

Course: 2024 / 2025 - Course planning



# [GOD304] MANUFACTURING ENGINEERING

#### **GENERAL INFORMATION**

Studies DEGREE IN INDUSTRIAL ORGANIZATION

**ENGINEERING** 

Semester 1 Mention / Field of Course 2 specialisation

Character COMPULSORY

Modality Face-to-face Plan 2022 Language EUSKARA/CASTELLANO

Credits 6 Hours/week 5.11 Total hours 92 class hours + 58 non-class hours = 150 total

hours

Subject PRODUCTION ENGINEERING

#### 2030 AGENDA GOALS







#### **PROFESSORS**

LARRINAGA URZELAY, GAIZKA OSINAGA URIZAR, BEÑAT

# UIRED PREVIOUS KNOWLEDGE

**Subjects** Knowledge

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

LEARNING RESULTS				
LEARNING RESULTS	кс	sĸ	AB	ECTS
<b>GOR206</b> - To apply appropriate tools and methods to minimize and/or eliminate waste incurred by a productive or service company.		Х	-	5,4
<b>G-RTR1</b> - 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		х		0,24

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

**ENAEE LEARNING RESULTS ECTS** 2,56 ENAE02 - Knowledge and understanding: A systematic understanding of the key aspects and concepts of their branch of engineering. ENAE04 - Knowledge and understanding: To be aware of the multidisciplinary context of engineering. 0.2 0,2 ENAE06 - Analysis in engineering: Ability to apply their knowledge and understanding in analysing product, process and method engineering. ENAE08 - Engineering projects: Ability to apply their knowledge in the development and completion of projects which meet 0.51 specific requirements. 0.52 ENAE12 - Research & innovation: Technical and lab competences. ENAE13 - Practical application of engineering: Ability to select and use suitable equipment, tools and methods. 1 0.51 ENAE17 - Transversal competences: To work effectively, both individually and in a team.

ENAE18 - Transversal competences: To use different methods to communicate effectively with the engineering community and society in general.

> Total: 6

> > 3 h.

0,51

#### SECONDARY LEARNING RESULTS

1RGO291 (1 sem)

СН NCH ТН **LEARNING ACTIVITIES** 

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

**EVALUATION SYSTEM** 

Presentation and defence of exercises, case studies, computer practical work, simulation practical work, laboratory practical work, term projects, end of degree **MAKE-UP MECHANISMS** 

(No mechanisms)

3 h.

100%



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project, master's thesis, challenges and problems

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

LEARNING ACTIVITIES			СН	NCH	TH
Development and writing of records, reports, presentation projects/work experience/challenges/case studies/experindividually and/or in teams	,	•	2 h.	10 h.	12 h.
Conducting tests, giving presentations, presenting defendence checkpoints	es, taking	examinations and/or doing	3 h.		3 h.
Carrying out/resolving projects/challenges/cases, etc. to pinterdisciplinary contexts, real and/or simulated, individua		•	15 h.	5 h.	20 h.
Presentation by the teacher in the classroom, in participa procedures associated with the subjects	tory classe	es, of concepts and	14 h.		14 h.
Carrying out exercises and solving problems individually	and/or in te	eams	10 h.	5 h.	15 h.
Role-playing games			4 h.		4 h.
EVALUATION SYSTEM	W	MAKE-UP MECHANISM	IS		
Reports on the completion of exercises, case studies,	40%	Individual written and/or oral tests or individual			

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

Individual written and/or oral tests or individual

40%

coding/programming tests

Individual written and/or oral tests or individual coding/programming tests

CH - Class hours: 48 h. NCH - Non-class hours: 20 h. TH - Total hours: 68 h.

RGO213 [!] Desarrolla la distribución en planta (funcional, lineal, celular, etc.) adecuada a la demanda de producto o productos de una empresa productiva

LEARNING ACTIVITIES			СН	NCH	TH
Development and writing of records, reports, presentation projects/work experience/challenges/case studies/experindividually and/or in teams		· ·	2 h.	13 h.	15 h.
Conducting tests, giving presentations, presenting defendence checkpoints	es, taking	examinations and/or doing	5 h.		5 h.
Presentation by the teacher in the classroom, in participa procedures associated with the subjects	tory classe	es, of concepts and	15 h.		15 h.
Carrying out exercises and solving problems individually	and/or in te	eams	16 h.	12 h.	28 h.
Role-playing games			4 h.		4 h.
EVALUATION SYSTEM	W	MAKE-UP MECHANISM	IS		
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	30%	Individual written and/or oral tests or individual coding/programming tests			
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	30%				
Individual written and/or oral tests or individual	40%				



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coding/programming tests

CH - Class hours: 42 h. NCH - Non-class hours: 25 h. TH - Total hours: 67 h.

1RGO292	(1	sem)

LEARNING ACTIVITIES

**CH** 2 h.

NCH

1 h.

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

3 h.

EVALUATION SYSTEM W

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100%

MAKE-UP MECHANISMS
(No mechanisms)

Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems

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

#### 1RGO290 (1 sem)

**LEARNING ACTIVITIES** 

СН

NCH

3 h.

ТН

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

**EVALUATION SYSTEM** 

*W* 

MAKE-UP MECHANISMS
(No mechanisms)

Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems

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

TH - Total hours: 3 h.

#### 1RGO293 (1 sem)

#### **LEARNING ACTIVITIES**

СН

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

#### **EVALUATION SYSTEM**

100%

**MAKE-UP MECHANISMS** 

(No mechanisms)

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

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

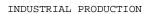


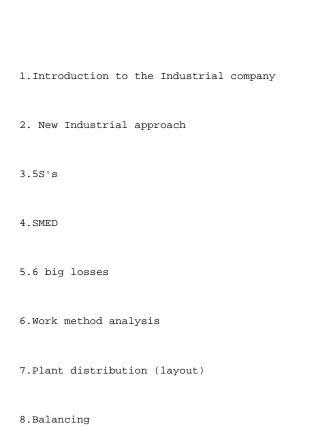
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1RGO294 (1 sem)					
LEARNING ACTIVITIES		С	н	NCH	тн
Development and writing of records, reports, presentation projects/work experience/challenges/case studies/experiendividually and/or in teams				3 h.	3 h.
EVALUATION SYSTEM	W	MAKE-UP MECHANISMS			
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	100%	(No	mech	nanisms)	
CH - Class hours: 0 h. NCH - Non-class hours: 3 h.					

## CONTENTS







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#### **LEARNING RESOURCES AND BIBLIOGRAPHY** Learning resources **Bibliography** [!] Apuntes de la asignatura 5S for Operators. 5 pillars of the visual workplace American Technical Publishers Ltd. ISBN: 1.56327-123-0 [!] Plataforma Moodle BLACK, J. T. y HUNTER, Steve L. Lean manufacturing systems and cell design. Dearborn, Michigan: Society of Manufacturing Engineers, [!] Presentaciones en clase [!] Realización de prácticas en laboratorio CUATRECASAS, Lluís. Diseño avanzado de procesos y plantas de producción flexible. Profit Editorial, 2009 WOMACK, James P. y JONES, Daniel T. Lean thinking: cómo utilizar el pensamiento lean para eliminar los despilfarros y crear valor en la empresa. Ediciones Gestión 2000, 2005 WOMACK, James P.; JONES, Daniel T. y ROOS, Daniel. The machine that changed the world: How Lean Production revolutionized