[MHC301] CHEMICAL PROCESS TECHNOLOGY

GENERAL INFORMATION

Studies	UNIVERSITY MASTER IN INDUSTRIAL ENGINEERING			**Subject**	?
Semester	2	**Course**	1	**Mention / Field of specialisation**	
Character	COMPULSORY				
Plan	2025	**Modality**	Face-to-face	**Language**	CASTELLANO
Credits	3	**Hours/week**	1.72	**Total hours**	31 class hours + 44 non-class hours = **75 total hours**

2030 AGENDA GOALS

PROFESSORS

FERNANDEZ LIZARRIBAR, GARBIÑE
ZUBIRIA ULACIA, MARIA

REQUIRED PREVIOUS KNOWLEDGE

Subjects	Knowledge
(No specific previous subjects required)	[!] *Fundamentos de Química*

LEARNING RESULTS

LEARNING RESULTS	KC	SK	AB	ECTS
MH2504 - Analyze and design chemical processes		x		2,36
MH2526 - Apply acquired knowledge and problem-solving skills in new, unfamiliar or changing environments within broader (or multidisciplinary) contexts related to their area of study.		x		0,2
MH2527 - Demonstrate the ability to integrate knowledge and deal with the complexity of formulate judgments based on incomplete or limited information, including reflections on the SDGs, human rights and fundamental rights, and on social, health and safety, environmental, economic and industrial implications and responsibilities.		x		0,2
MH2528 - Communicate its conclusions and the ultimate knowledge and rationale behind them to specialized and non-specialized audiences in a clear and unambiguous manner.		x		0,12
MH2530 - Work with people, involving them and leading them in a dynamic directed towards a common objective that includes reflection on their ethical and social responsibility, with a global vision of the work to be carried out and the characteristics required (quality, deadlines, etc.), assuming responsibility for the decisions taken.		x		0,12
			Total:	3

KC: Knowledge or Content / SK: Skills / AB: Abilities

SECONDARY LEARNING RESULTS

RMH138 [!] ***Resuelve balances de materia y energía en reactores donde se da un proceso químico.***

LEARNING ACTIVITIES	CH	NCH	TH
Personal study and flexible development of concepts and subjects using active dynamics, to foster more meaningful learning		26 h.	26 h.
Conducting tests, giving presentations, presenting defences, taking examinations and/or doing checkpoints	2 h.	8 h.	10 h.
Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects	12 h.		12 h.
Carrying out exercises and solving problems individually and/or in teams	10 h.		10 h.
Carrying out visits and/or learning trips to other university centres, laboratories, companies and/or thermal power plants	2 h.		2 h.

EVALUATION SYSTEM	W
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	10%
Presentation and defence of exercises, case studies, computer practical work, simulation practical work, laboratory practical work, term projects, end of degree project, master's thesis, challenges and problems	20%
Individual written and/or oral tests or individual coding/programming tests	70%

MAKE-UP MECHANISMS
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems
Individual written and/or oral tests or individual coding/programming tests

CH - Class hours: 26 h.
NCH - Non-class hours: 34 h.
TH - Total hours: 60 h.

RMH139 **[!]** ***Conoce y diseña operaciones básicas de la ingeniería química.***

LEARNING ACTIVITIES	CH	NCH	TH
Development and writing of records, reports, presentations, audiovisual material, etc. on projects/work experience/challenges/case studies/experimental investigations carried out individually and/or in teams	2 h.	10 h.	12 h.
Conducting tests, giving presentations, presenting defences, taking examinations and/or doing checkpoints	2 h.		2 h.
Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects	,5 h.		,5 h.
Carrying out exercises and solving problems individually and/or in teams	,5 h.		,5 h.

EVALUATION SYSTEM	W	MAKE-UP MECHANISMS
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	10%	Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems
Presentation and defence of exercises, case studies, computer practical work, simulation practical work, laboratory practical work, term projects, end of degree project, master's thesis, challenges and problems	20%	Presentation and defence of exercises, case studies, computer practical work, simulation practical work, laboratory practical work, term projects, end of degree project, master's thesis, challenges and problems
Individual written and/or oral tests or individual coding/programming tests	70%	Individual written and/or oral tests or individual coding/programming tests

CH - Class hours: 5 h.
NCH - Non-class hours: 10 h.
TH - Total hours: 15 h.

CONTENTS

LEARNING RESOURCES AND BIBLIOGRAPHY

Learning resources

Moodle Platform
Slides of the subject
Topic related web quires

Bibliography

Felder R.M., Rousseau R.W. Principios elementales de los procesos químicos, 3a edición, J. Wiley, 2000.

Himmelblau D.M. Principios básicos y cálculos en Ingeniería Química, 6a Ed., Pearson Educación, 2002.

Levenspiel O. Ingeniería de las reacciones químicas. 3a ed. México: Limusa Wiley, 2004.

Scott Fogler H. Elementos de ingeniería de las reacciones químicas, Pearson Prentice Hall, 2008.

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