

## Course guide

### 300204 - EMP - Business

**Last modified:** 22/01/2024

**Unit in charge:** Castelldefels School of Telecommunications and Aerospace Engineering  
**Teaching unit:** 732 - OE - Department of Management.  
748 - FIS - Department of Physics.

**Degree:** BACHELOR'S DEGREE IN AEROSPACE SYSTEMS ENGINEERING (Syllabus 2015). (Compulsory subject).

**Academic year:** 2023    **ECTS Credits:** 6.0    **Languages:** Catalan

#### LECTURER

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**Coordinating lecturer:** Definit a la infoweb de l'assignatura.

**Others:** Definit a la infoweb de l'assignatura.

#### DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

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##### Specific:

1. CE 6 AERO. Conocimiento adecuado del concepto de empresa, marco institucional y jurídico de la empresa. Organización y gestión de empresas. (CIN/308/2009, BOE 18.2.2009)

##### Generical:

CG2. (ENG) CG2 - Planificación, redacción, dirección y gestión de proyectos, cálculo y fabricación en el ámbito de la ingeniería aeronáutica que tengan por objeto, de acuerdo con los conocimientos adquiridos, los vehículos aeroespaciales, los sistemas de propulsión aeroespacial, los materiales aeroespaciales, las infraestructuras aeroportuarias, las infraestructuras de aeronavegación y cualquier sistema de gestión del espacio, del tráfico y del transporte aéreo.

CG7. (ENG) CG7 - Capacidad de analizar y valorar el impacto social y medioambiental de las soluciones técnicas.

##### Transversal:

2. EFFICIENT ORAL AND WRITTEN COMMUNICATION - Level 1. Planning oral communication, answering questions properly and writing straightforward texts that are spelt correctly and are grammatically coherent.

3. ENTREPRENEURSHIP AND INNOVATION - Level 1. Showing enterprise, acquiring basic knowledge about organizations and becoming familiar with the tools and techniques for generating ideas and managing organizations that make it possible to solve known problems and create opportunities.

5. TEAMWORK - Level 1. Working in a team and making positive contributions once the aims and group and individual responsibilities have been defined. Reaching joint decisions on the strategy to be followed.

6. EFFECTIVE USE OF INFORMATION RESOURCES - Level 1. Identifying information needs. Using collections, premises and services that are available for designing and executing simple searches that are suited to the topic.

##### Basic:

CB4. (ENG) CB4 - Que los estudiantes puedan transmitir información, ideas, problemas y soluciones a un público tanto especializado como no especializado

CB5. (ENG) CB5 - Que los estudiantes hayan desarrollado aquellas habilidades de aprendizaje necesarias para emprender estudios posteriores con un alto grado de autonomía

CB2. (ENG) CB2 - Que los estudiantes sepan aplicar sus conocimientos a su trabajo o vocación de una forma profesional y posean las competencias que suelen demostrarse por medio de la elaboración y defensa de argumentos y la resolución de problemas dentro de su área de estudio

CB3. (ENG) CB3 - Que los estudiantes tengan la capacidad de reunir e interpretar datos relevantes (normalmente dentro de su área de estudio)

para emitir juicios que incluyan una reflexión sobre temas relevantes de índole social, científica o ética

## TEACHING METHODOLOGY

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Company is based on the PBL methodology, Project Based Learning and Learning by doing.

The course offers students the challenge of thinking of a business idea to create a Startup using the Lean startup methodology

The ultimate goal is to prepare a document outlining the project. At the end of the course students will present an Elevator Pitch of the project.

Through the proposed project, students will learn the basic elements involved in the creation of a company and its external conditions, such as market analysis, source of funding and marketing plan.

The methodology used will involve teamwork, autonomous learning and individual responsibility to the group. Teachers will guide and provide tools to make it possible for students to apply the knowledge acquired independently. Oral presentations of intermediate activities will allow the analysis and evaluation of the work done by the groups. The final document will be the evidence of the learning achieved and will allow the evaluation of the final work.

## LEARNING OBJECTIVES OF THE SUBJECT

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On completion of Management, students will be able to:

- understand the concepts behind the the Lean Startup methodology;
- interpret basic business information;
- understand the factors involved in making business decisions;
- understand the main elements of economic activity and their functions as part of a system;
- identify the elements that regulate business activity;
- understand the regulation of the aeronautical market;
- write a general interest article following suggested criteria for effective written communication;
- present the project following suggested criteria for effective spoken communication;
- Write a Business Plan.
- identify appropriate sources of documentation for preparing specific communicative tasks;
- make effective use of multimedia resources.

## STUDY LOAD

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Type	Hours	Percentage
Hours medium group	42,0	28.00
Hours large group	24,0	16.00
Self study	84,0	56.00

**Total learning time:** 150 h

## CONTENTS

### Company Management

#### Description:

##### 1. COMPANY

Types of companies and their operation. Organizational structure. Business information system: The balance sheet and income statement. The Marketing Plan; Its objectives and structure. market analysis. Business strategy. Organization chart and assignment of tasks. Evaluation of investments: TIR and VAN. Risk analysis.

##### 2. BUSINESS CREATION

Phases in business creation: Opportunity identification, accumulation of resources, launch phase, consolidation phase and growth phase; Canvas and Lean Canvas. Competitor analysis and positioning; Product definition; Minimum viable product. The human team: Professional profiles; Operating plan and budgeting. Financial plan and ratios.

#### Specific objectives:

Identify reliable sources of information

Understand the elements of a Canvas / Lean Canvas

Understanding the Lean Startup methodology

Learn the basic principles of accounting

Analyze the viability and profitability of a business idea

Develop business idea

Write a Business Plan

Learn the keys to good oral and apply them to presentations

Get the keys to writing readable texts and apply them in the business plan document.

#### Related activities:

English

Read documentation provided

Interview potential customers to confirm the business idea

Find reliable sources of information relevant

Make a Canvas of the client and a canvas of the chosen business idea

Analyze the market using Porter's 5 Forces

Target customers.

Positioning the company.

Define strategies and design a marketing plan.

Indicate the process and calculate the sales forecast.

Designing the organizational structure of the company

Prepare an initial balance

Prepare a financing plan

Prepare an income statement

Analyze the profitability of the company in the first three years.

#### Full-or-part-time: 106h 12m

Theory classes: 36h

Guided activities: 7h 12m

Self study : 63h

## Oral Communication

### Description:

- 1- How to develop an effective oral resource.
- 2- How to speak well in public
- 3- How to make a pitch elevator

### Specific objectives:

1. Practice presentations to improve oral communication
2. Practice the elaboration of visual resources: PPT / Prezi to learn to present effective contents

### Related activities:

1. Present the evaluable sections
2. Elaborate a Power Point or Prezzi of the evaluable sections
3. Write the elevator pitch scripts
4. Final presentation of the project in elevator pitch format

**Full-or-part-time:** 8h 18m

Theory classes: 2h

Guided activities: 1h 48m

Self study : 4h 30m

## Aeronavigation

### Description:

AIR FIELD

The liberalization of air transport. Competition. Anticompetitive practices. coefficient

Fill. Price and Revenue Management. Markets in aviation. Introduction to the transport network and its effects on the economy and competition from airlines. Airline alliances.

### Related activities:

The methodology "News report" is worked where they have to choose a news/event/tendance/interest-theme related to air transport (the topics described in CG2 have been dealt with within this news report). Once the theme is chosen, they must write a video script, structuring a consistent and concise message. Finally they must record an explanatory video of up to 60 seconds explaining the topic. CG2 Competition.

Videos feature themes that have externalities (positive and negative) mostly related to emissions and fossil fuel dependence - the methodology to class based on less content brought to more depth is based on stimulating debates and promoting the discovery of different views. In this respect, we are trying to make pupils realise that in terms of management, not everything is black or white, but there are grey ones. Examples: overbooking of flights, demand stimulation, pollution, correlation between wealth generation and air transport development. CG7 competency

### Related competencies :

CG7. (ENG) CG7 - Capacidad de analizar y valorar el impacto social y medioambiental de las soluciones técnicas.

CG2. (ENG) CG2 - Planificación, redacción, dirección y gestión de proyectos, cálculo y fabricación en el ámbito de la ingeniería aeronáutica que tengan por objeto, de acuerdo con los conocimientos adquiridos, los vehículos aeroespaciales, los sistemas de propulsión aeroespacial, los materiales aeroespaciales, las infraestructuras aeroportuarias, las infraestructuras de aeronavegación y cualquier sistema de gestión del espacio, del tráfico y del transporte aéreo.

**Full-or-part-time:** 35h 30m

Theory classes: 10h

Guided activities: 3h

Self study : 22h 30m



## ACTIVITIES

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### INFORMATION RETRIEVAL

**Description:**

Students will retrieve useful information and assess the body of materials obtained in preparation for the project. Groups of 4-5 students will gather technical information relevant to the activities they are assigned. Information will be shared between the group for further analysis and assessment.

**Specific objectives:**

Students will learn how to use the UPC library catalogue and how to make the of search tools to retrieve information from online sources.

**Material:**

Session offered by the Library Service.

**Delivery:**

Submitted work will count towards formative assessment.

- List of consulted works
- Assessment of information retrieved

## ORAL PRESENTATIONS

### Description:

Students will complete a series of activities in preparation for making a PowerPoint presentation of the evaluable sections of the project. As the course progresses, students will use their knowledge of spoken communication to prepare the presentation of elevator pitch

### Specific objectives:

On completion of the subject students will understand and be able to apply the following concepts:

- the structure of discourse
- Body language
- Voice projection
- Oral resources
- Visual resources

Presentations of the business will be made at the end of the course.

### Material:

PowerPoint, Atenea, webcam, , videos, , notes, criteria for effective spoken communication.

### Delivery:

This activity will count towards formative assessment. Students will take an active role in the learning process and will be expected to assess some of their own work and co-assess the work of other group members. Students will be given guidelines on how to complete and assess the activities and examples of similar work. Lecturers will provide regular feedback on students' work.

As these activities count towards formative assessment, students must submit their completed work, which will represent 15% of the final mark for Communication. Assessed activities will be graded as:

- Satisfactory (the student has submitted the exercise and taken into account suggestions made by the teaching staff and/or classmates);
- Unsatisfactory (the student has submitted the exercise but not taken into account suggestions for improvement);
- Not Submitted.

Three or four activities will be submitted for assessment. Marks are awarded on a scale of 0-10.

To pass this part of the subject students must complete at least 80% of the activities set for completion in class or in their own time.

At the beginning of the project students will be given the criteria they need to evaluate the writing and presentation of the Plan de Negocio. A representative of each group, chosen at random, will present the business plan. The mark awarded will apply to all members of the group. This approach is designed to each student accepts their individual responsibility within the group.

### Related competencies :

CB4. (ENG) CB4 - Que los estudiantes puedan transmitir información, ideas, problemas y soluciones a un público tanto especializado como no especializado

### Full-or-part-time: 12h

Practical classes: 6h

Self study: 6h



## PRESENTATIONS

### Description:

Students will learn about the features of an effective presentation and apply them in the preparation of their PowerPoint presentation of the business plan.

### Specific objectives:

Students will prepare PowerPoint slides for the presentation of the business plan at the end of the course.

### Material:

Example presentations for analysis, and a sample presentation.

### Delivery:

Each student will prepare a short PowerPoint presentation. (Formative assessment).

Each group will prepare a PowerPoint for the oral presentation of the business plan. (This activity is worth 10% of the total mark for Communication)

### Full-or-part-time: 10h

Practical classes: 4h

Self study: 6h

## GRADING SYSTEM

### EXAMINATION RULES.

Any student unable to follow the work plan outlined at the beginning of the course must inform the subject coordinator.

Any student who fails to submit work for assessment will be awarded a mark of 0 for the formative assessment of the activity in question.

Any student who does not attend the project presentation and cannot provide evidence of extenuating circumstances will be awarded a mark of 0 for this activity.

## BIBLIOGRAPHY

### Basic:

- Stutely, Richard. Plan de negocios : la estrategia inteligente. México: Pearson educación, 2000. ISBN 9701703707.
- Fitzpatrick, Rob. The MOM test : how to talk customers and learn if your business is a good idea when everyone is lying to you. Leipzig: Founder Centric, 2014. ISBN 9781492180746.
- Sala i Martín, Xavier. Economia en colors. Barcelona: Ed. Debutxaca, 2020. ISBN 9788418132551.
- González Salazar, Diana M. Plan de negocios para emprendedores al éxito. México: McGraw-Hill, [2007]. ISBN 9789701059340.
- Rubio, Joana; Puigpelat, Francesc. Com parlar bé en públic. Barcelona: Pòrtic, 2000. ISBN 8473065867.
- Goxens, María Ángeles. Comptabilitat empresarial apta per a tots els públics. Barcelona: Publicacions de la Universitat de Barcelona, 2005. ISBN 8447528847.
- Ollé, Montserrat. El Plan de empresa : cómo planificar la creación de una empresa. Barcelona: Marcombo, 2008. ISBN 9788426714800.
- González Salazar, Diana M. Plan de negocios para emprendedores al éxito. México: McGraw-Hill, [2007]. ISBN 9789701059340.



## RESOURCES

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### Audiovisual material:

- Nom recurs. Resource
- Vídeos sobre Lean Startup i startup i 5 forces de Porter. Resource of the creators of the concepts Lean Startup, Startup and the 5 Forces of Porter.ce
- Rúbriques. Resource to elaborate the evaluable sections and to understand the obtained qualification

### Computer material:

- Plantilla Excel Pla financer. Resource to draw up the financial plan for the project

### Hyperlink:

- Material didàctic complementari. Resobased on examples of the topics presented in class and the notes that help to develop the projecturce
- Ajut pel desenvolupament del pla econòmic-financer
- Programa Innova. [http://pinnova.upc.es/innova/Pagines/servei\\_emprenedors/assessoria.php?id=7](http://pinnova.upc.es/innova/Pagines/servei_emprenedors/assessoria.php?id=7)- Formes jurídiques
- Programa Innova. [http://pinnova.upc.es/innova/Pagines/servei\\_emprenedors/assessoria.php?id=2](http://pinnova.upc.es/innova/Pagines/servei_emprenedors/assessoria.php?id=2)- Carpeta apunts i presentació de l'assignatura Empresa. Resource
- Taula seguiment activitats. Resource shared with students to give feedback on the activities delivered.