[GJO302] ENGINEERING OF PRODUCTION EQUIPMENT AND AUTOMATED SYSTEMS I

GENERAL INFORMATION

Studies	DEGREE IN MECHATRONICS ENGINEERING			**Subject**	?
Semester	1	**Course**	3	**Mention / Field of specialisation**	???
Character	OPTIONAL				
Plan	2025	**Modality**	Face-to-face	**Language**	EUSKARA/CASTELLANO
Credits	10,5	**Hours/week**	11.94	**Total hours**	215 class hours + 47.5 non-class hours = **262.5 total hours**

2030 AGENDA GOALS

PROFESSORS

ERAÑA LARRAÑAGA, IÑIGO
ELGUEZABAL LAZCANO, JON

REQUIRED PREVIOUS KNOWLEDGE

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

LEARNING RESULTS

LEARNING RESULTS	KC	SK	AB	ECTS
G-TR1 - 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		1,4
G-TR2 - 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		2,8
G-TR3 - To demonstrate the ability to practice your profession with a cooperative and participatory attitude, in national, international and interdisciplinary contexts, respecting fundamental rights, especially non-discrimination and accessibility and design for all people, and analyzing and assessing the impact of the proposed solutions in the Sustainable Development Goals	x	x		6,3
			Total:	10,5

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

SECONDARY LEARNING RESULTS

1RGJ394 (1 sem) Give an oral presentation of the project, justifying the proposed solutions with detailed and precise arguments, and using language that is correct, inclusive, and non-discriminatory.

LEARNING ACTIVITIES	CH	NCH	TH
Carrying out work experience in real environments and writing the corresponding report	20 h.	15 h.	35 h.

EVALUATION SYSTEM	W
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%

MAKE-UP MECHANISMS

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

Comments: Continuous assessment. With the written document of the practices of the second semester

CH - Class hours: 20 h.
NCH - Non-class hours: 15 h.
TH - Total hours: 35 h.

1RGJ393 (1 sem)Prepare the project report, providing detailed arguments and using language that is correct, inclusive, and non-discriminatory.

LEARNING ACTIVITIES	CH	NCH	TH
Carrying out work experience in real environments and writing the corresponding report	20 h.	15 h.	35 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%	Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems **Comments:** Continuous assessment. With the written document of the practices of the second semester

CH - Class hours: 20 h.
NCH - Non-class hours: 15 h.
TH - Total hours: 35 h.

1RGJ392 (1 sem) Identify and accurately discuss the SDGs that the project addresses, suggesting possible actions for improvement.

LEARNING ACTIVITIES	CH	NCH	TH
Carrying out work experience in real environments and writing the corresponding report	17,5 h.	17,5 h.	35 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)* **Comments:** Continuous assessment. Retake is not foreseen.

CH - Class hours: 17,5 h.
NCH - Non-class hours: 17,5 h.
TH - Total hours: 35 h.

1RGJ395 (1 sem)Ability to practice their profession with cooperation and participation in national, international, and interdisciplinary contexts, respecting fundamental rights, non-discrimination, accessibility, and universal design, evaluating impact on SD

LEARNING ACTIVITIES	CH	NCH	TH
Carrying out work experience in real environments and writing the corresponding report	157,5 h.		157,5 h.

EVALUATION SYSTEM	W	MAKE-UP MECHANISMS
Observation (technical capacity, attitude and participation)	100%	*(No mechanisms)* **Comments:** Continuous assessment. Retake is not foreseen.

CH - Class hours: 157,5 h.
NCH - Non-class hours: 0 h.
TH - Total hours: 157,5 h.

CONTENTS

The contents on which the student will develop his/her activities will be determined by the typology and the activity of the company and/or technical department in which the student is located.company and/or technical department in which the student is located.The contents will be based on one or more of the following areas:* Techniques for the assembly of production equipment: mechanical elements (transmission elements, guiding elements, sealing elements, etc.) in the following areas.Sealing elements...) in known contexts.* Introduction to parameters and systems of manufacturing processes: forming processes, machining processes, welding...* Introduction to automation of production lines, equipment or processes.* Demos of automation and programming of parameters of production equipment, manufacturing processes or automated systems.* Introduction to the tuning of production equipment or production processes.* Measurement, testing and verification of components / subassemblies / mechanical assemblies or parameters on production processes.Accompanied by company experts: tools, techniques and elements of measurement / monitoring / testing.* Diagnosis of malfunctions of production equipment of simple mechanisms and systems.* Diagnosis, verificat

ion and repair of failures of simple automated systems.* Programming of simple automated systems.* Design of simple mechatronic systems containing both mechanical and electronic parts, with the use of specific software.specific software.

* Introduction to project management and working methods of the company's departments.* Occupational health and safety.

LEARNING RESOURCES AND BIBLIOGRAPHY

Learning resources	Bibliography
Topic related web quires Technical articles Moodle Platform	http://katalogoa.mondragon.edu/janium-bin/janium_login_opac_re_lnk.pl?grupo=MECATRONICA31&ejecuta=50&_ST