



UNIVERSIDAD DE CASTILLA - LA MANCHA

GUÍA DOCENTE

1. General information

Course: WORK PLACEMENT I
Type: ELECTIVE
Degree: 344 - CHEMICAL ENGINEERING
Center: 1 - FACULTY OF SCIENCE AND CHEMICAL TECHNOLOGY
Year: 4

Main language: Spanish
Use of additional languages: English

Web site: http://www.uclm.es/cr/fquimicas/menu_principal/06-movilidad/practicas_empresa/index.htm

Code: 57742
ECTS credits: 6
Academic year: 2023-24
Group(s): 21
Duration: First semester
Second language: English
English Friendly: Y
Bilingual: N

Lecturer: FERNANDO DORADO FERNANDEZ - Group(s): 21				
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Lecturer: CARMEN MARIA FERNANDEZ MARCHANTE - Group(s): 21				
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Enrique Costa Novella/Despacho 14	INGENIERÍA QUÍMICA	6351	carmenm.fmarchante@uclm.es	Monday, Wednesday and Thursday from 12:30 to 13:30
Lecturer: JESUS MANUEL GARCIA VARGAS - Group(s): 21				
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Lecturer: ANA RAQUEL DE LA OSA PUEBLA - Group(s): 21				
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Lecturer: ALBERTO RODRÍGUEZ GÓMEZ - Group(s): 21				
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Lecturer: PAULA SANCHEZ PAREDES - Group(s): 21				
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Enrique Costa Novella. Ingeniería Química.Despacho 8.	INGENIERÍA QUÍMICA	3418	paula.sanchez@uclm.es	Monday to Wednesday from 12:00 to 14:00
Lecturer: MARIA LUZ SANCHEZ SILVA - Group(s): 21				
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Lecturer: JUAN RAMON TRAPERO ARENAS - Group(s): 21				
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Margarita Salas/ 304	ADMINISTRACIÓN DE EMPRESAS	926052446	juanramon.trapero@uclm.es	

2. Pre-Requisites

To have passed at least 120 credits of the Degree in Chemical Engineering.

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

Subject oriented to put into practice in the real working environment the theoretical training received at the University.

4. Degree competences achieved in this course

Course competences

Code	Description
	Prove that they have acquired and understood knowledge in a subject area that derives from general secondary education and is

CB01	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
E17	Applied knowledge of business organization.
E19	Knowledge about material and energy balances, biotechnology, material transfer, separation operations, chemical reaction engineering, reactor design, and recovery and transformation of raw materials and energy resources.
E20	Capacity for analysis, design, simulation and optimization of processes and products.
E22	Ability to design, manage and operate simulation, control and instrumentation procedures of chemical processes.
E24	Knowledge and / or ability to handle chemical analysis equipment and property characterization, and the basic instruments of a chemical laboratory.
E26	Knowledge about integration of processes and operations
E27	Knowledge and capacity of management and specification of the main industrial equipment in the area of knowledge of chemical engineering
E28	Ability to compare and select between technological alternatives
E29	Ability to perform economic evaluations and establish the economic viability of a project
E30	Knowledge of the theory and capacity of use of the procedures of change of scale
E32	Ability to manage information sources in chemical engineering. Properly handle the terminology of the profession in Spanish and English in the oral and written records
E39	Knowledge of the main energy and industrial processes related to oil and / or coal.
E40	Knowledge of the basic norms in matters of occupational health and safety, especially those that are applicable in the Industry and in the Chemical Laboratories
E41	Ability to evaluate and implement quality criteria in the chemical industry and chemical laboratories
E42	Applied knowledge about energy sources and capacity for energy evaluation and optimization of chemical processes
E43	Knowledge about the mode of operation and capacity for the design of the main unit operations used in the pharmaceutical and food industries, in particular mechanical separation operations and membrane processes
E44	Capacity to handle process simulators in Chemical Engineering
G01	Ability to write, sign and develop projects in the field of chemical engineering that are intended, according to the knowledge acquired as established in section 5 of order CIN / 351/2009 of February 9, construction, reform, repair, conservation, demolition, manufacture, installation, assembly or operation of: structures, mechanical equipment, energy installations, electrical and electronic installations, industrial facilities and processes and manufacturing and automation processes.
G02	Capacity for the direction, of the activities object of the engineering projects described in the competence G1.
G03	Knowledge in basic and technological subjects, which enables them to learn new methods and theories, and give them versatility to adapt to new situations.
G04	Ability to solve problems with initiative, decision making, creativity, critical reasoning and to communicate and transmit knowledge, skills and abilities in the field of Chemical Engineering.
G05	Knowledge for the realization of measurements, calculations, valuations, appraisals, surveys, studies, reports, work plans and other analogous works.
G06	Ability to handle specifications, regulations and mandatory standards.
G07	Ability to analyze and assess the social and environmental impact of technical solutions.
G08	Ability to apply the principles and methods of quality.
G09	Capacity for organization and planning in the field of the company, and other institutions and organizations.
G10	Ability to work in a multilingual and multidisciplinary environment.
G11	Knowledge, understanding and ability to apply the necessary legislation in the exercise of the profession of Industrial Technical Engineer
G14	Proper oral and written communication
G15	ethical commitment and professional ethics
G16	Management capacity and information planning
G17	Capacity for critical thinking and decision making
G18	Synthesis capacity
G19	Capacity for teamwork
G20	Ability to analyze and solve problems
G21	Ability to learn and work autonomously
G22	Ability to apply theoretical knowledge to practice
G23	Creativity and initiative
G24	Leadership
G25	Recognition of diversity, multiculturalism and gender equality
G26	Obtaining skills in interpersonal relationships.

5. Objectives or Learning Outcomes

Course learning outcomes

Description

To have the ability to work in a team, responsibility in performance and responsible management and leadership strategies.

To have the skill for practical work, being able to develop it in coordination with other professionals.

To know some of the main professional activities of the chemical industry sector.

To know the applications of chemical engineering in processes and energy engineering.

To develop in the student the capacity of initiative to raise and solve specific problems of Organic Chemistry, as well as to interpret the results obtained.

To acquire the capacity for the ethical exercise of the profession and become socially aware of their reports and impact of their decisions.

6. Units / Contents

Unit 1: Industrial training related to Process Engineering

7. Activities, Units/Modules and Methodology

Training Activity	Methodology	Related Competences (only degrees before RD 822/2021)	ECTS	Hours	As	Com	Description
Practicum [ON-SITE]	Guided or supervised work	CB01 CB02 CB03 CB04 CB05 E17 E19 E20 E22 E24 E26 E27 E28 E29 E30 E32 E39 E40 E41 E42 E43 E44 G01 G02 G03 G04 G05 G06 G07 G08 G09 G10 G11 G14 G15 G16 G17 G18 G19 G20 G21 G22 G23 G24 G25 G26	4.8	120	Y	Y	Tutored internships. Presential Training
Writing of reports or projects [OFF-SITE]	Self-study	CB01 CB02 CB03 CB04 CB05 E17 E19 E20 E22 E24 E26 E27 E28 E29 E30 E32 E39 E40 E41 E42 E43 E44 G01 G02 G03 G04 G05 G06 G07 G08 G09 G10 G11 G14 G15 G16 G17 G18 G19 G20 G21 G22 G23 G24 G25 G26	1.1	27.5	Y	Y	Preparation of an internship report
Progress test [ON-SITE]	Assessment tests	CB01 CB02 CB03 CB04 CB05 E17 E19 E20 E22 E24 E26 E27 E28 E29 E30 E32 E39 E40 E41 E42 E43 E44 G01 G02 G03 G04 G05 G06 G07 G08 G09 G10 G11 G14 G15 G16 G17 G18 G19 G20 G21 G22 G23 G24 G25 G26	0.1	2.5	Y	Y	Oral presentation of the work done
Total:			6	150			
Total credits of in-class work: 4.9			Total class time hours: 122.5				
Total credits of out of class work: 1.1			Total hours of out of class work: 27.5				

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
Self Evaluation and Co-evaluation	90.00%	90.00%	Attendance with good results followed by the elaboration of the internship report, and evaluation by both tutors.
Final test	10.00%	10.00%	Evaluation by means of critical oral presentation of the internship in front of an ad hoc commission of the FCYTQ.
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 evaluation process will be carried out both by the tutor of the external institution and by the tutor of the University. In case the report of the external institution's tutor is unfavorable (less than four points out of ten), the evaluation of the external internship will be negative, and the student will have to carry out a new internship period. In case the external institution tutor's report is favorable, the University tutor will evaluate the internship report submitted by the student. If the evaluation is negative (less than four points out of 10), the student may undergo a new evaluation of the internship report at the next evaluation call. The final grade for external internships will be given by the University tutor, and is established as follows:

Overall evaluation by tutors (90%)

Critical evaluation through final presentation in front of a committee (10%).

Non-continuous evaluation:

Evaluation criteria not defined

Specifications for the resit/retake exam:

Activity not recoverable in extraordinary call if the evaluation of tutors (90%) is not passed in the ordinary call.

Specifications for the second resit / retake exam:

Activity not recoverable in extraordinary call if the evaluation of tutors (90%) is not passed in the ordinary call.

9. Assignments, course calendar and important dates

Not related to the syllabus/contents

Hours	hours
Practicum [PRESENCIAL][Guided or supervised work]	120
Writing of reports or projects [AUTÓNOMA][Self-study]	27.5

Progress test [PRESENCIAL][Assessment tests]	2.5
Unit 1 (de 1): Industrial training related to Process Engineering	
Activities	Hours
Practicum [PRESENCIAL][Guided or supervised work]	120
Writing of reports or projects [AUTÓNOMA][Self-study]	27.5
Progress test [PRESENCIAL][Assessment tests]	2.5
Global activity	
Activities	hours
Practicum [PRESENCIAL][Guided or supervised work]	240
Writing of reports or projects [AUTÓNOMA][Self-study]	55
Progress test [PRESENCIAL][Assessment tests]	5
Total horas: 300	

10. Bibliography and Sources						
Author(s)	Title/Link	Publishing house	City	ISBN	Year	Description