

**COURSE DATA****Data Subject**

Code	44291
Name	Projects
Cycle	Master's degree
ECTS Credits	3.0
Academic year	2022 - 2023

Study (s)

Degree	Center	Acad. year	Period
2199 - M.D. in Electronic Engineering	School of Engineering	1	Second term
3131 - Electronic Engineering	Doctoral School	0	First term

Subject-matter

Degree	Subject-matter	Character
2199 - M.D. in Electronic Engineering	5 - Projects	Obligatory
3131 - Electronic Engineering	1 - Complementos de Formación	Optional

Coordination

Name	Department
GIRBES JUAN, VICENT	242 - Electronic Engineering
SUAREZ ALVAREZ, ISAAC	242 - Electronic Engineering

SUMMARY

The subject Project has the overall objective that students gain the ability to properly apply all the knowledge necessary for the design, development and evaluation of projects and reports, applying the appropriate methodology and the basic principles of economics, management, quality and business organization as well as legislation, regulation and standardization in the field of studies in Electrical Engineering Master .. It is a compulsory quarterly basis that is taught in the first year of the Master in Electronic Engineering in the first quarter. The curriculum consists of a total of 3 ECTS credits.

The basic objective of the subject is to introduce students to the concepts and techniques commonly employed in the management and direction of transportation projects, including documentary techniques used in the development of projects, as well as the presentation of the legislation applicable in industrial projects related to field of Industrial Electronics.



Project Management is the way of directing and coordinating human and material resources throughout the life cycle of a project to achieve the stated objectives d scope, cost and delivery and satisfaction of stakeholders in the project. In short, it is a set of methodologies and tools that try the effective management of a set of activities to achieve customer satisfaction.

The Course aims to show students these methodologies and tools for their professional future solvency can deal with an industrial project.

PREVIOUS KNOWLEDGE

Relationship to other subjects of the same degree

There are no specified enrollment restrictions with other subjects of the curriculum.

Other requirements

Given that this is a subject of general nature, are not necessary

OUTCOMES

2199 - M.D. in Electronic Engineering

- Students should apply acquired knowledge to solve problems in unfamiliar contexts within their field of study, including multidisciplinary scenarios.
- Students should be able to integrate knowledge and address the complexity of making informed judgments based on incomplete or limited information, including reflections on the social and ethical responsibilities associated with the application of their knowledge and judgments.
- Students should communicate conclusions and underlying knowledge clearly and unambiguously to both specialized and non-specialized audiences.
- Students should demonstrate self-directed learning skills for continued academic growth.
- Take into account the economic and social context in engineering solutions, be aware of diversity and multiculturalism and ensure sustainability and respect for human rights and equality between men and women.
- Diseñar un sistema, componente o proceso que cumpla unas especificaciones desde diferentes puntos de vista: electrónico, económico, social, ético y medioambiental.
- Demostrar una comprensión sistemática de un campo de estudio y el dominio de las habilidades.
- Realizar un análisis crítico, evaluación y síntesis de ideas nuevas y complejas.
- Ser capaz de fomentar, en contextos académicos y profesionales, el avance tecnológico, social o cultural dentro de una sociedad basada en el conocimiento.
- Capacidad para la dirección general, dirección técnica y dirección de proyectos de investigación, desarrollo e innovación, en empresas y centros tecnológicos relacionados con la Ingeniería Electrónica.



- Students should possess and understand foundational knowledge that enables original thinking and research in the field.

LEARNING OUTCOMES

Learning outcomes of the course projects

- 1 Understanding the basic principles of Management and Project Management in the field of Industrial Engineering, Industrial Electronics branch, and be able to use them to create, analyze and select plausible alternatives capable of responding to the problems in their field of work.
- 2 Know the different types of industrial projects
- 3 Know the feasibility analysis techniques in industrial projects
- 4 Learn the techniques of decision making
- 5 Be able to document a project both technical and management side
- 6 Knowing the organizational structure of a company and the functions of an office project
- 7 To learn the techniques of planning and controlling projects
- 8 Know the law applicable to industrial projects branch of Industrial Electronics
- 9 Perform economic evaluation of processes and projects.
- 10 Write and develop projects in the field of Industrial Engineering, Industrial Electronics branch
- 11 Meet the professional organization and basic paperwork. Know the current legislation and, in particular, regarding prevention and equality.
- 12 Being able to work in teams of their field of work or multidisciplinary
- 13 Possess ability to manage information and the use of Information Technology and Communications
- 14 Possess organizational skills and planning, particularly in the field of business. Have applied knowledge of business organization
- 15 Possess critical thinking skills, creativity and decision-making
- 16 Being able to gather and interpret information and make judgments on issues of social, scientific, technological or ethical
- 17 Possessing learning skills to continue and update their training throughout working life with a high degree of autonomy



DESCRIPTION OF CONTENTS

1. Introduction to Project Management

- 1.1. The concept of project.
- 1.2. Feasibility and contingency plan.
- 1.3. Execution, validation and control.
- 1.4. Planning.
- 1.5. Economic indexes.
- 1.6. Decision theory.

2. Application of Project Management in real cases

- 2.1 Integrated Devices
- 2.2 Industry 4.0.
- 2.3. Other examples

3. Professional career and sources of financing

- 3.1. Technological innovation and business innovation projects.
- 3.2. R&D projects and research career.

WORKLOAD

ACTIVITY	Hours	% To be attended
Theory classes	15,00	100
Laboratory practices	15,00	100
Development of group work	10,00	0
Development of individual work	10,00	0
Readings supplementary material	5,00	0
Preparation of evaluation activities	15,00	0
Preparing lectures	5,00	0
TOTAL	75,00	

TEACHING METHODOLOGY

Theoretical activities will be exposed by the lectures (T). In those classes, the lecture model is used. The teacher will present on presentation and / or explain the contents of each issue to highlight those key aspects for its understanding.



EVALUATION

The knowledge acquired by the student can be evaluated in the following ways: through the work carried during the course (Continuous Evaluation System) or through a final exam (Single Evaluation System).

Continuous Assessment System

Through this system, those students who regularly participate in the training activities will be assessed, evaluating class attendance, the development of the draft project and the laboratory activities.

To be entitled to this evaluation system, **at least 80% of the theory classes must be attended and it will be compulsory to attend the presentation** of each of the draft projects.

Under this system the final mark will be calculated as follows:

- The oral presentation of the draft project will count for **50 %** of the final mark.
- The report of the draft project will count **50 %** of the final mark.

A minimum grade 4 in each of the parts will be necessary to be able to make an average.

Unique Evaluation System

Students who have failed the continuous assessment or have not attended class regularly may take a final exam on the date set out in the academic calendar.

REFERENCES

Basic

- 1. Pereña, J. "Dirección y Gestión de Proyectos". Ed. Díaz de Santos (1991).
- Gómez, J. F; Coronel, A.J; Martinez de Irujo, L; Lorente, A. "Gestión de proyectos". FC Editorial. Madrid, 2000. ISBN 8428317747
- Lock, D. "Gestión de proyectos". Ed. Paraninfo. Madrid, 1994. ISBN 8428317747
- 2. Domingo Alejo, A. Dirección y Gestión de Proyectos, un enfoque práctico. Ed. Rama 2005
- 3. Reglamento Electrotécnico de Baja Tensión. Ed. Paraninfo (1997) ISBN 84-283-2109-4
- 4. SERCOBE Gestión de la I+D+i- Normas UNE (2008) ISBN 978-84-8143-567-2

Additional

- Amándola, L.J. Gestión de Proyectos de Manufacturera Editoril UPV, ISBN 84-9705-311-7
- 5. Ruiz M., Mandado, E. La innovación Tecnológica y su Gestión Ed. Marcombo (1989) ISBN 84-267-0733-5