

## [GCZ302] BASIC INDUSTRIAL AUTOMATION

### 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> [!] 64 class hours + 75 non-class hours = <b>139 total hours</b>
<b>Credits</b>	3	<b>Hours/week</b>	3.56	

### PROFESSORS

MITXELENA MARTIARENA, EKHI

### REQUIRED PREVIOUS KNOWLEDGE

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

### LEARNING RESULTS

LEARNING RESULTS	KC	SK	AB	ECTS
<b>GCR302</b> - Develops automation systems and control methods appropriate to the requirements and needs of users		x		2,56
<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		0,2
<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		0,24
<b>Total:</b>				<b>3</b>

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

### CONTENTS

Control and protection devices:- Protection devices.- Control devices or drive mechanisms.- Interpretation of electrical diagrams.Programming devices (PLC):- Basic concepts.- Programming environment with TIA Portal software.- Software development and simulation.- Connection with the digital twin: virtual commissioning.- Implementation of practical sessions.

### LEARNING RESOURCES AND BIBLIOGRAPHY

Learning resources	Bibliography
Slides of the subject	<a href="http://katalogoa.mondragon.edu/janium-bin/janium_login_opac_re_Ink.pl?grupo=EKOTEKNOLOGIA31&amp;ejecuta=35">http://katalogoa.mondragon.edu/janium-bin/janium_login_opac_re_Ink.pl?grupo=EKOTEKNOLOGIA31&amp;ejecuta=35</a>
Specific Master Software	
Moodle Platform	
Lab practical training	