

[GCJ302] METALLIC MATERIALS SCIENCE

GENERAL INFORMATION

Studies	DEGREE IN ENGINEERING IN ECO-TECHNOLOGY IN INDUSTRIAL PROCESS	Subject	MATERIAL ENGINEERING
Semester	1	Course	2
Character	COMPULSORY	Mention / Field of specialisation	
Plan	2022	Modality	Face-to-face
Credits	6	Hours/week	4.61
		Language	CASTELLANO
		Total hours	83 class hours + 67 non-class hours = 150 total hours

PROFESSORS

HERRERO DORCA, NURIA

REQUIRED PREVIOUS KNOWLEDGE

Subjects	Knowledge
(No specific previous subjects required)	(No previous knowledge required)

LEARNING RESULTS

LEARNING RESULTS	KC	SK	AB	ECTS
GCR210 - To relate the properties of metals to their composition, microstructure and their corresponding synthesis and processing processes	x		x	5,4
G-RTR1 - To develop interdisciplinary projects specific to their specialty and of gradual complexity, - becoming aware of respect for human rights and fundamental rights, and analyzing and assessing the impact of the proposed solutions on the SDGs - to acquire and/or apply basic, advanced and /or avant-garde, demonstrating the ability to work in multidisciplinary teams and/or undertake further studies with a high degree of autonomy		x		0,32
G-RTR2 - To express information, ideas and the arguments that support them in an orderly, clear and coherent manner, orally and in writing, based on quality information, self-made or obtained from different sources, using inclusive and non-discriminatory language		x		0,28
			Total:	6

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

SECONDARY LEARNING RESULTS

RGC290 [!] *Proponer los objetivos y la planificación de un proyecto que le permita adquirir y/o reforzar los conocimientos de tecnologías propias de su especialidad,- que en ocasiones llegan a la vanguardia del conocimiento- y definir una estrategia de aprendizaje*

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		4 h.	4 h.	
EVALUATION SYSTEM	W	MAKE-UP MECHANISMS	<i>(No mechanisms)</i>	
Self-assessment	50%			
Co-assessment	50%			
CH - Class hours: 0 h. NCH - Non-class hours: 4 h. TH - Total hours: 4 h.				

RGC291 [!] *Establecer las responsabilidades de los miembros del equipo utilizando técnicas adecuadas para fomentar la eficiencia del equipo para el desarrollo del proyecto en los plazos establecidos (compartir recursos, aportar ideas, habilidades comunicativas)*

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		4 h.	4 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	100%	(No mechanisms)
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CH - Class hours: 0 h.
NCH - Non-class hours: 4 h.
TH - Total hours: 4 h.

RGC293 [!] Redacta y estructura correctamente la memoria del proyecto, haciendo un uso correcto, inclusivo y no discriminatorio del lenguaje. Para ello, busca y hace uso de las fuentes de información adecuadas.

LEARNING ACTIVITIES

	CH	NCH	TH
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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

EVALUATION SYSTEM

W	MAKE-UP MECHANISMS
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Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems

(No mechanisms)

CH - Class hours: 0 h.
NCH - Non-class hours: 4 h.
TH - Total hours: 4 h.

RGC294 [!] Realiza una presentación oral del proyecto con argumentos elaborados por sí mismos y haciendo un uso correcto, inclusivo y no discriminatorio del lenguaje.

LEARNING ACTIVITIES

	CH	NCH	TH
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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

3 h.

3 h.

EVALUATION SYSTEM

W	MAKE-UP MECHANISMS
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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

(No mechanisms)

CH - Class hours: 0 h.
NCH - Non-class hours: 3 h.
TH - Total hours: 3 h.

RGC214 [!] Conocer los fundamentos científicos de la ciencia de los materiales metálicos y la relación entre la microestructura del material y sus propiedades macroscópicas

LEARNING ACTIVITIES

	CH	NCH	TH
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Carrying out/resolving projects/challenges/cases, etc. to provide solutions to problems in interdisciplinary contexts, real and/or simulated, individually and/or in teams

15 h.

15 h.

Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects

30 h.

30 h.

Carrying out exercises and solving problems individually and/or in teams

10 h.

10 h.

20 h.

EVALUATION SYSTEM

W	MAKE-UP MECHANISMS
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Individual written and/or oral tests or individual

85%

Individual written and/or oral tests or individual

coding/programming tests Self-assessment	15%	coding/programming tests
CH - Class hours: 40 h. NCH - Non-class hours: 25 h. TH - Total hours: 65 h.		

RGC215 [!] Resolver problemas cualitativos y cuantitativos sobre estructura, transformaciones de fase, tratamientos térmicos, propiedades y aplicaciones de los metales

LEARNING ACTIVITIES	W	CH	NCH	TH
Carrying out/resolving projects/challenges/cases, etc. to provide solutions to problems in interdisciplinary contexts, real and/or simulated, individually and/or in teams			15 h.	15 h.
Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects		30 h.		30 h.
Carrying out exercises and solving problems individually and/or in teams		10 h.	12 h.	22 h.
Practical work in workshops and/or laboratories, individually and/or in teams		3 h.		3 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	40%	Individual written and/or oral tests or individual coding/programming tests		
Individual written and/or oral tests or individual coding/programming tests	60%			
CH - Class hours: 43 h. NCH - Non-class hours: 27 h. TH - Total hours: 70 h.				

CONTENTS

LEARNING RESOURCES AND BIBLIOGRAPHY	
Learning resources	Bibliography
Topic related web quires Moodle Platform Slides of the subject	http://katalogoa.mondragon.edu/janium-bin/janium_login_opac_re_ink.pl?grupo=EKOTEKNOLOGIA21&ejecuta=45&_ST