[GJI203] ELECTROMECHANICAL SYSTEMS

GENERAL INFORMATION

Studies	DEGREE IN MECHATRONICS ENGINEERING			**Subject**	?
Semester	1	**Course**	3	**Mention / Field of specialisation**	
Character	COMPULSORY				
Plan	2022	**Modality**	Face-to-face	**Language**	CASTELLANO/EUSKARA
Credits	6	**Hours/week**	5	**Total hours**	90 class hours + 60 non-class hours = **150 total hours**

PROFESSORS

ARANA OSTOLAZA, AITOR
UNAMUNO RUIZ, ENEKO
ELGUEZABAL LAZCANO, JON
VALERA GARCIA, JUAN JOSE

REQUIRED PREVIOUS KNOWLEDGE

Subjects	Knowledge
GRAPHIC EXPRESION FOUNDATIONS OF ELECTRICAL ENGINEERING PHYSICS MECHANICAL SYSTEMS FOUNDATIONS OF ELECTRICAL ENGINEERING	Theoretical knowledge about three-phase systems and electrical machines

LEARNING RESULTS

LEARNING RESULTS	KC	SK	AB	ECTS
GJR303 - To know and apply the principles of theory of machines and transmission mechanisms, electrical drives and their applications			*x*	5,4
G-RTR1 - 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*		0,32
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		*x*		0,28
			Total:	6

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

CONTENTS

Mechanical systems
1. Overview of mechanical transmission systems2. Kinematic chain modelling3. Machine element sizing

Electric drives
1. Mechanical load types and electric drive sizing2. DC electric drives3. AC electric drives

LEARNING RESOURCES AND BIBLIOGRAPHY

Learning resources	Bibliography
Topic related web quires Moodle Platform Slides of the subject Computer practical training	Peter R.N. Childs, "Mechanical design engineering Handbook" Steven R. Schmid, Bernard J. Hamrock, Bo O. Jacobson, "Fundamentals of Machine Elements" J. Fraile Mora, J. Fraile Ardanuy, "Accionamientos eléctricos" W. Leonhard, "Control of Electrical Drives" http://katalogoa.mondragon.edu/janium-bin/janium_login_opac_re_lnk.pl?grupo=MECATRONICA31&ejecuta=5&_ST