UNIVERSIDAD DE CASTILLA - LA MANCHA

GUÍA DOCENTE

1. General information

Course:	ENGINEERING PROJECTS	**Code:**	56329
Type:	CORE COURSE	**ECTS credits:**	6
Degree:	351 - UNDERGRADUATE DEGREE PROG. IN MECHANICAL ENGINEERING (ALM)	**Academic year:**	2020-21
Center:	106 - SCHOOL OF MINING AND INDUSTRIAL ENGINEERING	**Group(s):**	56 57
Year:	4	**Duration:**	First semester
Main language:	English	**Second language:**	Spanish
Use of additional languages:		**English Friendly:**	Y
Web site:		**Bilingual:**	N

Lecturer: **DEMETRIO FUENTES FERRERA** - Group(s): **56 57**

Building/Office	Department	Phone number	Email	Office hours
Edificio Störr Planta 3ª	MECÁNICA ADA. E ING. PROYECTOS	926052115	demetrio.fuentes@uclm.es	

2. Pre-Requisites

This subject is intimately linked in its contents to the rest of the subjects in the career of the Area of Graphic Expression in Engineering. In the act of planning, practically all the knowledge acquired during the training process is used.
It is also one of the professional opportunities, either as a free practice of the profession or within a company or administration.

3. Justification in the curriculum, relation to other subjects and to the profession

Not established

4. Degree competences achieved in this course

Course competences

Code	Description
A0	Promote respect, Human Rights and the principles of universal accessibility and design for everyone in accordance with the provisions in the final part of Law 51/2003, of 2 December, Equal Opportunities, non-discrimination and universal accessibility for disabled people.
A02	To know how to apply knowledge to work or vocation in a professional manner and possess the competences that are usually demonstrated by the formulation and defence of arguments and the resolution of problems in the field of study.
A03	To have the capability to gather and interpret relevant data (normally within the area of study) to make judgements that include a reflection on themes of a social, scientific or ethical nature.
A07	Knowledge of Information Technology and Communication (ITC).
A08	Appropriate level of oral and written communication.
A09	Ethical and professional commitment.
A10	Ability to produce and develop projects in the field of industrial engineering and automation aimed at, and in accordance with the knowledge acquired as established in section 5 of Order CIN/351/2009, the construction, remodelling, repair, conservation, demolition, manufacturing, installation, assembly or use of: structures, mechanical equipment, power installations, electrical and electronic installations, industrial plants and installations and processes of manufacture and automatization.
A11	Ability to manage engineering project activities described in the previous competency.
A13	Ability to take the initiative to solve problems, take decisions, creativity, critical reasoning and ability to communicate and transmit knowledge, skills and abilities in Mechanical Engineering.
A14	Knowledge to undertake measurements, calculations, evaluations, appraisals, studies, give expert opinions, reports, work plans and similar tasks.
A15	Ability to work to specifications and comply with obligatory rules and regulations.
A16	Ability to analyse and evaluate the social and environmental impact of technical solutions.
A18	To have organization and planning skills used in businesses and other institutions and organizations.
A19	Ability to work in a multilingual and multidisciplinary environment.
C12	Knowledge and ability to organize and manage projects. To be familiar with the structural organization and functions of a project office.
CB01	Prove that they have acquired and understood knowledge in a subject area that derives from general secondary education and is appropriate to a level based on advanced course books, and includes updated and cutting-edge aspects of their field of knowledge.
CB02	Apply their knowledge to their job or vocation in a professional manner and show that they have the competences to construct and justify arguments and solve problems within their subject area.
CB03	Be able to gather and process relevant information (usually within their subject area) to give opinions, including reflections on relevant social, scientific or ethical issues.
CB04	Transmit information, ideas, problems and solutions for both specialist and non-specialist audiences.
CB05	Have developed the necessary learning abilities to carry on studying autonomously

5. Objectives or Learning Outcomes

Course learning outcomes

Description

Awareness of the necessity to adapt engineering projects to ensure the least damage possible to the surroundings and environment

Know all the functions of the works' management, their functions and their responsibilities

Ability to analyze and compare different alternatives put forward from the economic point of view of a project

Ability to design, write and manage all of the documents that make up the structure of an industrial project or any technical document that this type of professional has to produce. Fundamental documents:reports, plans, specifications, budgets, health and safety documents, environmental documents, control of deadlines and times.

Ability to express and defend ideas, problems and solutions in the field of engineering projects

Ability to manage any type of project

Understand and interpret the importance of current regulations and legislation applied to industrial engineering works and their implementation in industrial projects

Knowledge of the different tasks carried out in a project office

Knowledge of the main information applications used in the production, processing and control of projects

Know the general aspects related to environmental and sustainable technologies

6. Units / Contents

Unit 1: Introduction to the project.

Unit 2: Documents. Contents and elaboration.

Unit 3: Economic and financial evaluation.

Unit 4: Legislation, Quality, Safety and Environment, Human Resources and Industrial Property.

Unit 5: Legal processing of projects.

Unit 6: The execution and management of the project.

Unit 7: Project planning, programming and control.

7. Activities, Units/Modules and Methodology

Training Activity	Methodology	Related Competences (only degrees before RD 822/2021)	ECTS	Hours	As	Com	Description
Class Attendance (theory) [ON-SITE]	Combination of methods	A0 A02 A03 A07 A08 A09 A10 A11 A13 A14 A15 A16 A18 A19 C12 CB01 CB02 CB03 CB04 CB05	0.8	20	N	-	
Problem solving and/or case studies [ON-SITE]	Problem solving and exercises	A0 A02 A03 A07 A08 A09 A10 A11 A13 A14 A15 A16 A18 A19 C12 CB01 CB02 CB03 CB04 CB05	0.4	10	Y	Y	
Computer room practice [ON-SITE]	Practical or hands-on activities	A0 A02 A03 A07 A08 A09 A10 A11 A13 A14 A15 A16 A18 A19 C12 CB01 CB02 CB03 CB04 CB05	0.6	15	N	-	
Workshops or seminars [ON-SITE]	Lectures	A0 A02 A03 A07 A08 A09 A10 A11 A13 A14 A15 A16 A18 A19 C12 CB01 CB02 CB03 CB04 CB05	0.2	5	N	-	
Study and Exam Preparation [OFF-SITE]	Self-study	A0 A02 A03 A07 A08 A09 A10 A11 A13 A14 A15 A16 A18 A19 C12 CB01 CB02 CB03 CB04 CB05	3.6	90	N	-	
Individual tutoring sessions [ON-SITE]	Combination of methods	A0 A02 A03 A07 A08 A09 A10 A11 A13 A14 A15 A16 A18 A19 C12 CB01 CB02 CB03 CB04 CB05	0.2	5	N	-	
Progress test [ON-SITE]	Assessment tests	A0 A02 A03 A07 A08 A09 A10 A11 A13 A14 A15 A16 A18 A19 C12 CB01 CB02 CB03 CB04 CB05	0.2	5	Y	N	
		Total:	**6**	**150**			
Total credits of in-class work: 2.4			**Total class time hours: 60**				
Total credits of out of class work: 3.6			**Total hours of out of class work: 90**				

As: Assessable training activity

Com: Training activity of compulsory overcoming (It will be essential to overcome both continuous and non-continuous assessment).

8. Evaluation criteria and Grading System

Evaluation System	Continuous assessment	Non-continuous evaluation*	Description
Final test	33.33%	33.00%	
Assessment of problem solving and/or case studies	66.67%	67.00%	
Total:	**100.00%**	**100.00%**	

According to art. 4 of the UCLM Student Evaluation Regulations, it must be provided to students who cannot regularly attend face-to-face training activities the passing of the subject, having the right (art. 12.2) to be globally graded, in 2 annual calls per subject , an ordinary and an extraordinary one (evaluating 100% of the competences).

9. Assignments, course calendar and important dates

Not related to the syllabus/contents

Hours	hours
Progress test [PRESENCIAL][Assessment tests]	5

Unit 1 (de 7): Introduction to the project.

Activities	Hours
Class Attendance (theory) [PRESENCIAL][Combination of methods]	1

Unit 2 (de 7): Documents. Contents and elaboration.

Activities	Hours
Class Attendance (theory) [PRESENCIAL][Combination of methods]	4
Problem solving and/or case studies [PRESENCIAL][Problem solving and exercises]	2
Computer room practice [PRESENCIAL][Practical or hands-on activities]	5
Workshops or seminars [PRESENCIAL][Lectures]	2
Study and Exam Preparation [AUTÓNOMA][Self-study]	25
Individual tutoring sessions [PRESENCIAL][Combination of methods]	1

Unit 3 (de 7): Economic and financial evaluation.

Activities	Hours
Class Attendance (theory) [PRESENCIAL][Combination of methods]	2
Problem solving and/or case studies [PRESENCIAL][Problem solving and exercises]	3
Computer room practice [PRESENCIAL][Practical or hands-on activities]	2
Study and Exam Preparation [AUTÓNOMA][Self-study]	10
Individual tutoring sessions [PRESENCIAL][Combination of methods]	1

Unit 4 (de 7): Legislation, Quality, Safety and Environment, Human Resources and Industrial Property.

Activities	Hours
Class Attendance (theory) [PRESENCIAL][Combination of methods]	3
Computer room practice [PRESENCIAL][Practical or hands-on activities]	2
Workshops or seminars [PRESENCIAL][Lectures]	1
Study and Exam Preparation [AUTÓNOMA][Self-study]	30
Individual tutoring sessions [PRESENCIAL][Combination of methods]	1

Unit 5 (de 7): Legal processing of projects.

Activities	Hours
Class Attendance (theory) [PRESENCIAL][Combination of methods]	2
Study and Exam Preparation [AUTÓNOMA][Self-study]	5

Unit 6 (de 7): The execution and management of the project.

Activities	Hours
Class Attendance (theory) [PRESENCIAL][Combination of methods]	2
Workshops or seminars [PRESENCIAL][Lectures]	2
Study and Exam Preparation [AUTÓNOMA][Self-study]	6

Unit 7 (de 7): Project planning, programming and control.

Activities	Hours
Class Attendance (theory) [PRESENCIAL][Combination of methods]	6
Problem solving and/or case studies [PRESENCIAL][Problem solving and exercises]	5
Computer room practice [PRESENCIAL][Practical or hands-on activities]	6
Study and Exam Preparation [AUTÓNOMA][Self-study]	14
Individual tutoring sessions [PRESENCIAL][Combination of methods]	2

Global activity

Activities	hours
Class Attendance (theory) [PRESENCIAL][Combination of methods]	20
Problem solving and/or case studies [PRESENCIAL][Problem solving and exercises]	10
Computer room practice [PRESENCIAL][Practical or hands-on activities]	15
Workshops or seminars [PRESENCIAL][Lectures]	5
Study and Exam Preparation [AUTÓNOMA][Self-study]	90
Individual tutoring sessions [PRESENCIAL][Combination of methods]	5
Progress test [PRESENCIAL][Assessment tests]	5
Total horas:	150

10. Bibliography and Sources

Author(s)	Title/Link	Publishing house	Citv	ISBN	Year	Description
Asociación Española de Ingeniería de Proyectos.	Guía de los fundamentos de la Dirección de Proyectos http://www.aeipro.com/index.php/publicaciones.html	Asociación Española de Ingeniería de Proyectos.	Madrid			
CONESA FERNANDEZ-VITORIA, V	Guía metodológica para la evaluación del impacto ambiental	Ediciones Mundi-Prensa	Madrid			
Colegio de Aparejadores y Arquitectos Técnicos de Guadalajara	Cuadro de Precios de la Construcción.	Servicio de Publicaciones del Colegio de Aparejadores y Arquitectos	Guadalajara			

		Técnicos de Guadalajara			
FERNÁNDEZ, JOSE ANTONIO.	http://www.preciocentro.com/ Como interpretar un Balance	DEUSTO			
Fuentes Fererra, Demetrio					Moodle de la asignatura
Fuentes Ferrera, Demetrio	https://campusvirtual.uclm.es/ Apuntes de Clase				
RAMIREZ DE ARELLANO, A..	Presupuestación de obras	Servicio de Publicaciones de la Universidad de Sevilla.		1988	
ROMERO, C..	Técnicas de programación y control de proyectos	Pirámide			
Santos Sabrás, Fernando	Ingeniería de proyectos	Ediciones Universidad de Navarra	84-313-1723-X	2002	