

COURSE GUIDE

| Course Data | |
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| Name | Project Management |
| Code | DOI-MII-681 |
| Degree | Master in Industrial Engineering |
| Year | 2nd |
| Semester | 1st |
| ECTS Credits | 3 ECTS |
| Type | Mandatory |
| Department | Industrial Engineering |
| Area | Economics and Business Administration |
| Coordinator | Pedro Linares |

| Information of Professors | |
|----------------------------------|---------------------------------------|
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SPECIFIC INFORMATION OF THE COURSE

| Course context |
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| Contribution to the professional profile of the degree |
| <p>The completion of this course allows students to:</p> <ol style="list-style-type: none"> 1. Acquire the knowledge and competences needed to manage an engineering project, and also an R&D one. 2. Be able to define the key elements of Projects and their management 3. Identify the main groups of processes in Project Management 4. Understand and analyze the basic tools to manage time, cost, risk and quality in a project 5. Verify, control and audit Engineering Projects 6. Present and defend orally and in written format the scheduling and execution of a Project. |

CONTENTS

| Contents |
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| 1. Introduction to Project Management. Project life cycle. Types of projects |
| 2. Project planning. Mission, vision, challenges and objectives. Work Breakdown Structure (WBS) |
| 3. Time and cost management. Estimation of time, cost and resources. Task planning. Leveling of resources. Earned Value Analysis |
| 4. Risk planning. Definition of risk and contingency reserves. Risk matrix. Control and assessment. Contract management |
| 5. Metrics, quality. Indicators. Integration of projects in the firm. Quality plan. Current management methodologies. |

TEACHING METHODOLOGY

| General methodological aspects of the course |
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| In order to achieve the learning objectives stated above, the course will focus on the students' activity and on their active learning. Therefore, the methodology will be oriented towards a more active role of the student and the promotion of creativity and collaboration among students. |
| Classroom Methodology: Activities |
| <ol style="list-style-type: none">1. Lectures2. Problem solving / Case discussion: In these sessions tasks previously given to students (problems and case studies) will be discussed, solved and explained. In order to participate in these sessions the student must hand in previously the task |
| Non-Classroom Methodology: Activities |
| The objective of non-classroom activities is to understand the concepts and methodologies described in class, and to apply them to the different problems or case studies presented in the classroom or given by the instructor. |
| <ol style="list-style-type: none">1. Individual and group study of the concepts, methodologies and techniques learnt during the lectures2. Problem solving3. Case analysis and preparation |
| In addition, instructors will address the questions of students individually or in groups during their office hours, and will also help them orient their learning process |

EVALUATION ACTIVITIES AND CRITERIA

| Evaluation activities | Evaluation Criteria | Weight Percentage |
|--|--|-------------------|
| Tests: Final exam | <ul style="list-style-type: none"> - Understanding of concepts. - Application of concepts to problem solving. - Analysis and interpretation of problem results. - Quality of writing and overall presentation. | 40% |
| Project Management Case Report Presentation of the term paper Discussion of case studies | | 60% |

Qualification Criteria

The final grade of the course will result from adding the following elements:

- 40% from the grade in the final exam
- 15% from the presentation of the project management case
- 40% from the report of the project management case
- 5% from active participation in class

The minimum grade in the final exam is 5. If the grade is below 5, this will be the final grade of the course.

The minimum grade to pass is 5. If not, the student must take the extraordinary session.

Extraordinary session

In the extraordinary session the grade results from:

- 40% from the grade in the final exam
- 15% from the presentation of the project management case
- 40% from the report of the project management case
- 5% from active participation in class

The minimum grade in the extraordinary exam is 5. If the grade is below 5, this will be the final grade of the course.

Missing more than 15% of the classes may result in the student not being able to take the final exam in its first session.

SUMMARY OF WORKING HOURS OF THE STUDENT

| CLASSROOM HOURS | | |
|---------------------------|--------------------------|-----------------------|
| Lectures | Problem solving | Group problem solving |
| 20 | 5 | 5 |
| NON-CLASSROOM HOURS | | |
| Individual practical work | Group work with software | Case studies |
| 15 | 15 | 30 |

BIBLIOGRAPHY AND RESOURCES

Basic References

Textbooks

J. Heagney.: "Fundamentals of Project Management" (2011)
H. Kerzner. Project Management: a Systems Approach to Planning, Scheduling and Controlling. John Wiley & Sons, 2006

Additional References

Textbooks

M.P. Spinner, Project Management: principles and practices, Prentice-Hall International, [1997]
J.R. Highsmith Agile Project Management: Creating Innovative Products
ISO.UNE 21500:2013
E. Goldratt, Critical Chain