IN TRODUCTION TO IT

1. SUBJECT DESCRIPTION

Information Technology (IT) is the study, design, development, implementation, support or management of computer-based information systems, particularly software applications and computer hardware. IT deals with the use of electronic computers and computer software to convert, store, protect, process, transmit, and securely retrieve information. When computer and communications technologies are combined, the result is Information Technology (IT).

In recent decades widespread incorporation of IT into many tiers of business, political processes and everyday life has caused fundamental restructuring of the global economy. IT has increased international interconnectedness and speed up the process of globalization. IT has been key factor in the information revolution, facilitating the transition from industrial economies, driven by the manufacturing sector, to knowledge economies.

IT, in conjunction with globalization and the information revolution, has reshaped the workforce. By increasing the speed of international communication IT has enabled corporations to outsource jobs, both in the manufacturing as well as white collar sectors. While this lowers production costs and as a result the cost of goods, it has also had fundamental and often detrimental impacts on labour conditions.

The course introduces you to information technology, computers, and computer networks and their application in the enterprise. By the end of this course, you will have a sound but basic understanding of information technology, how computers are used in the enterprise, how communications systems can help boost productivity, and how the World Wide Web can influence the way of doing business.

2. OBJECTIVES AND SKILLS

At the end of this course and having completed the activities the students should be able to:

- Have a solid understanding of the role of information technology including its history, application, benefits and costs in our organizations and society.
- Be able to make informed decisions regarding the use of information technology.
- Be able to safely utilize information technology to meet organizational goals.

3. METHODOLOGY AND WEIGHTING
### TEACHING METHODOLOGY

<table>
<thead>
<tr>
<th></th>
<th>WEIGHTING</th>
<th>TIME DEDICATION</th>
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<tbody>
<tr>
<td>Lectures</td>
<td>(20)%</td>
<td>14 hours</td>
</tr>
<tr>
<td>Discussions</td>
<td>(10)%</td>
<td>6 hours</td>
</tr>
<tr>
<td>Individual studying and assignments</td>
<td>(30)%</td>
<td>20 hours</td>
</tr>
<tr>
<td>Group work</td>
<td>(40)%</td>
<td>30 hours</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td>100%</td>
<td><strong>75 hours, for 3 ECTs (15 sessions)</strong></td>
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### 4. CONTENT

#### PROGRAM

The course is organized in four areas:

1. IT in the companies
2. Security
3. Social Media and business
4. Present and Future trends

The first part of the course provides you a brief overview of the IT market, illustrated with some ‘well known’ examples. The second part will allow you to know some of the most relevant aspects in security. The third part will deal with the social media phenomenon and its impact on the business world. Finally, we will take a look at the present and future through some innovative ideas: SEO, Cloud Computing, mobility and the Internet of Things. This wide range of new ways opens a new world of possibilities for entrepreneurship.

**SESSION 1 - COURSE INTRODUCTION. CHANGES EVERYWHERE**

- Course Introduction
- Welcome to the New economy
- Examples in various business activities. Start-ups
- Data, Information, Information systems, databases, servers
- The concept of information systems from the business

**1. IT IN THE COMPANIES**

**SESSION 2 – IT EVOLUTION, HOW MUCH IT DO WE NEED?**

- Evolution of Information Technology.
- Different types of IS, IT impact on business and IT as a business enabler
- IT strategic alignment with the business.
- Management Information Systems: ERP, CRM, SCM.

**SESSION 3 – CASE METHODOLOGY**

- Dealing with a case related to IT
- Backgrounds and keys of the case method

**SESSION 4 – HOW TO DEVELOP AN INTERNET STRATEGY IN YOUR COMPANY**

- Internet as a sales channel real: some conclusive figures.
- Sources of revenue: advertising, direct marketing...
- Definition of Internet strategy
- Alignment with International company's strategy
- What to sell? Main characteristics of the goods and services sold online. Relevant sectors.
- E-commerce common applications

**SESSION 5 - MANAGE THE DEVELOPMENT AND ACQUISITION OF SI**

- Alternative approaches to the implementation of systems
- Project management involving the selection of packaged software.
Developing, Buying, Renting?
Open Source and Software as a Service (SaaS)

SESSION 6 - THE IMPLEMENTATION OF AN ERP
- Features and objectives of an ERP
- Decision making based on ERP
- Change management and organizational impact
- Major obstacles and solving problems in the implementation
- Management models for the industry: Frameworx (TM Forum), ITIL y TOGAF

SESSION 7 - CUSTOMER RELATIONSHIP MANAGEMENT
- Key concepts in CRM to understand and implement a customer-centric strategy
- Database and data warehouse
- Business Intelligence and the new consumer

2. SECURITY

SESSION 8 – SECURITY IN INFORMATION SYSTEMS
- Security technologies (firewalls, encryption, digital signatures, virtual private networks, etc.)
- Systems and security policies
- Protection of privacy
- Privacy in the networked economy
- Electronic Payment Systems
- Security issues from a legal standpoint, organizational and ethical
- Basic principles of safety, secure access and protection at the Internet

SESSION 9 - LEGAL FRAMEWORK FOR ELECTRONIC COMMERCE
- Data protection
  - The legal principles: information, consent, access of third parties etc.
  - Requirements of information security
- Legal status of online advertising: recent developments
- Other applicable law: Copyright, electronic signature, etc.

3. SOCIAL MEDIA AND BUSINESS

SESSION 10 – SOCIAL MEDIA
- Where is the information? "Official" media face of weblogs. What is a weblog? Is it hard to put a blog together? Collective Blogs, Web 2.0 and Web 3.0
- Definition of Social Media
- The creation of online or social networks
- Social media business-oriented: Twitter and Facebook for business, attention economy, the advent of Google+, LinkedIn: professional network

4. PRESENT AND FUTURE TRENDS

SESSION 11 – SEO AND POSITIONING
- Internet marketing
- Advanced analytics
- Contextual and social experience of the user: contextual computing
- CAC (Context-aware computing): GPS, NFC, code reading, augmented reality, proactive alerts or m-commerce
- Collaborative decisions: adoption of social applications and monitoring processes

SESSION 12 - CLOUD COMPUTING
- What is cloud computing?
- Cloud computing deployment and services
SaaS, IaaS, PaaS
Security
An example: Salesforce

SESSION 13 - MOBILITY
- Just What is Mobility? Customer Views
- Business Mobility Solutions

SESSION 14 – THE INTERNET OF THINGS
- What’s the Internet of Things?
- State of the art of the IoT
- Challenges and limitations of the IoT
- Future of IoT

SESSION 15 - GROUP WORK: FINAL PRESENTATION.

Analysis and description of a real case and evaluation of their IT and on-line strategy in all areas discussed during the course.

5. EVALUATION SYSTEM (ORDINARY AND EXTRAORDINARY)

This course requires students to attend, at least, to the 70 % of the sessions. You will be asked to make written and verbal presentations and take an active role in class discussions. The evaluation is based on the following criteria:

<table>
<thead>
<tr>
<th>Activities</th>
<th>Score</th>
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<tbody>
<tr>
<td>Work on the case studies</td>
<td>30%</td>
</tr>
<tr>
<td>Class participation</td>
<td>15%</td>
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<tr>
<td>Final exam</td>
<td>20%</td>
</tr>
<tr>
<td>Volunteer work</td>
<td>5%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
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Individual:

Group:

- Final presentation 35%

A. CLASS PARTICIPATION
Students must attend, at least, 70% of all classes and participate in class discussions. The rating of the class participation is based on two aspects, the presence and contributions to class discussions. Contributions on class discussions will focus on quality, not quantity of the contribution, so that students who participate often do not necessarily receive a better rating than those who participate less frequently. Therefore, students are encouraged to start contributing to the discussions since the beginning of the course.

For this course, consider the cases and the documentation just a starting point. Feel free to update, add additional data or analysis to the discussion, or ask questions in the light of recent news or the news the read.

B. GROUP CASE WRITE-UPS
For each write-up, there is an upper limit of three pages of text (assuming 11-point font size, Times New Roman, double spacing) plus no more than one page of exhibits. A hard copy of the document must be delivered to the professor in class before the deadline. You also have to send a soft copy of the case write-up to the professor via email.
Make sure the case write-up is easy to read. Consider using bullets, headings, etc., to make the case write-up easy to follow. The objective of this process it to give you practice writing concise executive summaries – something that would make the reader believe that you have done a thorough analysis supporting your recommendations. This is the type of briefing that must typically be prepared for upper management – before they provide the resources for a more detailed investigation.

Good case briefs are concise, but also provide a fact-based rationale for your recommendations and implementation plan. The rationale should reflect a good understanding of the important issues of the case and may integrate previous material from the class or your experience. You might also note factors that argue against your recommendation, and how your implementation plan might minimize the impact of these factors.

C. FINAL GROUP PRESENTATION AND REPORT
You are also expected to complete a final project with your group and present it in written form. The project will give you the opportunity to reflect on what you have learnt in class and apply it to some practical problems. More details of the project will be provided by the start of the course.

D. FINAL EXAM
The Final Exam will focus on the concepts defined throughout the course. Detailed instructions will be provided during the course.

RETAKE POLICY

- Each student has 4 chances to pass any given course distributed in two consecutive academic years (regular period and July period).
- Students who do not comply with the 70% attendance rule will lose their 1st and 2nd chance, and go directly to the 3rd one (they will need to enrol again in this course next academic year).
- Grading for retakes will be subject to the following rules:
  - Students failing the course in the first regular period will have to do a retake in July (except those not complying with the attendance rules, which are banned from this possibility).
  - Dates and location of the July retakes will be posted in advance and will not be changed. Please take this into consideration when planning your summer.
  - The retake will consist on:
    - If you have participated in the process of continuous evaluation (assignments, final presentation) the extraordinary exam will have a weight of 30%. The final grade for the subject will take into account the grade achieved during the period of continuous evaluation (70%) and the grade achieved in the extraordinary exam (30%).
    - If you have not participated in the process of continuous evaluation you will take the exam with a maximum value of 80% of the final grade for the subject. In this case, the maximum grade that you can achieve will be 8.
    - Even if you have participated in the continuous evaluation process, the final grade could be calculated according to the second paragraph if you request it formally before sitting the exam.
    - Those students who have not handed me in the assignments and have not participated in the final presentation will only have available the second option.
  - The maximum grade that a student may obtain in the retake will be 8 out of 10.

6. USE OF ELECTRONIC DEVICES IN CLASS
This subject does not require the use of a laptop in class; nevertheless, if you want to bring your laptop, please contact your professor. Just in case a connection was required, the professor will let you know in advanced. The use of Wi-Fi for activities not related to this class will hinder your grade on participation.