

Course guide

220564 - 220564 - Technical Entrepreneurship

Last modified: 29/06/2023

Unit in charge: Terrassa School of Industrial, Aerospace and Audiovisual Engineering
Teaching unit: 732 - OE - Department of Management.

Degree: MASTER'S DEGREE IN MANAGEMENT ENGINEERING (Syllabus 2012). (Compulsory subject).

Academic year: 2023 **ECTS Credits:** 5.0 **Languages:** Catalan, Spanish

LECTURER

Coordinating lecturer: MANEL RAJADELL CARRERAS

Others:

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:

1. Apply theories and inherent principles in the general direction of an organization with the aim of analyzing uncertainty complex situations and make decisions using engineering tools.
2. Identify, analyze, diagnose, design and implement solutions to complex socio-technical systems
3. To analyze the risks and consequences of proposed solutions in the various organizational sub-systems and their social and environmental contexts.
4. Develop a business plan in a new context.

Generical:

5. Ability to integrate knowledge and formulate judgments with the aim of making decisions based on information that, with incomplete or limited include reflecting on social and ethical responsibilities linked to the application of their knowledge and judgments.
6. Ability to effectively communicate their findings, knowledge and concluding reasons to skilled and unskilled audiences, clearly and unambiguously.
7. Ability to operate and lead multidisciplinary and multicultural groups, with negotiation skills, group work, relationships in an international setting, and conflict resolution.
8. Ability to understand the impact of engineering solutions in a global and social context .

TEACHING METHODOLOGY

The course is divided into three parts:

Theory classes

Practical classes

Self-study for doing exercises and activities.

In the theory classes, teachers will introduce the theoretical basis of the concepts, methods and results and illustrate them with examples appropriate to facilitate their understanding.

In the practical classes (in the classroom), teachers guide students in applying theoretical concepts to solve problems, always using critical reasoning. We propose that students solve exercises in and outside the classroom, to promote contact and use the basic tools needed to solve problems.

Students, independently, need to work on the materials provided by teachers and the outcomes of the sessions of exercises/problems, in order to fix and assimilate the concepts.

The teachers provide the curriculum and monitoring of activities (by ATENEA).

LEARNING OBJECTIVES OF THE SUBJECT

The aim of the course is to develop a business plan in order to create a business. The course uses the knowledge of other subjects in the area of finance, marketing or human resources. Students have to create their business plan from their own idea and following a specific methodology. This course is designed to awaken a spirit of creativity and active in front of business opportunities. To this end, part of an initial reflection: "good ideas generate good business and good business needs a good business plan. However, a good business plan can not turn a bad idea into a good business. "

STUDY LOAD

Type	Hours	Percentage
Self study	80,0	64.00
Guided activities	22,0	17.60
Hours small group	15,0	12.00
Hours large group	8,0	6.40

Total learning time: 125 h

CONTENTS

Module 1: General Definitions

Description:

Introduction: enterprise and entrepreneur. Concept of organization. Mission and objectives of the organization. Business concept. Mission and objectives of the company. Business risk: economic and financial. Size of the company. Mergers. Concept of businessman and entrepreneur. Stages in the creation of a business.

Full-or-part-time: 15h

Theory classes: 1h

Laboratory classes: 1h

Guided activities: 3h

Self study : 10h

Module 2: Business Idea and Opportunity

Description:

The idea of business. Methods of generating ideas. Observation of the environment: economic life, work, daily life, social changes, the ideas of others (franchisees). Idea and business opportunity. Validation of the business idea. Virtual enterprises. Moving from an idea to a particular project. Internal and external analysis. SWOT matrix. Strategy.

Full-or-part-time: 16h

Theory classes: 1h

Laboratory classes: 2h

Guided activities: 3h

Self study : 10h

Module 3: Long-term decisions

Description:

Legal form. Criteria. Corporations.

Location of business: qualitative method for points, model Hitchcock, Weber model.

Choosing the name of the company. The mark. Objectives of the marks. Characteristics of a good brand. Generic brands.

Licensing: Concept.

Plan Operations: Sales floor. Process design and facilities. Capacity. Stores.

Full-or-part-time: 23h

Theory classes: 1h

Laboratory classes: 3h

Guided activities: 4h

Self study : 15h

Module 4: Marketing Plan

Description:

Market actors: consumer, buyer, specifier and competition. Phases of market research. The price. Pricing strategies. Discounts.

Price discrimination. Distribution channels. The product: image and attributes. Point of sale. Merchandising. Advertising and sales.

Communication plan.

Full-or-part-time: 24h

Theory classes: 2h

Laboratory classes: 3h

Guided activities: 4h

Self study : 15h

Module 5: Human Resources Plan

Description:

Job design and coordination. Organizational Structure. Organizational structures. Types of structures. Entrepreneurship and organizational structure. Fundamental mechanisms of coordination. Formal structure: organizational charts. Informal structure of the company. The organization as a system of regulated flows. Overview.

Full-or-part-time: 24h

Theory classes: 2h

Laboratory classes: 3h

Guided activities: 4h

Self study : 15h

Module 6: Economic and Financial Plan. Contingency Plan

Description:

Financial business plan.

Interim Income Statement (for years). Provisional balance sheet (for years). Financing Plan. Treasury Plan. Analysis of the

investment project: IRR, NPV, Pay Back. Control measures: economic and financial ratios. Pension Ratios: Altman, Beaver i Parés. Contingency Plan.

Full-or-part-time: 23h

Theory classes: 1h

Laboratory classes: 3h

Guided activities: 4h

Self study : 15h

GRADING SYSTEM

The final grade depends on the following acts of evaluation

Exam, weight: 50%
Test, weight: 20%
Project, weight: 30%

Any student that cannot attend to the exam or test, or wants to improve his/her grade will have an opportunity to do it in a final exam.

BIBLIOGRAPHY

Basic:

- Rajadell, Manel. Creatividad: emprendimiento y mejora continua [on line]. Barcelona: Reverté, 2019 [Consultation: 15/06/2022]. Available on : https://www-ingebook-com.recursos.biblioteca.upc.edu/ib/NPcd/IB_BooksVis?cod_primaria=1000187&codigo_libro=8351. ISBN 9788494949357.
- Rajadell, Manel. Creación de empresas [on line]. 3a ed. Barcelona: Edicions UPC, 2009 [Consultation: 18/04/2023]. Available on: <http://hdl.handle.net/2099.3/36602>. ISBN 9788498803747.

RESOURCES

Audiovisual material:

- Nom recurs. Resource

Other resources:

The resources available on the platform are:

- Notes in text format for each of the course modules. Contents of the book exposed in book format: theory, practical examples and forms.
- Slides in Power Point format. Class slides are published for each course module.
- Frequently asked questions document. This document lists the most frequently asked questions from recent courses.
- Cases of business plans. These cases correspond to models of operations plans, marketing, human resources and economic and financial plan.
- Photocopies delivered in class. The contents of the photocopies are part of the evaluation.
- Videos at: www.youtube.com/user/manelrajadell

All this material does not replace the contents of the classes. The course works in semi-presential regime, it is not an online course. For class attendance it is highly recommended to have the notes corresponding to the topics that are exposed in the theoretical sessions.