

**Project Management and Innovation**

Code: 42872  
ECTS Credits: 6

| Degree                          | Type | Year | Semester |
|---------------------------------|------|------|----------|
| 4313785 Aeronautical Management | OB   | 0    | 1        |

The proposed teaching and assessment methodology that appear in the guide may be subject to changes as a result of the restrictions to face-to-face class attendance imposed by the health authorities.

**Contact**

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**Use of Languages**

Principal working language: spanish (spa)

**Teachers**

Romualdo Moreno Ortiz  
Lluís Bernabé Comino

**Prerequisites**

None.

**Objectives and Contextualisation**

The objective of this module is twofold: in a first thematic block, the aim is to train students in the fundamental concepts and techniques of project management, as well as to introduce them to the use of a computer tool for project management. In the second thematic block, students explore the roles and correlations of management and entrepreneurial spirit in companies that have been successful in a globalized environment. The main objective is to analyze the skills and entrepreneurial spirit of the management that enable the success of an organization.

**Competences**

- Communicate and justify conclusions clearly and unambiguously to both specialised and non-specialised audiences.
- Conduct an original, innovative project on a problem related to the aeronautical sector.
- Continue the learning process, to a large extent autonomously
- Organise, plan and manage projects.
- Recognise the human, economic, legal and ethical dimension in professional practice.
- Seek out new areas to open up within the field.
- Solve complex problems by adopting a rigorous, efficient approach.
- Use acquired knowledge as a basis for originality in the application of ideas, often in a research context.
- Work collaboratively in multidisciplinary teams.

**Learning Outcomes**

1. Apply knowledge on management models for companies in the aeronautical sector.
2. Communicate and justify conclusions clearly and unambiguously to both specialised and non-specialised audiences.
3. Continue the learning process, to a large extent autonomously
4. Demonstrate management skills and entrepreneurship in the face of new challenges and strategies.
5. Organise, plan and manage projects.
6. Recognise the human, economic, legal and ethical dimension in professional practice.
7. Seek out new areas to open up within the field.
8. Solve complex problems by adopting a rigorous, efficient approach.
9. Use acquired knowledge as a basis for originality in the application of ideas, often in a research context.
10. Work collaboratively in multidisciplinary teams.

## Content

### Thematic block M1-B1: Project Management

#### 1. Introduction

- What is a project?
- Project management: generalities. Needs and interest
- Project management to different sectors of activity
- System concept
- Conception, analysis, engineering and systems management

#### 2. The development cycle of a system

- Life cycle of a system
- Cycle of development of a system
- Phases of the development cycle: conception, definition, execution and operation

#### 3. Project planning

- Project master plan
- Organizational structure. Responsibilities
- The project management system
- Planning and programming diagrams (scheduling).
- Gantt diagrams

#### 4. Graph-based programming methods

- Logical diagrams and graphs. The critical path
- Roy's diagram
- The PERT method (Program review and evaluation technique)
- The GERT method (Graphic evaluation and review technique)

#### 5. Cost analysis

- The process of cost estimation
- Budget and accounting management
- Programming and cost control

#### 6. Risk management

- General concepts
- Identification and risk measurements
- Planning of responses to face risks

#### 7. Project control

- Introduction

- Performance analysis. Costs and programming
- Control of changes
- Reports

## Thematic block M1-B2: Leadership and Strategy

### 1. Function and managerial competences

- 1.1. Leadership and team management
- 1.2. Leadership and motivation of people
- 1.3. Leadership and organizational change

### 2. Strategy

- 2.1. The process of formulating the strategy.
- 2.2. External diagnosis: analysis of the sector and of the competition.
- 2.3. Internal diagnosis: analysis of resources and capabilities.
- 2.4. Business strategy: nature and sources of competitive advantage.
- 2.5. Corporate strategy: business scope

## Methodology

The general methodological approach of the subject is based on the principle of multivariate strategies, which aims to facilitate the active participation and the construction of the learning process by the student, under the principle of "learning by doing".

## Activities

| Title                           | Hours | ECTS | Learning Outcomes    |
|---------------------------------|-------|------|----------------------|
| Type: Directed                  |       |      |                      |
| Conferences                     | 2.5   | 0.1  | 7, 6                 |
| Practices classes               | 5     | 0.2  | 8, 5, 10             |
| Presentation of works           | 5     | 0.2  | 2                    |
| Problem solving classes         | 10    | 0.4  | 8, 5                 |
| Theory classes                  | 17.5  | 0.7  | 6, 9                 |
| Type: Supervised                |       |      |                      |
| Development of group works      | 30    | 1.2  | 1, 8, 4, 7, 5, 6, 10 |
| Tutorials                       | 8     | 0.32 | 3                    |
| Type: Autonomous                |       |      |                      |
| Individual development of works | 20    | 0.8  | 1, 8, 4, 7, 5, 3, 6  |
| Individual problem solving      | 20    | 0.8  | 8, 5, 3              |

## Assessment

For any of the evaluation elements to be considered in the formula for calculating the final grade of the module (according to their weights), their individual qualification must be greater than or equal to 4.

All activities based on written reports must be submitted within the expiration dates indicated by the teacher. If a report-based activity is suspended, the student may re-submit the report in accordance with the corrections / indications provided by the teacher.

If a written exam is suspended, the student will have the opportunity to repeat it.

Exams recovery dates, as well as the dates of re-release of work reports, will be communicated by the teacher at the beginning of the course.

The student can submit to the recovery whenever it has been presented to a set of activities that represent at least two thirds of the total.

The elements evaluated in the recovery phase will obtain the rating of: Pass (5) or Not pass.

The evaluation method for repeating students is the same.

The evaluation activities corresponding to each of the thematic blocks that make up the module are indicated below.

### M1-B1: Project Management

- Resolution of time scheduling exercises
- Practices with Microsoft Project (report)
- Development of a project master plan (report + MS Project file)

### M1-B2: Lideratge i Estratègia

- Course works: 4 deliveries (report)
- Oral presentation of works

To have the right to be evaluated in this module, the class attendance percentages indicated below must be accredited:

- In the face-to-face modality: 75%
- In the virtual modality: 50%

The weights of each evaluation activity are shown in the following table.

## Assessment Activities

| Title  | Weighting | Hours | ECTS | Learning Outcomes |
|--|-----------|-------|------|-------------------|
| Development of a Project Master Plan                     | 25 %      | 0     | 0    | 8, 7, 5, 6, 10    |
| Oral presentation of works about Leadership and Strategy | 15 %      | 0     | 0    | 2                 |

|   |        |   |   |               |
|---|--------|---|---|---------------|
| Practices with Microsoft Project              | 7,5 %  | 0 | 0 | 7, 5, 3       |
| Resolution of temporary scheduling exercises  | 17,5 % | 0 | 0 | 8, 7, 5, 3    |
| Works about Leadership and Strategy (reports) | 35 %   | 0 | 0 | 1, 4, 7, 6, 9 |

## Bibliography

### Thematic block M1-B1: Project Management

- Nicholas, John M. *Project Management for Business and Technology*. Prentice-Hall, 2001.
- Davidson, Jeff. *La Gestión de Proyectos*. Prentice-Hall (guías de bolsillo), 2000.
- Romero López, C. *Técnicas de Programación y Control de Proyectos*. Ediciones Pirámide, 1988.
- Companys Pascual, Ramón; Corominas Subias, Albert. *Organización de la producción I: Diseño de sistemas productivos 2*. Edicions UPC, 1991.

### Thematic block M1-B2: Leadership and Strategy

- ANGWIN, D. et al (2007) *The Strategy Pathfinder*. Blackwell Publishig
- GRANT, R.M. (2006). *Dirección estratégica*. Madrid: Civitas.
- PORTER, M. (1999.1982). *Estrategia competitiva. Técnicas de análisis de los sectores Industriales y de la Competencia*. Mexico. CECSA.
- ROBBINS, S.P. (2004). *Comportamiento organizacional: conceptos, controversias y aplicaciones*. (10ª ed.). México. Prentice-Hall Hispanoamericana.
- SARATXAGA, K. (2009). *Un nuevo estilo de relaciones*. Ed. Pearson Educación.
- CHAPMAN, B., SISODIA, R. (2020). *Todo el mundo es importante*. Obelisco.
- Capital Humano. <https://capitalhumano.wolterskluwer.es/content/>