270102 - NE - E-Business

Coordinating unit: 270 - FIB - Barcelona School of Informatics
Teaching unit: 732 - OE - Department of Management
Academic year: 2017
Degree: BACHELOR'S DEGREE IN INFORMATICS ENGINEERING (Syllabus 2010). (Teaching unit Optional)
ECTS credits: 6
Teaching languages: Catalan, Spanish

Teaching staff
Coordinator: - Ferran Sabate Garriga (ferran.sabate@upc.edu)

Prior skills
- Knowledge of organizations from different perspectives: organizational, legal and economic.
- Basic knowledge of information systems for companies, especially to know the concept of global business system (ERP).

Requirements
- Prerequisite SIO

Degree competences to which the subject contributes

Specific:
CSI1. To demonstrate comprehension and apply the principles and practices of the organization, in a way that they could link the technical and management communities of an organization, and participate actively in the user training.
CSI2.1. To demonstrate comprehension and apply the management principles and techniques about quality and technological innovation in the organizations.
CSI2.4. To demonstrate knowledge and capacity to apply systems based on Internet (e-commerce, e-learning, etc.).
CSI2.7. To manage the presence of the organization in Internet.
CSI3.4. To develop business solutions through the deployment and integration of hardware and software systems.
CSI3.5. To propose and coordinate changes to improve the operation of the systems and the applications.

General:
G1. ENTREPRENEURSHIP AND INNOVATION: to know and understand the organization of a company and the sciences which govern its activity; capacity to understand the labour rules and the relation between planning, industrial and business strategies, quality and benefit. To develop creativity, entrepreneur spirit and innovation tendency.
G8. APPROPRIATE ATTITUDE TOWARDS WORK: to have motivation to be professional and to face new challenges, have a width vision of the possibilities of the career in the field of informatics engineering. To feel motivated for the quality and the continuous improvement, and behave rigorously in the professional development. Capacity to adapt oneself to organizational or technological changes. Capacity to work in situations with information shortage and/or time and/or resources restrictions.
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Teaching methodology

The methods used are based on the PBL model (Problem Based Learning), resolution of cases, participatory activities and also traditional lectures. Multiple activities are conducted in groups following a stable structure of groups defined at the beginning of the course.

As a general rule is done one Theory+Problems session and one Laboratory session per week:
- Classes of theory and problems have the following dynamics: A first activity related to self-study activities entrusted to previous class, which allows control who has performed and worked into the subject. The following is a theoretical and/or practical work (a case resolution, a debate …) that is usually in groups.
- The laboratory classes also begin by monitoring the self-study activities when it is appropriate and they are oriented to work in the SCM and CRM workshops and in the e-Commerce project. Always they are worked in group.

Based on the dynamics of class it is calculated a note of participation and a note of self-study activities. Work in the laboratory -the two workshops and the project- is presented in public. These exhibitions are part of the standard evaluation process and also of the evaluation of generic skills.

Learning objectives of the subject

1. To describe the information systems that support the main business functions: sales-marketing, production, finance-accounting and human resources.
2. To evaluate the role of information systems serving the various administrative levels in the company and their interrelations.
3. Explain how enterprise applications and intranets facilitate the integration of business processes and improve the efficiency of the organization.
4. Assessing the impact of information systems in organizations.
5. Demonstrate how information systems help companies to use synergies, core competencies and network-based strategies to achieve competitive advantage.
6. Demonstrate how management systems of the customer relationship (CRM) makes it possible to integrate all the information relating to customers and make it available to the company; and be able to think of improving customer relations with the support of CRM systems.
7. Describe how enterprise applications can be used in platforms for new interfunctional services.
8. To demonstrate how the construction of new systems produce organizational change.
9. Evaluate models to determine the value of business information systems.
10. Identify the main factors driving the internationalization of business
11. Compare strategies for developing global business and understand how information systems can support these strategies.
12. Describe the reality of the use of systems and information technology to small and medium enterprises (SMEs)
13. Describe the various types of electronic commerce and how this has changed the retail consumer and business to business transactions.
14. To evaluate the role of mobile commerce in business and describe the major e-commerce applications.
15. Describe the unique features of e-commerce, digital markets, digital goods and new business models.
16. Compare the major payment systems for electronic commerce
17. Consider setting up an e-commerce solution on a specific electronic business model, integrating all the theoretical receipts on electronic commerce, using an open source tool
18. Ability to solve problems or projects medium-structured, characterized by a lack of information, the existence of time constraints and the ability to offer multiple solutions compatible with certain requirements for improvement, innovation and quality.
19. To encourage a high level of demand on the quality of the projects involved, and skills to promote their creation and management.
20. Encourage the practice of generating new solutions and vision to bring them to practice in the context of e-business improvement projects, considering their own restrictions and market ones, and trying to achieve innovative solutions in terms of processes or organizational innovations.
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21. Encourage the practice of having to count on others to take initiatives, making them share in your vision and your projects.
22. Demonstrate how systems supply chain management (SCM systems) coordinate planning, production and logistics with suppliers and be able to consider improvements in the supply chain with the support of SCM systems.
24. Explain the opportunities of globalization and why nowadays the information systems are so vital in business.

<table>
<thead>
<tr>
<th>Study load</th>
<th>Hours large group:</th>
<th>Hours medium group:</th>
<th>Hours small group:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total learning time: 150h</td>
<td>15h</td>
<td>15h</td>
<td>30h</td>
</tr>
<tr>
<td>Guided activities:</td>
<td>6h</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self study:</td>
<td>84h</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Study load

Total learning time: 150h

Hours large group: 15h 10.00%
Hours medium group: 15h 10.00%
Hours small group: 30h 20.00%
Guided activities: 6h 4.00%
Self study: 84h 56.00%
<table>
<thead>
<tr>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Module 1: e-Business and Information Systems and Electronics</strong></td>
</tr>
<tr>
<td><strong>Degree competences to which the content contributes:</strong></td>
</tr>
<tr>
<td><strong>1.1 The Information Society and the role of information systems in business at the present time</strong></td>
</tr>
<tr>
<td><strong>Degree competences to which the content contributes:</strong></td>
</tr>
<tr>
<td><strong>Description:</strong></td>
</tr>
<tr>
<td>It is explained the transforming capacity of information technologies and their implications in different areas of the Company. In this context emphasizes the fit between business and new forms of electronic communication, collaboration and partnership that allows the new IT and the Information Society that is configured.</td>
</tr>
<tr>
<td><strong>1.2 Type of enterprise information systems</strong></td>
</tr>
<tr>
<td><strong>Degree competences to which the content contributes:</strong></td>
</tr>
<tr>
<td><strong>Description:</strong></td>
</tr>
<tr>
<td>Systems are classified from two perspectives, the functional one and the users one. The interrelationship between systems is also described.</td>
</tr>
<tr>
<td><strong>1.3 Integrated enterprise systems</strong></td>
</tr>
<tr>
<td><strong>Degree competences to which the content contributes:</strong></td>
</tr>
<tr>
<td><strong>Description:</strong></td>
</tr>
<tr>
<td>It describes the business applications that supports, in an integrated, way the information needs of the company. It also presents the role of intranets and extranets to make possible the e-business, e-commerce and e-government.</td>
</tr>
<tr>
<td><strong>1.4 Influence of information systems in organizations: understanding impacts, obtaining competitive advantages and organizational change</strong></td>
</tr>
<tr>
<td><strong>Degree competences to which the content contributes:</strong></td>
</tr>
<tr>
<td><strong>Description:</strong></td>
</tr>
<tr>
<td>On the one hand, it is analyzed the economic, organizational and behavior impact of information systems and the Internet. On the other hand, some business concepts such as the Porters' model, chain value, system value are recalled, to have a framework in which to think how information systems and the Internet can help you gain competitive advantages. Finally, we discuss the organizational change that involves the introduction of a business</td>
</tr>
<tr>
<td><strong>1.5 Systems for managing the supply chain (SCM systems)</strong></td>
</tr>
<tr>
<td><strong>Degree competences to which the content contributes:</strong></td>
</tr>
</tbody>
</table>
1.6 Systems for managing the relationship with the customer (CRM systems)

**Degree competences to which the content contributes:**

**Description:**
We present the concept of supply chain and depth: 1) the information relevant to its administration, 2) in applications to support their management and 3) the role of the Internet. Finally we reflect on how to improve business value using SCM systems.

1.7 Establishment of the financial value of information systems

**Degree competences to which the content contributes:**

**Description:**
It explains how to approach the financial value of an investment in information systems. Concepts of costs, benefits and capital budgeting are introduced. The financial limitations of the models are also debated.

1.8 Introduction to international information systems for global business

**Degree competences to which the content contributes:**

**Description:**
We present the main strategies for establishing global business, the necessary changes in the organization and the organization of information systems to global systems.

1.9 Information systems for small and medium enterprises (SMEs)

**Degree competences to which the content contributes:**

**Description:**
Small and Medium Enterprises have specific factors and limitations for managing and using information systems. In this context, some strategies are explained in order to make possible for small and medium enterprises to access and use advanced information systems.

Module 2: E-commerce: digital markets and digital goods

**Degree competences to which the content contributes:**

2.1 Electronic commerce and Internet
### 2.2 e-Commerce models

**Degree competences to which the content contributes:**

**Description:**
An overview of the different models of electronic commerce is exposed, with particular emphasis on B2B and B2C models.

### 2.3 The mobile commerce

**Degree competences to which the content contributes:**

**Description:**
According to the increasing importance of mobile commerce the main services and applications are presented. In addition its challenges are debated. Solutions to the problem of accessing to the information from the Webwirelessly is also commented.

### 2.4 Payment Systems for e-Commerce

**Degree competences to which the content contributes:**

**Description:**
Payment systems for e-commerce and m-commerce
## Planning of activities

| A0. Presentation of the subject and training group | Hours: 2h  
Theory classes: 1h  
Practical classes: 1h  
Laboratory classes: 0h  
Guided activities: 0h  
Self study: 0h |
| --- | --- |
| **Description:**  
Take note of the dynamic performance and doubts | |
| **Specific objectives:** | 24 |
| A1.1 The Information Society and the role of information systems in business at the present time | Hours: 3h 30m  
Theory classes: 1h  
Practical classes: 1h  
Laboratory classes: 0h  
Guided activities: 0h  
Self study: 1h 30m |
| **Description:**  
Group work on the case Accenture | |
| **Specific objectives:** | 1, 2 |
| A1.2 Type of enterprise information systems | Hours: 3h 30m  
Theory classes: 0h 30m  
Practical classes: 1h  
Laboratory classes: 0h  
Guided activities: 0h  
Self study: 2h |
| **Description:**  
Group work on the case of the "Interactive Session on page 55 of the book of support" | |
| **Specific objectives:** | 3 |
| A2 e-Commerce project | Hours: 46h 30m  
Theory classes: 0h  
Practical classes: 0h  
Laboratory classes: 16h  
Guided activities: 1h  
Self study: 29h 30m |
<table>
<thead>
<tr>
<th>Description</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implement the electronic store using the PrestaShop module proposed for each session, with the support of a working guide</td>
<td>4h 30m</td>
</tr>
<tr>
<td>Case Discussion (base or alternative)</td>
<td>4h 30m</td>
</tr>
<tr>
<td>Group work to integrate individual solutions resulting from self-study activities.</td>
<td>4h 30m</td>
</tr>
<tr>
<td>Working Group on the Whirlpool case, SCM Workshop</td>
<td>15h</td>
</tr>
</tbody>
</table>

### A1.3 Integrated enterprise systems

**Description:**
Implement the electronic store using the PrestaShop module proposed for each session, with the support of a working guide.

**Specific objectives:**
13, 14, 15, 16, 17, 18, 19, 20, 21

#### Hours:
- Theory classes: 1h
- Practical classes: 1h
- Laboratory classes: 0h
- Guided activities: 0h
- Self study: 2h 30m

### A1.4 Influence of information systems in organizations: understanding impacts, obtaining competitive advantages and organizational change

**Description:**
Case Discussion (base or alternative)

**Specific objectives:**
4

#### Hours:
- Theory classes: 2h
- Practical classes: 0h
- Laboratory classes: 0h
- Guided activities: 0h
- Self study: 2h 30m

### A1.5 Systems for managing the supply chain (SCM workshop)

**Description:**
Working Group on the Whirlpool case, SCM Workshop

**Specific objectives:**
5, 7, 18, 19, 20, 21, 22

#### Hours:
- Theory classes: 2h
- Practical classes: 2h
- Laboratory classes: 4h
- Guided activities: 1h
- Self study: 6h
### NTallerSCM - Presentations at the workshop for SCM

**Hours:** 5h  
Guided activities: 2h  
Self study: 3h

**Description:**  
Each group makes a public presentation of work done in the workshop SCM

**Specific objectives:**  
5, 7, 18, 19, 20, 21, 22

### A1.6 Systems for managing the relationship with the customer (CRM)

**Hours:** 15h  
Theory classes: 2h  
Practical classes: 2h  
Laboratory classes: 4h  
Guided activities: 1h  
Self study: 6h

**Description:**  
Working Group on the case IHop, CRM Workshop

**Specific objectives:**  
5, 6, 7, 18, 19, 20, 21

### NTallerCRM - Presentations at the workshop for CRM

**Hours:** 5h  
Guided activities: 2h  
Self study: 3h

**Description:**  
Each group makes a public presentation of work done in the workshop CRM

**Specific objectives:**  
5, 6, 7, 18, 19, 20, 21

### A1.7 Establishment of the financial value of information systems

**Hours:** 3h 30m  
Theory classes: 1h  
Practical classes: 1h  
Laboratory classes: 0h  
Guided activities: 0h  
Self study: 1h 30m

**Description:**  
Group work on a case (or base alternative)

**Specific objectives:**  
9
### A1.8 Introduction to international information systems for global business

**Hours:** 3h 30m  
Theory classes: 1h  
Practical classes: 1h  
Laboratory classes: 0h  
Guided activities: 0h  
Self study: 1h 30m

**Description:**  
Debate: aspectos éticos e implicaciones sociales; Trabajo en grupo sobre un caso (base o alternativo)

**Specific objectives:**  
10, 11

### A1.9 Information systems for small and medium enterprises (SMEs)

**Hours:** 3h 30m  
Theory classes: 1h  
Practical classes: 1h  
Laboratory classes: 0h  
Guided activities: 0h  
Self study: 1h 30m

**Description:**  
Work in groups on a case (base or alternative)

**Specific objectives:**  
12

### NProjecteE-Commerce - Public presentation of the proposed e-Commerce (1st round)

**Hours:** 4h 30m  
Guided activities: 2h  
Self study: 2h 30m

**Description:**  
Each group makes a public presentation of the proposed e-Commerce

**Specific objectives:**  
13, 14, 15, 16, 17, 18, 19, 20, 21

### NProjecteE-Commerce - Public presentation of the proposed e-Commerce (2nd round)

**Hours:** 4h 30m  
Guided activities: 2h  
Self study: 2h 30m

**Description:**  
Each group makes a public presentation of the proposed e-Commerce

**Specific objectives:**  
13, 14, 15, 16, 17, 18, 19, 20, 21
### NExamen - Review

<table>
<thead>
<tr>
<th>Hours: 25h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guided activities: 2h</td>
</tr>
<tr>
<td>Self study: 23h</td>
</tr>
</tbody>
</table>

**Description:**
Examination of the contents of the course

**Specific objectives:**
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 22, 24

### Revision of examen

<table>
<thead>
<tr>
<th>Hours: 1h</th>
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</thead>
<tbody>
<tr>
<td>Theory classes: 0h</td>
</tr>
<tr>
<td>Practical classes: 0h</td>
</tr>
<tr>
<td>Laboratory classes: 0h</td>
</tr>
<tr>
<td>Guided activities: 1h</td>
</tr>
<tr>
<td>Self study: 0h</td>
</tr>
</tbody>
</table>

**Description:**
Request review of examination
Qualification system

Elements of evaluation:
- NSeg: Note for the realization of self-study and class participation at individual level.
- NTallerSCM: Note for the creation and presentation of workshop SCM, which is done in group but evaluate at individual level.
- NTallerCRM: Note for the creation and presentation of workshop CRM, which is done in group but evaluate at individual level.
- NProjecteE-Commerce: Note for the creation and presentation of e-Commerce project, which is done in group but evaluate at individual level.
- NExamen: Note the final exam

The final grade is calculated as follows:
NF = 20% * NSeg + 12,5% * NTallerSCM + 12,5% * NTallerCRM + 30% * NProjecteE-Commerce + 25% * NExamen

Regarding the assessment of generic skills of the subject (and CG1.2 CG8.3) they will be based on one or more activities and their public presentation. The activities that the teacher determined to make their evaluation may be: the SCM workshop, the CRM workshop and/or the e-Commerce project. The evaluation of the activities chosen will have a note based on three components, namely: 1) a note for evaluating the content at group level; 2) a note focused on individual indicators to assess the generic skill “CG1.2-entrepreneurship and innovation”; and 3) a note focused on individual indicators to assess the generic skill “CG8.3-Proper Attitude at work.” For the specific skill C8.3 will also be considered the note for the self-study activities, the participation one (NSeg) and the exam one (NExamen). It will be necessary to attend the exam to get the grade “A” in the skill CG8.3

Notes for general skills take the values: A, B, C, D, as:
> A if the note is netween 8.5 to 10
> B if the note is between 6.5 and 8.4
> C if the note is between 5 and 6.4
> D if the grade is between 0 and 4.9

The qualification of "not presented" is awarded when the student has participated in a number of assessment activities that have, as a whole, weighing not more than 12.5% of the final grade.

Bibliography

Basic: