Goi Eskola Politeknikoa | Mondragon Unibertsitatea
Course: 2025 / 2026 - Course planning

[GJO304] ENGINEERING OF PRODUCTION EQUIPMENT AND AUTOMATED SYSTEMS III

GENERAL INFORMATION

Studies	DEGREE IN MECHATRONICS ENGINEERING	**Subject**	?
Semester	1	**Course**	4	**Mention / Field of specialisation**	???
Character	OPTIONAL		
Plan	2025	**Modality**	Face-to-face	**Language**	CASTELLANO/EUSKARA
Credits	12	**Hours/week**	13.61	**Total hours**	245 class hours + 55 non-class hours = **300 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		2,4
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		2,4
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		7,2
			Total:	**12**

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

SECONDARY LEARNING RESULTS

RGJ413 **Designs, validates, and evaluates the performance of advanced control techniques for alternating current electrical machines. TYPE: Competencies**

LEARNING ACTIVITIES	CH	NCH	TH
Carrying out work experience in real environments and writing the corresponding report	180 h.		180 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: 180 h.
NCH - Non-class hours: 0 h.
TH - Total hours: 180 h.

RGJ493 **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	15 h.	15 h.	30 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: 15 h.
NCH - Non-class hours: 15 h.
TH - Total hours: 30 h.

RGJ494 **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.	10 h.	30 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:** Continuous assessment. Retake is not foreseen.

CH - Class hours: 20 h.
NCH - Non-class hours: 10 h.
TH - Total hours: 30 h.

RGJ492 **Identify and accurately explain the SDGs that the project affects, suggesting possible actions for improvement.**

LEARNING ACTIVITIES	CH	NCH	TH
Carrying out work experience in real environments and writing the corresponding report	30 h.	30 h.	60 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: 30 h.
NCH - Non-class hours: 30 h.
TH - Total hours: 60 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.The contents will be based on one or more of the following areas:* Production equipment assembly techniques: mechanical elements (transmission elements, guiding elements, sealing elements...).* Manufacturing processes: shaping processes, machining processes, welding...* Automation of lines, equipment or production processes.* Programming of automated systems.* Set-up of equipment or production processes.* Measurement, testing and verification of components / subassemblies / mechanical assemblies or parameters on production processes: tools, techniques and elements of measurement / monitoring / testing.* Diagnosis, verification and repair of failures of production equipment or automated systems.* Design of mechatronic systems containing both mechanical and electronic parts, with the use of specific software.* Management of projects and working methods of the company's departments.* Occupational health and safety

LEARNING RESOURCES AND BIBLIOGRAPHY

Learning resources	Bibliography
Topic related web quires	http://katalogoa.mondragon.edu/janium-bin/janium_login_opac_re_lnk.pl?grupo=MECATRONICA41&ejecuta=25&_ST
Technical articles	
Moodle Platform	