

## [GCO302] INDUSTRIAL ORGANISATION

### GENERAL INFORMATION

<b>Studies</b>	DEGREE IN ENGINEERING IN ECO-TECHNOLOGY IN INDUSTRIAL PROCESS		<b>Subject</b>	?
<b>Semester</b>	1	<b>Course</b>	3	<b>Mention / Field of specialisation</b>
<b>Character</b>	COMPULSORY		<b>Language</b>	ENGLISH
<b>Plan</b>	2022	<b>Modality</b>	Face-to-face	<b>Total hours</b> [!] 76 class hours + 131 non-class hours = <b>207 total hours</b>
<b>Credits</b>	4,5	<b>Hours/week</b>	4.22	

### PROFESSORS

URIZAR AIZPURU, ENERITZ

### REQUIRED PREVIOUS KNOWLEDGE

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

### LEARNING RESULTS

LEARNING RESULTS	KC	SK	AB	ECTS
<b>GCR310</b> - Applies business organization knowledge to improve production in industrial plants		x		3,78
<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		0,4
<b>G-RTR2</b> - 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		0,32
<b>Total:</b>				<b>4,5</b>

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

### SECONDARY LEARNING RESULTS

**RGC390** [!] *Definir y gestionar los objetivos y la planificación de un proyecto que le permita adquirir y/o reforzar los conocimientos de tecnologías específicas de su especialidad,- que en ocasiones llegan a la vanguardia del conocimiento- y definir una estrate*

#### 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

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

**Comments:** Assessment of the acquired transversal skills:

Followed methodology to solve the project: team work, decision making methods, conflict management... Project management: definition of objectives, planning,... Written and oral communication

#### MAKE-UP MECHANISMS

(No mechanisms)

**Comments:** Continuous assessment. The project is managed through the tutoring meetings and the meetings held with the experts, errors are corrected and the precise guidelines are given to overcome the project.

**CH - Class hours:** 0 h.

**NCH - Non-class hours:** 4 h.

**TH - Total hours:** 4 h.

**RGC391** [!] *Coordinar el equipo de trabajo, estimulando la cohesión y buen clima para lograr la integración de todas las personas y su contribución para alcanzar un rendimiento apropiado, tanto a nivel individual como grupal, para el desarrollo del proyecto en*

#### LEARNING ACTIVITIES

	CH	NCH	TH
Development and writing of records, reports, presentations, audiovisual material, etc. on		3 h.	3 h.

projects/work experience/challenges/case studies/experimental investigations carried out individually and/or in teams

**EVALUATION SYSTEM**

**W**

Self-assessment

50%

Co-assessment

50%

**Comments:** Assessment of the acquired transversal skills:

Followed methodology to solve the project: team work, decision

making methods, conflict management... Project management:

definition of objectives, planning,... Written and oral communication

**MAKE-UP MECHANISMS**

(No mechanisms)

**Comments:** Continuous assessment. The project is managed through the tutoring meetings and the meetings held with the experts, errors are corrected and the precise guidelines are given to overcome the project.

**CH - Class hours:** 0 h.

**NCH - Non-class hours:** 3 h.

**TH - Total hours:** 3 h.

**RGC392** [!] *Identificar y argumentar de forma precisa los ODS en los que incide el proyecto realizado, aportando posibles acciones para la mejora.*

**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

3 h.

3 h.

**EVALUATION SYSTEM**

**W**

Reports on the completion of exercises, case studies,

100%

computer exercises, simulation exercises, laboratory

exercises, term projects, challenges and problems

**Comments:** Assessment of the acquired transversal skills:

Followed methodology to solve the project: team work, decision

making methods, conflict management... Project management:

definition of objectives, planning,... Written and oral communication

**MAKE-UP MECHANISMS**

(No mechanisms)

**Comments:** Continuous assessment. The project is managed through the tutoring meetings and the meetings held with the experts, errors are corrected and the precise guidelines are given to overcome the project.

**CH - Class hours:** 0 h.

**NCH - Non-class hours:** 3 h.

**TH - Total hours:** 3 h.

**RGC393** [!] *Elabora la memoria del proyecto, aportando argumentos elaborados y haciendo un uso correcto, inclusivo y no discriminatorio del lenguaje.*

**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**

Reports on the completion of exercises, case studies,

100%

computer exercises, simulation exercises, laboratory

exercises, term projects, challenges and problems

**Comments:** Assessment of the acquired transversal skills:

Followed methodology to solve the project: team work, decision

making methods, conflict management... Project management:

definition of objectives, planning,... Written and oral communication

**MAKE-UP MECHANISMS**

(No mechanisms)

**Comments:** Continuous assessment. The project is managed through the tutoring meetings and the meetings held with the experts, errors are corrected and the precise guidelines are given to overcome the project.

**CH - Class hours:** 0 h.

**NCH - Non-class hours:** 4 h.

**TH - Total hours:** 4 h.

**RGC394** (!) Realiza una presentación oral del proyecto, justificando las soluciones propuestas con argumentos elaborados y precisos, y haciendo un uso correcto, inclusivo y no discriminatorio del lenguaje.

#### 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

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

100%

(No mechanisms)

**Comments:** Assessment of the acquired transversal skills:

Followed methodology to solve the project: team work, decision making methods, conflict management...

Project management: definition of objectives, planning,...

Written and oral communication

**Comments:** Continuous assessment. The project is managed through the tutoring meetings and the meetings held with the experts, errors are corrected and the precise guidelines are given to overcome the project.

CH - Class hours: 0 h.

NCH - Non-class hours: 4 h.

TH - Total hours: 4 h.

**RGC325** Identify and apply the different techniques and tools for the overall improvement of the productive flow of an industrial plant, which will reduce the productive waste

#### LEARNING ACTIVITIES

CH

NCH

TH

Conducting tests, giving presentations, presenting defences, taking examinations and/or doing checkpoints

1 h.

5 h.

6 h.

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

17,75 h.

17,75 h.

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

11 h.

10 h.

21 h.

Role-playing games

2 h.

2 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

70%

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

30%

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

**Comments:** KP1 30% EN1 15% PULL PUSH SIMULATION EN2

10% 5S WORK EN3 10% SMED WORK EN4 5% EXERCISES

DELIVERY POPBL 30%

CH - Class hours: 24 h.

NCH - Non-class hours: 34,75 h.

TH - Total hours: 58,75 h.

**RGC326** Calculate productive efficiency and apply techniques and tools to increase it

#### LEARNING ACTIVITIES

CH

NCH

TH

Conducting tests, giving presentations, presenting defences, taking examinations and/or doing checkpoints

1 h.

3 h.

4 h.

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

6 h.

6 h.

Carrying out exercises and solving problems individually and/or in teams	5 h.	3,75 h.	8,75 h.
Role-playing games	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

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

**Comments:** KP1 45% EN1 5% PULL PUSH SIMULATION EN2 5% 5S WORK EN3 5% SMED WORK EN4 10% EXERCISES DELIVERY POPBL 30%

#### 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:** 14 h.

**NCH - Non-class hours:** 21,75 h.

**TH - Total hours:** 35,75 h.

**RGC325** [!] *Identificar y aplicar las diferentes técnicas y herramientas de mejora global del flujo productivo de una planta industrial, que permitan reducir el despilfarro productivo.*

#### LEARNING ACTIVITIES

**CH**

**NCH**

**TH**

Conducting tests, giving presentations, presenting defences, taking examinations and/or doing checkpoints	1 h.	5 h.	6 h.
Carrying out/resolving projects/challenges/cases, etc. to provide solutions to problems in interdisciplinary contexts, real and/or simulated, individually and/or in teams		17,75 h.	17,75 h.
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	11 h.	10 h.	21 h.
Role-playing games	2 h.	2 h.	4 h.

#### EVALUATION SYSTEM

**W**

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

**Comments:** KP1 30% EN1 15% PULL PUSH SIMULATION EN2 10% 5S WORK EN3 10% SMED WORK EN4 5% EXERCISES DELIVERY POPBL 30%

#### 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:** 24 h.

**NCH - Non-class hours:** 34,75 h.

**TH - Total hours:** 58,75 h.

**RGC326** [!] *Calcular la eficiencia productiva y aplicar técnicas y herramientas para incrementarla.*

#### LEARNING ACTIVITIES

**CH**

**NCH**

**TH**

Conducting tests, giving presentations, presenting defences, taking examinations and/or doing checkpoints	1 h.	3 h.	4 h.
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	6 h.		6 h.
Carrying out exercises and solving problems individually and/or in teams	5 h.	3,75 h.	8,75 h.
Role-playing games	2 h.		2 h.

#### EVALUATION SYSTEM

**W**

Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory

#### MAKE-UP MECHANISMS

Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term

<p>exercises, term projects, challenges and problems</p> <p>Individual written and/or oral tests or individual coding/programming tests</p> <p><b>Comments:</b> KP1 45% EN1 5% PULL PUSH SIMULATION EN2 5% 5S WORK EN3 5% SMED WORK EN4 10% EXERCISES DELIVERY POPBL 30%</p> <p><b>CH - Class hours:</b> 14 h. <b>NCH - Non-class hours:</b> 21,75 h. <b>TH - Total hours:</b> 35,75 h.</p>	<p>45%</p> <p>projects, challenges and problems</p> <p>Individual written and/or oral tests or individual coding/programming tests</p>
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## CONTENTS

- 1.New Industrial paradigm: Introduction to Lean Manufacturing
- 2.Just in time: Plant distribution and Cell design
- 3.Stability: Efficiency (OEE)
- 4.Stability: 5S and Autonomous Maintenance
- 5.Just in time: Rapid Changeover (SMED)
- 6.Just in time: Fifo Lane and Kanban Supermarkets

## LEARNING RESOURCES AND BIBLIOGRAPHY

Learning resources	Bibliography
<p>Moodle Platform</p> <p>Class presentations</p>	<p>LEAN MANUFACTURING. Exposición adaptada a la fabricación de familias de productos mediante procesos discretos. Francisco Larrañaga. 2013</p> <p>LA MÁQUINA QUE CAMBIÓ EL MUNDO. Womack, J.P.; Jones, A.T. y Ross, D. Ed. McGraw-Hill 1992</p> <p>LEAN THINKING. Cómo utilizar el pensamiento Lean para eliminar los despilfarros y crear valor en la empresa Womack, J.P.; Jones, A.T. y Ross, D. Ed. McGraw-Hill 1992</p>