UNIVERSIDAD DE CASTILLA - LA MANCHA

GUÍA DOCENTE

1. General information

Course: INTRODUCTION TO CHEMICAL ENGINEERING
Type: CORE COURSE
Degree: 344 - CHEMICAL ENGINEERING
Center: 1 - FACULTY OF SCIENCE AND CHEMICAL TECHNOLOGY
Year: 1
Main language: Spanish
Use of additional languages:
Web site:

Code: 57703
ECTS credits: 6
Academic year: 2021-22
Group(s): 21
Duration: First semester
Second language: English
English Friendly: Y
Bilingual: N

Lecturer: **MARIA TERESA GARCIA GONZALEZ** - Group(s): **21**

Building/Office	Department	Phone number	Email	Office hours
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Lecturer: **PAULA SANCHEZ PAREDES** - Group(s): **21**

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2. Pre-Requisites

Not established

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
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.
E31	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
E32	Knowledge of the fundamentals and techniques of environmental analysis
G03	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.
G04	Knowledge for the realization of measurements, calculations, valuations, appraisals, surveys, studies, reports, work plans and other analogous works.
G13	Proper oral and written communication
G14	ethical commitment and professional ethics
G16	Capacity for critical thinking and decision making
G18	Capacity for teamwork
G19	Ability to analyze and solve problems
G20	Ability to learn and work autonomously
G21	Ability to apply theoretical knowledge to practice
G22	Creativity and initiative
G26	Obtaining skills in interpersonal relationships.

5. Objectives or Learning Outcomes

Course learning outcomes

Description

6. Units / Contents

Unit 1:
Unit 2:
Unit 3:
Unit 4:
Unit 5:
Unit 6:
Unit 7:
Unit 8:
Unit 9:

Unit 10:
Unit 11:
Unit 12:
Unit 13:
Unit 14:
Unit 15:
Unit 16:

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	E19 E31 E32 G03 G13 G16 G18	1.2	30	N	-	
Computer room practice [ON-SITE]	Practical or hands-on activities	E32 G13 G14 G19 G20 G22 G26	0.25	6.25	Y	N	
Workshops or seminars [ON-SITE]	Project/Problem Based Learning (PBL)	E31 E32 G03 G04 G19 G20 G22 G26	0.6	15	Y	N	
Group tutoring sessions [ON-SITE]	Project/Problem Based Learning (PBL)	E31 E32 G04 G19 G26	0.2	5	Y	N	
Study and Exam Preparation [OFF-SITE]	Self-study	E19 E31 E32 G03 G04 G13 G14 G16 G18 G19 G20 G21 G22 G26	3.6	90	N	-	
Final test [ON-SITE]	Assessment tests	E19 E31 E32 G03 G04 G13 G14 G16 G18 G19 G20 G21 G22 G26	0.15	3.75	Y	Y	
		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
Assessment of activities done in the computer labs	10.00%	10.00%	
Assessment of problem solving and/or case studies	10.00%	0.00%	
Final test	70.00%	90.00%	
Assessment of problem solving and/or case studies	10.00%	0.00%	
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**

Unit 1 (de 16):

Activities	**Hours**
Class Attendance (theory) [PRESENCIAL][Lectures]	30
Computer room practice [PRESENCIAL][Practical or hands-on activities]	12.5
Workshops or seminars [PRESENCIAL][Project/Problem Based Learning (PBL)]	10
Group tutoring sessions [PRESENCIAL][Project/Problem Based Learning (PBL)]	5
Study and Exam Preparation [AUTÓNOMA][Self-study]	90
Final test [PRESENCIAL][Assessment tests]	2.5

Global activity

Activities	**hours**
Class Attendance (theory) [PRESENCIAL][Lectures]	30
Computer room practice [PRESENCIAL][Practical or hands-on activities]	12.5
Workshops or seminars [PRESENCIAL][Project/Problem Based Learning (PBL)]	10
Group tutoring sessions [PRESENCIAL][Project/Problem Based Learning (PBL)]	5
Study and Exam Preparation [AUTÓNOMA][Self-study]	90
Final test [PRESENCIAL][Assessment tests]	2.5
Total horas:	150

10. Bibliography and Sources

Author(s)	Title/Link	Publishing house	Citv	ISBN	Year	Description

MARTÍNEZ DE LA CUESTA, P.J Y RUS MARTÍNEZ, ELOÍSA	Operaciones de Separación en Ingeniería Química. Métodos de Cálculo	Pearson Educación (Prentice Hall)		2004	
CALLEJA, G; GARCÍA, F; DE LUCAS, A; PRATS, D; RODRÍGUEZ, J.M.	Introducción a la Ingeniería Química	Síntesis	9788477386643		Libro base para el seguimiento de la asignatura
COSTA, E.; SOTELO, J.L.; CALLEJA, G., OVEJERO, G.; DE LUCAS, A.; AGUADO, J. Y UGUINA, M.A.	Ingeniería Química 1. Conceptos generales	Alhambra		1983	
COULSON, J.M.; RICHARDSON, J.F.; SINNOTT, R.K.;; BACKHURST, J.R.; HARKER, J.H.; PEACOK	Ingeniería Química Tomos I y II	Reverté		1987	
PERRY, R.H. ; GREEN, D.W.	Perry¿s Chemical Engineer¿s Handbook.	Mc Graw Hill		1999	
VIAN ORTUÑO, A	El pronóstico económico en química industrial	Eudema, S.A		1991	
VIAN ORTUÑO, A.	Introducción a la química industrial	Reverté		1999	