



1. General information

Course: PROJECTS AND MANAGEMENT SYSTEMS
Type: CORE COURSE
Degree: 409 - CHEMISTRY
Center: 1 - FACULTY OF SCIENCE AND CHEMICAL TECHNOLOGY
Year: 4

Main language: Spanish

Use of additional languages:

Web site:

Code: 57329
ECTS credits: 6
Academic year: 2023-24
Group(s): 20
Duration: C2
Second language:
English Friendly: Y
Bilingual: N

Lecturer: MANUEL SALVADOR CARMONA FRANCO - Group(s): 20				
Building/Office	Department	Phone number	Email	Office hours
ITQUIMA/Dirección	INGENIERÍA QUÍMICA	6709	manuel.cfranco@uclm.es	Monday and Tuesday from 9:00 to 13:00 h
Lecturer: JESUS MANUEL GARCIA VARGAS - Group(s): 20				
Building/Office	Department	Phone number	Email	Office hours
Enrique Costa Novella	INGENIERÍA QUÍMICA	3502	JesusManuel.Garcia@uclm.es	Monday, Wednesday and Thursday from 11.30 to 13.30
Lecturer: M ^º JESUS RAMOS MARCOS - Group(s): 20				
Building/Office	Department	Phone number	Email	Office hours
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2. Pre-Requisites

Not established

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

The justification of this subject in the curriculum is based on the student's need for knowledge of the execution of a project in the chemical industry as well as existing management systems and their possible integration. This subject is related to the subject of Chemi

4. Degree competences achieved in this course

Course competences

Code	Description
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.
CB04	Transmit information, ideas, problems and solutions for both specialist and non-specialist audiences.
E04	Understand the principles of thermodynamic and their applications in chemistry
E09	Know the kinetics of chemical change, including catalysis and reaction mechanisms
E10	Know and understand the characteristics of chemical equilibrium
E11	Know the basic operations and the unitary processes of the chemical industry
E14	Know and know how to apply the metrology of chemical processes, including quality management
E15	Know how to handle the standard chemical instrumentation and be able to elaborate and manage standardized procedures of work in the laboratory and chemical industry
E16	Plan, design and develop projects and experiments
E17	Develop the ability to relate to each other the different specialties of Chemistry, as well as this one with other disciplines (interdisciplinary character)
G03	Know how to apply the theoretical-practical knowledge acquired in the different professional contexts of Chemistry
G05	Acquire and adapt new knowledge and techniques of any scientific-technical discipline with incidence in the chemical field
T03	Proper oral and written communication
T05	Organization and planning capacity
T06	Ability to approach decision making
T07	Ability to work as a team and, where appropriate, exercise leadership functions, fostering the entrepreneurial character
T08	Skills in interpersonal relationships
T09	Motivation for quality, job security and awareness of environmental issues, with knowledge of internationally recognized systems for the correct management of these aspects
T10	Ability to use specific software for chemistry at user level

5. Objectives or Learning Outcomes

Course learning outcomes

Description

Know the main management systems and their possible integration

Learn to develop topics and acquire skills in the oral and written presentation at the time of the presentation of results.

Deepen the design concepts of the main equipment found in any chemical plant

Know how the execution of a project in the Chemical Industry develops

Know the phases in which a project is developed, deepening the knowledge required for each of them

To ensure that students are able to search and select information in the field of the Chemical Industry and that they are able to process it and present it properly, both orally and in writing. Developing his capacity for synthesis, being critical and objective

Develop in the student the concept of security within the execution of a project

To develop in the student the capacity of initiative to pose and solve specific problems of the Chemical Industry, as well as to interpret the obtained results

Train the student for autonomous work and learning, as well as for personal initiative.

6. Units / Contents

Unit 1: Introduction

Unit 2: Definition and scope of a project

Unit 3: Economic analysis

Unit 4: Process Engineering

Unit 5: Detail engineering and construction

Unit 6: Start-up and operation

Unit 7: Environment and safety

Unit 8: Management systems

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]	Lectures	CB02 CB04 E14 E16 G03 G05	1	25	N	-	face-to-face theoretical teaching
Workshops or seminars [ON-SITE]	Guided or supervised work	CB02 CB04 E04 E09 E10 E11 G03 T03 T10	0.4	10	Y	Y	tutored case study
Group tutoring sessions [ON-SITE]	Group tutoring sessions	CB02 CB04 G03 T03 T05 T07 T08	0.1	2.5	Y	Y	group tutorials
Final test [ON-SITE]	Assessment tests	CB02 CB04 E04 E09 E10 E11 G03 T03 T10	0.1	2.5	Y	Y	Final test
Writing of reports or projects [OFF-SITE]	Self-study	CB02 CB04 E16 E17 G03 T03 T05 T06	2.5	62.5	N	-	Student self-study
Study and Exam Preparation [OFF-SITE]	Self-study	G03 G05 T05	1.9	47.5	N	-	Student self-study
Total:			6	150			
Total credits of in-class work: 1.6			Total class time hours: 40				
Total credits of out of class work: 4.4			Total hours of out of class work: 110				

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
Projects	40.00%	40.00%	The execution of a practical case that will be carried out in groups will be evaluated
Final test	60.00%	60.00%	
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).

Evaluation criteria for the final exam:

Continuous assessment:

The student must participate in a mandatory way in the work execution seminars.

The student, to be able to pass, must pass all parts of the assessment system with a grade equal to or greater than 4.0.

Students who do not participate in the seminars of preparation of the work must present the day of the final test, a working memory whose subject must be previously agreed with the teacher of the subject.

Non-continuous evaluation:

Evaluation criteria not defined

Specifications for the first/retake exam:
The same criteria as ordinary exam

Specifications for the second resit / retake exam:
The same criteria as ordinary exam

9. Assignments, course calendar and important dates	
Not related to the syllabus/contents	
Hours	hours
Class Attendance (theory) [PRESENCIAL][Lectures]	25
Workshops or seminars [PRESENCIAL][Guided or supervised work]	10
Group tutoring sessions [PRESENCIAL][Group tutoring sessions]	2.5
Final test [PRESENCIAL][Assessment tests]	2.5
Writing of reports or projects [AUTÓNOMA][Self-study]	62.5
Study and Exam Preparation [AUTÓNOMA][Self-study]	47.5
Global activity	
Activities	hours
Workshops or seminars [PRESENCIAL][Guided or supervised work]	10
Group tutoring sessions [PRESENCIAL][Group tutoring sessions]	2.5
Final test [PRESENCIAL][Assessment tests]	2.5
Writing of reports or projects [AUTÓNOMA][Self-study]	62.5
Study and Exam Preparation [AUTÓNOMA][Self-study]	47.5
Class Attendance (theory) [PRESENCIAL][Lectures]	25
Total horas: 150	

10. Bibliography and Sources						
Author(s)	Title/Link	Publishing house	City	ISBN	Year	Description
Costa Novella, E.	Ingeniería química	Alhambra		84-205-0989-2	1983	
Costa Novella, E.	Ingeniería química: Conceptos generales	Universidad Complutense		84-400-4085-7	1978	
Coulson, J. M.	Ingeniería químicaTomo 2: Unidades SI, operaciones básicas	Reverté		978-84-291-7136-5 (t	2003	
McCabe, Warren L.	Unit operation of chemical engineering	McGrawHill		007-124710-6	2005	
Perry, Robert H.	Perry's chemical engineers handbook	McGraw Hill		0-07-134412-8	1999	
Rase H.F.; Barrow M.H.	Ingeniería de proyectos para plantas de proceso	CECSA	Mexico		1984	
Cabra L.; de Lucas A.; Ruiz F.; Ramos M.J.	Metodologías de diseño aplicado y gestión de proyectos para	Ediciones de la Universidad de Castilla-La Mancha		978-84-8427-758-3	2010	
Valcárcel M.; Ríos A.	La calidad en los laboratorios analíticos	Reverte		84-291-7986-0	2002	
de Lucas A.; Gracia I.; Fernández F.J.; Sánchez de Pablo J.D.	Economía para la función directiva del ingeniero en la Industria Química	Signe S.A.		987-84-614-9819-2	2011	
Compañó Beltrán, Ramon	Garantía de la calidad en los laboratorios analíticos	Síntesis		84-9756-024-8	2002	