[GOD302] MANUFACTURING PROCESSES

GENERAL INFORMATION

Studies	DEGREE IN INDUSTRIAL ORGANIZATION ENGINEERING			**Subject**	PRODUCTION ENGINEERING
Semester	1	**Course**	2	**Mention / Field of specialisation**	
Character	COMPULSORY				
Plan	2022	**Modality**	Face-to-face	**Language**	ENGLISH
Credits	6	**Hours/week**	5.44	**Total hours**	98 class hours + 52 non-class hours = **150 total hours**

2030 AGENDA GOALS

PROFESSORS

SAENZ DE ARGANDOÑA FERNANDEZ DE GOROSTIZA, ENEKO

CHAMORRO SANCHEZ, XABIER

REQUIRED PREVIOUS KNOWLEDGE

Subjects	Knowledge
GRAPHIC EXPRESSION	*(No previous knowledge required)*

LEARNING RESULTS

LEARNING RESULTS	KC	SK	AB	ECTS
GOR202 - To know production and manufacturing systems		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		0,36
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		0,24
			Total:	6

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

ENAEE LEARNING RESULTS	ECTS
ENAE02 - Knowledge and understanding: A systematic understanding of the key aspects and concepts of their branch of engineering.	3,04
ENAE04 - Knowledge and understanding: To be aware of the multidisciplinary context of engineering.	0,4
ENAE05 - Analysis in engineering: Ability to apply their knowledge and understanding in identifying, formulating and solving engineering problems using established methods.	0,44
ENAE06 - Analysis in engineering: Ability to apply their knowledge and understanding in analysing product, process and method engineering.	0,44
ENAE08 - Engineering projects: Ability to apply their knowledge in the development and completion of projects which meet specific requirements.	0,42
ENAE17 - Transversal competences: To work effectively, both individually and in a team.	0,42
ENAE18 - Transversal competences: To use different methods to communicate effectively with the engineering community and society in general.	0,42
ENAE19 - Transversal competences: Demonstrate that they are aware of the responsibility implied in the practical application of engineering, the social and environmental impact, and show commitment with professional ethics, responsibility and regulations of the practical application of engineering.	0,42
Total:	6

SECONDARY LEARNING RESULTS

1RGO291 (1 sem)

LEARNING ACTIVITIES	CH	NCH	TH
Personal study and flexible development of concepts and subjects using active dynamics, to foster more meaningful learning	2 h.	1 h.	3 h.

EVALUATION SYSTEM	W
Individual written and/or oral tests or individual	100%

MAKE-UP MECHANISMS

(No mechanisms)

coding/programming tests

CH - Class hours: 2 h.
NCH - Non-class hours: 1 h.
TH - Total hours: 3 h.

RGO203 **[!]** ***Seleccion los procesos de fabricación adecuados para asegurar que los estándares de producto se mantienen a lo largo del tiempo***

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.	6 h.	10 h.
Personal study and flexible development of concepts and subjects using active dynamics, to foster more meaningful learning	4 h.	8 h.	12 h.
Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects	16 h.		16 h.
Carrying out exercises and solving problems individually and/or in teams	20 h.	10 h.	30 h.
Practical work in workshops and/or laboratories, individually and/or in teams	10 h.	2 h.	12 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	20%	*(No mechanisms)*
Individual written and/or oral tests or individual coding/programming tests	80%	

CH - Class hours: 54 h.
NCH - Non-class hours: 26 h.
TH - Total hours: 80 h.

1RGO292 **(1 sem)**

LEARNING ACTIVITIES	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	2 h.	1 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	100%	*(No mechanisms)*

CH - Class hours: 2 h.
NCH - Non-class hours: 1 h.
TH - Total hours: 3 h.

RGO204 **[!]** ***Selecciona las tecnologías más adecuadas para fabricar el producto dentro de las especificaciones establecidas por el cliente***

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	10 h.	10 h.	20 h.
Personal study and flexible development of concepts and subjects using active dynamics, to	4 h.	6 h.	10 h.

foster more meaningful learning			
Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects	10 h.		10 h.
Carrying out exercises and solving problems individually and/or in teams	10 h.	5 h.	15 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	20%	*(No mechanisms)*
Individual written and/or oral tests or individual coding/programming tests	80%	

CH - Class hours: 34 h.
NCH - Non-class hours: 21 h.
TH - Total hours: 55 h.

1RGO290 **(1 sem)**

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.	1 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	100%	*(No mechanisms)*

CH - Class hours: 2 h.
NCH - Non-class hours: 1 h.
TH - Total hours: 3 h.

1RGO293 **(1 sem)**

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.	1 h.	3 h.

EVALUATION SYSTEM	W	MAKE-UP MECHANISMS
Individual written and/or oral tests or individual coding/programming tests	100%	*(No mechanisms)*

CH - Class hours: 2 h.
NCH - Non-class hours: 1 h.
TH - Total hours: 3 h.

1RGO294 **(1 sem)**

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.	1 h.	3 h.

EVALUATION SYSTEM	W	MAKE-UP MECHANISMS

Individual written and/or oral tests or individual coding/programming tests	100%	*(No mechanisms)*

CH - Class hours: 2 h.
NCH - Non-class hours: 1 h.
TH - Total hours: 3 h.

CONTENTS

1 - Materials2 - Foundry3 - Forging4 - Sheet metal forming5 - Polymers6 - Machining7 - 3D printing8 - Joining9 - Manufacturing costs

LEARNING RESOURCES AND BIBLIOGRAPHY

Learning resources

[!] *Apuntes de la asignatura*
[!] *Proyección de videos*
[!] *Realización de prácticas en laboratorio*

Bibliography

Fundamentos de Manufactura Moderna. Materiales, Procesos y Sistemas. Mikell P. Groover

Manufactura. Ingeniería y Tecnología. Serope Kalpakjian y Steven R. Schmid . Pearson Education