology of organisations and work to understand, develop and evaluate the management processes of the different systems in the aeronautical sector.

Learning Outcomes

1. Analyse the strategic use of information systems.
2. Analysing the strategic use of information systems.
3. Appropriately drawing up technical reports according to the customer's demands.
4. Assessing the effect of the design and architecture of an information system on the organisational structure of a big company or organisation.
5. Communicate knowledge and findings efficiently, both orally and in writing, both in professional situations and with a non-expert audience.
6. Communicating with experts of other fields and non-experts.
7. Configuring the architecture of an information system that gives support to an organisation in an integrated manner.
8. Demonstrating a concern for quality in the objectives and development of the work.
9. Demonstrating the ability to plan in accordance to the objectives and available resources.
10. Describing the main technological components on which the information support systems are based.
11. Detail the principal elements of the process of analysis and design of an organisation's information system.
12. Develop the ability to analyse, synthesise and plan ahead.
13. Explaining in detail the main elements of the process of analysis and design of an information system of an organisation.
14. Make efficient use of ICT in communicating ideas and results.
15. Manage time and available resources. Work in an organised manner.
16. Students must be capable of analysing, summarising, organising, planning and solving problems and making decisions.
17. Using the more effective and up-to-date technical means in oral and written communication.

Content

1. The world of ERP (Enterprise Resource Planning)
    - History of the ERP
    - MRP, MRP II and ERP
3. Structure and Typology of ERP's
    - Functions included (or integrated) - additional functions (or peripherals)
    - Common modules of an ERP
    - Interaction with business processes.
    - ERP's according to the activity and size of the company
    - Main ERP's manufacturers
5. Implementation of an ERP
    - Selection of ERP's. ERP versus custom programming
    - Parameterization and customization of ERP's
    - Integration with other company software.
    - Integration of data and management of teachers
    - TCO (Total Cost Ownership). Evaluation of the investment project derived from the acquisition, implantation and operation of an ERP
    - Change management in an ERP implementation.
    - Training of the human capital of the organization
7. Operation and maintenance of the ERP
    - Service management and ERPs
    - Outsourcing and relationships with service providers
    - Structure and Roles.
9. Computer technology and ERP's
    - Determination of the necessary capacity
    - Security management and the guarantee of the integrity of the data
    - On-premise vs. On-demand
    - On-site vs. Cloud

Methodology

Teacher-student relationship

The general and relevant information of the subject that details the contents of the teaching guide, such as the dates of continuous evaluation and dates and conditions of the deliveries of work, will be published in the virtual campus (or equivalent position) and may be subject to changes in programming for reasons of adaptation to possible incidents; always be informed in the virtual campus about these changes since it is understood that the virtual campus is the usual mechanism of exchange of information between teacher and student.

Languages

Classes will be conducted mostly in Catalan or Spanish although it is very common the appearance of terms in English. The written material or support to the subject (notes, bibliography, references or even statements of practices, exercises or cases) can be provided in Catalan or Spanish or in English and, in this case, the use of the English language may not be exceptional but usual. The exams will be written in Catalan or Spanish. The answers to the exams, tests and the exercises can be delivered (and if necessary presented) in Catalan, Spanish or English.

Teamwork

During the course, teamwork and the collaborative exchange of information and tools to solve problems will be encouraged. However, the final learning process must be individual, highlighted by the autonomous activity of each student, which should complement and enrich the work initiated to the sessions directed of the course. The supervised activity, around regulated tutoring and sporadic consultations carried out during the course, is also an essential tool in the acquisition of the knowledge provided by the subject.

Master classes, cases, seminars and classroom practices

Where the basic contents that students need to introduce themselves in the topics that make up the program are presented. Likewise, the possible ways to complete or deepen the information received in these sessions are indicated. During the sessions, the case method can also be used as a teaching tool, depending on the degree of student participation. Additionally, a series of seminars (conferences and talks) will be planned by experts from the sector who will present real experiences and which will serve as a complement to the discussion of the concepts explained in the classes and to promote related work.

Practices with SAP

Throughout the course, there will be a set of practices with different SAP modules where business processes will be reproduced with this tool. All the material and the software are in English. One part will be done in computerized classroom directed by the faculty and another part will be supervised work via tutorials.

Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Classroom practices	9	0.36	4, 10, 12, 11, 14, 16, 17
Laboratory practices (SAP)	10	0.4	2, 1, 12, 13, 11, 14, 3
Theoretical classes, cases and seminars	28	1.12	2, 4, 5, 7, 10, 12, 13, 11, 16
Type: Supervised			
SAP supervised practices	5	0.2	2, 1, 4, 9, 12, 13, 11, 14
Tutorials	15	0.6	2, 1, 4, 6, 5, 7, 9, 8, 10, 12, 13, 11, 14, 3, 16
Type: Autonomous			
Individual study	46	1.84	2, 1, 4, 9, 8, 10, 12, 3, 16
Teamwork and Case preparation	34	1.36	6, 5, 10, 13, 11, 14, 3

Assessment

The assessment is twofold:

1. Continuous assessment (60%) two parts:
    1. CA1: Laboratory Practices (30%).
        5 practices with SAP. A minimum of 2.5/10 is required in four practices, if this is not achieved, this part (CA1) is valued as zero
        Students who for any reason have not worked with SAP before will have to pass previous practices in order to be evaluated.
    3. CA2: Participation, Exercises and work (30%): Problem-based learning exercises, case discussion, individual or teamwork, presentation in class of the results and other tests that are determined. Class participation will also be valued.
3. Exams (40%):
    1. Partial exam, weighing 50% of the note (variable according to contingencies that did not allow the planned course)
    2. Final exam divided into two parts:
        Students who have not passed the first exam or want to raise their mark (with previous notification requesting it) can resist. The resulting grade will be the highest of the two exams.

The second part corresponds to the rest of the syllabus.
The grade from the part of the exams will be the weighted average of the two parts.

5. Calculation of the final grade:
    1. If AC> = 5, the final grade of the subject (N) will be: N = 40% (exams) + 60% (continuous assessment). The student passes the course if N>=5, and does not pass if N <3.5. In the intermediate case, the student can do the recovery process detailed below.
    2. If AC <5, fail the course, but if from the previous calculation [by placing AC the minimum between the grade obtained for the continuous assessment and 3], a value of N exceeding 3.5 is obtained, the student can go to the recovery process.

Calendar of evaluation activities

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

The dates of the midterm exam and final exam are 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 within the same academic period to 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 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 third. The recovery (UAB Academic Regulations). Additionally, it is required that the student to have achieved an average grade of the subject between 3.5 and 4.9.

The date of the retake exam will be posted in the calendar of evaluation activities of the Faculty. Students who take this exam and pass will get a grade of 5 for the subject. If the student does not pass the retake, the grade will remain unchanged, and hence, the student will fail the course.

Irregularities in evaluation activities

In spite of other disciplinary measures deemed appropriate, and in accordance with current academic regulations, *"in the case that the student makes any irregularity that could lead to a significant variation in the grade of evaluation activity, it will be graded with a 0, regardless of the disciplinary process that can be instructed. In case of various irregularities occur 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).***

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Continuous assessment: Exercices and	30	0	0	2, 1, 4, 6, 5, 7, 9, 8, 10, 12, 13, 11, 14,

Participation				15, 3, 16, 17
Exams	40	3	0.12	2, 1, 4, 7, 9, 8, 10, 12, 13, 11, 3, 16
Laboratory practices	30	0	0	2, 1, 4, 6, 5, 7, 9, 8, 10, 12, 13, 11, 14, 3, 16, 17

Bibliography

see virtual campus