Universitat Autònoma de Barcelona

2020/2021

Introduction to Information Systems

Code: 102148
ECTS Credits: 6

Degree	Type	Year	Semester
2501232 Business and Information Technology	OB	2	2

The proposed teaching and assessment methodology that appear in the guide may be subject to changes as a result of the restrictions to face-to-face class attendance imposed by the health authorities.

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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

Prerequisites

It is not mandatory but it is recommended to have passed IRPDA, Operating Systems and Databases before attending the course.

Objectives and Contextualisation

- Understand why information systems are essential in business and how they have transformed them.
  Appreciate the business benefits derived from the digital processing of the information.
  Be interested in how the Internet and the extensive use of ICT enable reconfiguration of traditional business models
- Differentiate applications or functionalities according to the basic types of information systems and determine the value they bring to management.
- Identify and prove how business processes are carried out through corporate management systems.
- Recognize the risks and dangers arising from digital dependence. In particular, why a critical spirit and an ethical commitment are necessary
- Be aware of ethical aspects and organizational efficiency derived from gender policies applied to the design, management and governance of information systems
- Learn to use specific tools in the fields of data analysis and the execution of business processes.

Competences

- 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.

- Developing critical thinking and reasoning and communicating them effectively both in your own and other languages.
- 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.
- Working in teams, sharing knowledge and communicating it to the rest of the team and the organisation.

Learning Outcomes

1. Communicating with experts of other fields and non-experts.
2. Defining the role of data management and data communication systems in an organisation.
3. Demonstrating a concern for quality in the objectives and development of the work.
4. Describing the main technological components on which the information support systems are based.
5. Developing critical thinking and reasoning and communicating them effectively both in your own and other languages.
6. Enumerating the characteristics of the main ways of using the information systems in the business management.
7. Explaining in detail the main elements of the process of analysis and design of an information system of an organisation.
8. Identifying the various types of information needs in an organisation.
9. Students must be capable of analysing, summarising, organising, planning and solving problems and making decisions.
10. Using the more effective and up-to-date technical means in oral and written communication.
11. Working in teams, sharing knowledge and communicating it to the rest of the team and the organisation.

Content

Topic 1: Information systems in the current global business

1. Data, information and knowledge. The value chain of information.
2. Typologies of Information Systems.
3. ICT Infrastructure Data centres and cloud.

Topic 2: Business processes and corporate management systems.

1. The business processes.
2. The Corporate Management Systems: ERP, CRM, SCM and PLM.
3. Systems integration.

Topic 3: Data analysis and support for control and decision making.

1. Business Intelligence.
2. Big data and data analytics.
3. Limits of Big Data in Social Sciences. Ethical considerations

Topic 4: Digital transformation.

1. Digital disruption. Business in Internet.
2. Sharing economy. Internet of things, smart cities and industry 4.0.
3. The new role of the CIO.

Topic 5: Security and ethical aspects related to information systems.

1. Integrity, availability and confidentiality.
2. Threats, Cybercrime, Hacktivists and APTs
3. Perimeter defence. Information security management systems.

4. Privacy, transparency and intellectual property

Topic 6: Management and Governance of information systems

1. Service Management Frameworks. Good practices and standards.
2. Legal compliance and regulatory framework.
3. Talent, inclusion, ICT diversity and Organization.
4. Information systems audit

Methodology

Teacher-students relationship

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

Languages

The classes will be done mostly in Catalan or Spanish, although the appearance of terms in English is very common. The written material or support for the subject (notes, bibliography, references or even statements of practices, exercises or cases) can be provided either in Catalan or Spanish or in English and in this case the use of the English language It can be not exceptional but usual. All tests and exams will be written in Catalan or Spanish. The answers to the tests and the exercises can be delivered (and if applicable) indistinctly in Catalan, Spanish or English.

Lectures, cases, seminars, and sessions for solving exercises

It is in these sessions that present the basic contents that students need to enter into the topics that make up the program. At the same time, they will indicate the possible ways to complete or deepen the information received in these sessions.

During the sessions, the case method can also be used as a teaching tool, depending on the degree of participation of the students. These sessions can be complemented with seminars, workshops and conferences conducted or supervised by the teaching team

Laboratory practices (SAP and others):

The sessions of laboratory practices will be used essentially SAP although the use of other tools is not discarded. Both the material of the practices andthe software will probably be in English. These practices will be partially carried out in a computer-aided classroom led by a teacher, and partially simply supervised through tutorials.

During the course, teamwork and the collaborative exchange of information and tools for solving problems will be encouraged. However, the final learning process must be individual, highlighted by the autonomous activity of each student, who will have to complement and enrich the work initiated in the course's directed sessions. The supervised activity, around regular tutorials and sporadic consultations carried out during the course, is also an indispensable tool in the acquisition of the knowledge that the subject provides.

Please note that the proposed teaching methodology may undergo some modifications according to the restrictions imposed by the health authorities on on-campus courses.

Activities

Title	Hours	ECTS	Learning Outcomes

Type: Directed			
Laboratory practices with SAP (and others)	10	0.4	2, 3, 4, 7, 8, 11, 10
Master classes, case studies and seminars	30	1.2	2, 3, 4, 7, 6, 8, 11, 10
Practices and sessions of resolution of exercises	8	0.32	2, 3, 4, 7, 8, 9, 11
Type: Supervised			
Completion of Practices with SAP (and others)	6	0.24	2, 3, 8, 11, 10
Tutorship	15	0.6	3, 9, 11
Type: Autonomous			
Homework	28	1.12	3, 4, 11, 10
Study	50	2	2, 4, 8

Assessment

General Conditions to Approve

- At least 5 out of 10 must be taken to pass

1. Continuous assessment (60%) two parts:
    1. CA1: Laboratory Practices (35%).
        5 practices with SAP. The first one is obligatory and overcoming it allows you to do the others and does not add a note. A minimum of 2.5/10 is required in three of the remaining four practices, if this is not achieved, this part (CA1) is valued as zero
    3. CA2: Participation, Exercises and work (25%): 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 in the week set by the dean. 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 part or want to raise a note (they must notify them beforehand) can be presented again in the first part. The resulting grade will be the highest of the two exams.
        The second part corresponds to the rest of the syllabus.
        The resulting 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 evaluation activities (exercises in the classroom, assignments, ...) will be announced well in advance during the semester.

The dates of the midterm and final exams 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).***

Final note: *The proposed evaluation activities may undergo some changes according to the restrictions imposed by the health authorities on on-campus courses.*

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Continuous Assesment 1: Practice (SAP and others)	35	0	0	2, 3, 7, 6, 8, 11, 10
Continuous Assessment 2: Participation, Exercises and Class work	25	0	0	1, 2, 3, 4, 5, 7, 6, 8, 9, 11, 10
Exams	40	3	0.12	2, 3, 4, 5, 7, 6, 8

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