Universitat de Lleida

DEGREE CURRICULUM

TECHNOLOGICAL BUSINESS MANAGEMENT AND ENTREPRENEURSHIP

Coordination: ESCRIBÀ GARRIGA, JOSEP

Academic year 2019-20

TECHNOLOGICAL BUSINESS MANAGEMENT AND ENTR... 2019-20

Subject's general information

Subject name	TECHNOLOGICAL BUSINESS MANAGEMENT AND ENTREPRENEURSHIP
Code	103082
Semester	2nd Q(SEMESTER) CONTINUED EVALUATION
Typology	

Degree	Course	Character	Modality
Master's Degree in Informatics Engineering	1	COMPULSORY	Attendance-based

Course number of credits (ECTS)	6
Type of activity, credits, and groups	

Activity type	PRAULA	TEORIA
Number of credits	3	3
Number of groups	1	1

Coordination	ESCRIBÀ GARRIGA, JOSEP
Department	BUSINESS ADMINISTRATION
Teaching load distribution between lectures and independent student work	30% of the time are lectures (3 hours/week) and 70% is based on autonomous work (105 hours).
Important information on data processing	Consult this link for more information.
Language	English
Distribution of credits	Josep Escribà Garriga (6 ECTS)
Office and hour of attention	Hours of attention: To be arranged with the student Margarita Moltó Aribau Office: 1.19 Josep Clotet Sopeña Angel Ros i Domingo Office: 1.07

TECHNOLOGICAL BUSINESS MANAGEMENT AND ENTR... 2019-20

Teaching staff	E-mail addresses	Credits taught by teacher	Office and hour of attention
ESCRIBÀ GARRIGA, JOSEP	josep.escriba@udl.cat	6	

Subject's extra information

This course aims to analyze the development of an IT idea business under a strategic management orientation. First of all, It presents the planification of information systems, as a first step to approach to the overall strategic planning of the company.

Moreover, It works in several management skills, necessary for any professional engineering who wants to develop management position in companies.

Although It is not necesary having previous knowledge of business management, they can be very useful.

Learning objectives

- Analyze the role of information technology and communications in companies and institutions.
- Learning to make a strategic analysis of a company in the technology sector.
- Learning to make a plan of technologies from the perspective of strategic planning.
- Present different methodologies to analyze the environment and competition.
- Evaluate the technology plan from an economic and finantial point of view
- Integrating the technology plan in the strategic plan of the company.
- Develop management skills.

Competences

Strategic Competences of University of Lleida according to the "Plan Director de la Docencia" approved by the Council of Government of UdL on July 10th, 2007.

- **UdL3:** Master Information and Communication Technologies.
- **UdL4.** To respect the fundamental rights of equality between men and women, the promotion of the Human Rights and the principles of a culture of peace and democratic values.

Cross-disciplinary Competences approved by the Plenary Commission of the Degrees of Industrial Engineering, Computer Engineering and Building Engineering, gathered on June 16th, 2008

- **EPS4.** Capacity to conceive, design and implement projects and/or contribute to new solutions, using engineering tools.
- **EPS5.** To be motivated for the quality and steady improvement.

General Competences that the students have to acquire according to Resolution June 8th, 2009, of the General Office of Universities.

- **CG1:** Capacity to project, calculate and design products, processes and installations in all fields of Computer Engineering.
- **CG2:** Capacity to manage computing systems works and installations, in compliance with current regulations, and assure quality service.
- **CG3:** Capacity to manage, plan and supervise multidisciplinary teams.
- **CG5**. Capacity to elaborate, strategically plan, manage, coordinate and technically and economically

manage projects in all fields of computer engineering following quality and environmental criteria.

- **CG7.** Capacity to implement and manage computer equipment manufacturing processes, guaranteeing personal and material safety, the final quality of products and their homologation.
- **CG9.** Capacity to understand and apply ethical responsibility, legislation and professional ethics in computer engineering activities.
- **CG10:** Capacities to apply economic principles, manage human resources and projects, and comply with computer legislation, regulation and normalization.

Basic Competences that the students have to acquire according to the real ordinance 861/2010, Annex I section 3.3.

- **CB2**. That the students can apply their knowledge and their ability to solve problems in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their field of study.

Specific competences that the students have to acquire according to Resolution June 8th, 2009, of the General Office of Universities

- **CE1:** Capacity for the integration of technologies, applications and computer engineering systems, in general and in wider and multidisciplinary contexts.
- **CE2.** Capacity for the strategic planning, preparation, direction, coordination, and technical and economic management in the fields of the computer engineering in: systems, applications, services, networks, infrastructures or computer installations and centres or factories of software development, complying with the suitable fulfilment of the quality criteria and multidisciplinary working environments.
- **CE3.** Capacity for the direction of research, development and innovation projects, in companies and technological centres, with guarantee of security for people and resources, the final quality of the products and his certification.
- **CE6.** Capacity to ensure, manage, audit and certify the quality of the developments, processes, systems, services, applications and computer products.
- **CE8.** Capacity to analyse the information needs that arise and to carry out all the stages of the process of construction of an information system.

Subject contents

1. Business ideas and their strategic viability
   - 1.1 Traditional company vs. ITC
   - 1.2 Evaluation of business ideas: Canvas Model

2. The strategic plan of the company
   - 2.1 Definition of the company Mission, vision and values
   - 2.2 General environment analysis: PEST
   - 2.3 Analysis of the specific environment: Porter's competitive forces
   - 2.4 Strategic diagnosis: SWOT matrix

3. The Value Chain Porter model
   - 3.1 Value chain concept
   - 3.2 Role of technologies in the value chain

4. The Technology Plan based on the Strategic Business Plan
   - 4.1 Methodology
   - 4.2 Results and monitoring of a Technology Plan

4.3 Time and cost planning

5. Economic-financial structure of the business idea
    5.1 Financial information and balance sheet
    5.2 Income and expense forecasts: income statement
    5.3 Financial information of the business idea

6. Evaluation of investment alternatives and cost analysis
    6.1 Estimation of costs of the business idea
    6.2 Methods of evaluation of business ideas
    6.3 Analysis of the viability of the business idea

7. Management skills
    7.1 Presentation of ICT ideas projects
    7.2 Oratory
    7.3 Leadership
    7.4 Elevator pitch

Methodology

The groups, which have been working in a project about an IT bussines idea, continue working in the same idea but from a strategic management point of view.

Teaching methodology is based on project-based learning, through which, based on a proposed business technology idea, the theoretical topics of the course are developed. This project is carried out in coordination with two other master's courses: IT Project management and ICT Project: Development and implementation (both in the first semester).

Every week, each student will receive:

- Three hours of class attendance. Lectures are organized by theoretical explanations accompanied by illustrative examples and problem solving in the first part, ending with practical exercices in the second part. Groups can apply in their project the explained theory. As a support material of the class, we will follow the course slides.

- Other support materials to follow the topict in a non-attendance way.

Requirements:

- Canvas bussines model
- Strategic analysis of the IT idea
- SWOT analysis of the proposal
- Technological Plan
- Value chain of the proposal
- Analysis of feasibility
- Proposal of technical and economic solution

Through the semester will combine theoretical and practical sessions that aim to facilitate the learning process of the student.

Development plan

The course is based on continuous work throughout the semester and the final objective will be to maturity and presentation of innovative business idea based on ICT. This project will be progressively developed over thesemester by approximately fortnightly deliveries practice written and oral presentations.

These deliveries are scheduled as follows:

Week	Assessment activity
2	**Assignment 0:** Business Model Canvas
5	**Assignment 1:** Design of the Strategic Plan
7	**Assignment 2:** Value chain
9	**Assignment 3:** The Plan of Tecnology. final proposal to develope
11	**Assignment 4:** Economic evaluation of the Plan of Technology
13	**Assignment 5:** Feasibility Analysis of the Plan of Technology
15	**Assignment 6:** Elevator Pitch

Evaluation

The subject can be overcome by two methods of evaluation:

1. CONTINUOUS EVALUATION:

It will build on the work experience / presentations throughout the course. Either of these practices can be recovered throughout the semester. All practices are recoverable. From the deliveries made in the virtual campus and suggestions professors will be made for the professors in order to improve the work. Students may decide to include or not these suggestions in newer versions of the same practice. The incorporation of these reviews will be considered positively in the final practice mark. If a student fails the continuous assessment system or want to improve their final qualification may always do the classroom exams.

- Assignment 0 (10%): Business Model Canvas
    - Se avaluará:
        - Aplicación del BMC a la idea de negocio
        - Discusión de la tipología de empresa que se propona
    - Evaluadores: profesores de la assignatura
- Assignment 1 (20%): Design of the Strategic Plan of a business idea
    - It will be assessed:
        - Application of theoretical concepts: economic sectors, applying their ICT Sectors
        - Mission, Vision and Values of the company
        - Development of a Strategic Plan
        - Analysis of the environment (PEST)
        - Competitive Analysis (basic competitive forces of Michael Porter)
        - SWOT diagnostic methodology
        - Proposal for strategic lines
        - Presentation of the strategic plan
    - Reviewers: teachers of the subject
- Assignment 2 (20%): Value chain
    - It will be assessed:
        - Application of theoretical concepts: value chain
        - Classification of business activities within the value chain
        - Identification of activities that add value
        - Defining the value chain of the company
    - Reviewers: teachers of the subject
- Practice 3 (15%): Technology Plan of the company
    - It will be assessed:
        - Application of theoretical concepts: development technology plan
        - Technological detail of the business idea
        - Assign activities to the plan technology resources
    - Reviewers: teachers of the subject
- Assignment 4 (10%): Economic evaluation of the Technology Plan

        - It will be assessed:
            - Application of theoretical concepts: investment and classification of expenditures and revenues associated with a business idea.
            - Economic quantification of the initial investment
            - Estimated revenue and associated costs
    - Evaluators; teachers of the subject
- Assignment 5 (15%): Feasibility analysis of the Technology Plan
    - It will be assessed:
        - Application of theoretical concepts: evaluation of investment projects
        - feasibility analysis of the business idea (classical methods)
        - Presentation of the feasibility study
    - Reviewers: teachers of the subject
- Assignment 6 (10%): Elevator Pitch
    - It will be assessed:
        - Presentation of the proposal
        - Presentation of the team
        - Economic aspects of the proposal
    - Reviewers: teachers and external teachers of the subject

Assessment activity	Weighting	Week
Assignment 0: Business Model Canvas	10	2
Assignment 1: Design of the Strategic Plan	20	5
Assignment 2: Value chain	20	7
Assignment 3: The Plan of Technology. final proposal to develop	15	9
Assignment 4: Economic evaluation of the Plan of Technology	10	11
Assignment 5: Feasibility Analysis of the Plan of Technology	15	13
Assignment 6: Elevator Pitch	10	15

2. EXAM ATTENDANCE:

- Part 1: 50% of the final grade
- Part 2: 50% of the final grade
- Recovery: be recovered each separate partial and total course

Bibliography

Anderson, D (2010): *Kanban: Successful Evolutionary Change for Your Technology Business.* Ed Blue Hole Press

Barringer, Bruce, and R. Duane Ireland. *Entrepreneurship: Successfully Launching New Ventures*. 4th ed. Prentice Hall Entrepreneurship Series. Upper Saddle River NJ: Prentice Hall, 2012.

Drucker, P. (1999): Management Challenges for the 21st Century, Ed. Norma.

Kaplan, R; Cooper,R. (2002): Cost & Effect: Using Integrated Cost Systems to Drive Profitability and Performance. Ed Gestión 2000, 2a edición.

Porter, M.E. (2008) "The Five Competitive Forces That Shape Strategy", *Harvard Business Review*, January 2008, pp. 79–93.

Adaptations to the methodology due to COVID-19

The groups, which have been working in a project about an IT bussines idea, continue working in the same idea

but from a strategic management point of view.

Teaching methodology is based on project-based learning, through which, based on a proposed business technology idea, the theoretical topics of the course are developed. This project is carried out in coordination with two other master's courses: IT Project management and ICT Project: Development and implementation (both in the first semester).

Every week, each student will receive:

- The class attendance wil be online through the videoconferences platform in the Virtual Campus website. Lectures are organized by theoretical explanations accompanied by illustrative examples and problem solving in the first part, ending with practical exercices in the second part. Groups can apply in their project the explained theory. As a support material of the class, we will follow the course slides.
- Other support materials to follow the topict in an online way: videos, recorded sessions and links.

Adaptations to the development plan due to COVID-19

The course is based on continuous work throughout the semester and the final objective will be to maturity and presentation of innovative business idea based on ICT. This project will be progressively developed over thesemester by approximately fortnightly deliveries practice written and oral presentations.

These deliveries are scheduled as follows:

Week	Assessment activity
2	**Assignment 0:** Business Model Canvas
6	**Assignment 1:** Design of the Strategic Plan
9	**Assignment 2:** Value chain
12	**Assignment 3:** The Plan of Tecnology. final proposal to develope
17	**Assignment 4-5:** Economic and feasibility analysis evaluation of the Plan of Technology

Adaptations to the evaluation due to COVID-19

The subject can be overcome with the foloowing evaluation:

1. CONTINUOUS EVALUATION:

It will build on the work experience / presentations throughout the course. Either of these practices can be recovered throughout the semester. All practices are recoverable. From the deliveries made in the virtual campus and suggestions professors will be made for the professors in order to improve the work. Students may decide to include or not these suggestions in newer versions of the same practice. The incorporation of these reviews will be considered positively in the final practice mark.

- Assignment 0 (10%): Business Model Canvas
    - It will be assessed:
        - Application of the BMC to the business idea
        - Discussion of the type of company proposed
    - Reviewers: teachers of the subject
- Assignment 1 (25%): Design of the Strategic Plan of a business idea
    - It will be assessed:
        - Application of theoretical concepts: economic sectors, applying their ICT Sectors
        - Mission, Vision and Values of the company
        - Development of a Strategic Plan

        - Analysis of the environment (PEST)
        - Competitive Analysis (basic competitive forces of Michael Porter)
        - SWOT diagnostic methodology
        - Proposal for strategic lines
        - Presentation of the strategic plan
    - Reviewers: teachers of the subject
- Assignment 2 (20%): Value chain
    - It will be assessed:
        - Application of theoretical concepts: value chain
        - Classification of business activities within the value chain
        - Identification of activities that add value
        - Defining the value chain of the company
    - Reviewers: teachers of the subject
- Practice 3 (20%): Technology Plan of the company
    - It will be assessed:
        - Application of theoretical concepts: development technology plan
        - Technological detail of the business idea
        - Assign activities to the plan technology resources
    - Reviewers: teachers of the subject
- Assignment 4-5 (25%): Economic and feasibility analysis evaluation of the Plan of Technology
    - It will be assessed:
        - Application of theoretical concepts: investment and classification of expenditures and revenues associated with a business idea. Also evaluation of investment projects.
        - Economic quantification of the initial investment
        - Estimated revenue and associated costs
        - Feasibility analysis of the business idea (classical methods)

      Evaluators; teachers of the subject

Assessment activity	Weighting	Week
Assignment 0: Business Model Canvas	10	2
Assignment 1: Design of the Strategic Plan	25	6
Assignment 2: Value chain	20	9
Assignment 3: The Plan of Technology. final proposal to develop	20	12
Assignment 4-5: Economic and feasibility analysis evaluation of the Plan of Technology	25	17