[GJL304] OP S2. TECHNICAL DOCUMENTATION OF ELECTRICAL SYSTEMS

GENERAL INFORMATION

Studies	DEGREE IN MECHATRONICS ENGINEERING			**Subject**	?
Semester	2	**Course**	2	**Mention / Field of specialisation**	???
Character	OPTIONAL				
Plan	2025	**Modality**	Face-to-face	**Language**	CASTELLANO/EUSKARA
Credits	4,5	**Hours/week**	3.75	**Total hours**	67.5 class hours + 45 non-class hours = **112.5 total hours**

2030 AGENDA GOALS

PROFESSORS

(No professor appointed)

REQUIRED PREVIOUS KNOWLEDGE

Subjects	Knowledge
ELECTRICAL POWER SYSTEMS	*(No previous knowledge required)*

LEARNING RESULTS

LEARNING RESULTS	KC	SK	AB	ECTS
GJR226 - To know the principles to organize and manage projects	x			4,02
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		0,32
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		0,16
			Total:	4,5

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

SECONDARY LEARNING RESULTS

2RGJ291 (2 sem) Establish the responsibilities of team members using appropriate techniques to promote their efficiency in project development (sharing resources, contributing ideas, seeking consensus, evaluating results, the process, etc.).

LEARNING ACTIVITIES	CH	NCH	TH
Carrying out/resolving projects/challenges/cases, etc. to provide solutions to problems in interdisciplinary contexts, real and/or simulated, individually and/or in teams	2 h.	1 h.	3 h.

EVALUATION SYSTEM	W
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	100%

MAKE-UP MECHANISMS

(No mechanisms)

Comments: Continuous assessment. Retake is not foreseen.

CH - Class hours: 2 h.
NCH - Non-class hours: 1 h.
TH - Total hours: 3 h.

2RGJ292 (2 sem) Identify and accurately explain the SDGs addressed by the project carried out.

LEARNING ACTIVITIES	CH	NCH	TH
Carrying out/resolving projects/challenges/cases, etc. to provide solutions to problems in interdisciplinary contexts, real and/or simulated, individually and/or in teams	2 h.		2 h.

EVALUATION SYSTEM	W
Reports on the completion of exercises, case studies,	100%

MAKE-UP MECHANISMS

(No mechanisms)

computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems

CH - Class hours: 2 h.
NCH - Non-class hours: 0 h.
TH - Total hours: 2 h.

RGJ244 They develop the technical documentation of electrical systems following the established specifications and the current regulations.

LEARNING ACTIVITIES	CH	NCH	TH
Personal study and flexible development of concepts and subjects using active dynamics, to foster more meaningful learning	3 h.	5 h.	8 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	6 h.	4 h.	10 h.
Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects	8 h.	3 h.	11 h.
Practical work in workshops and/or laboratories, individually and/or in teams	13 h.	8 h.	21 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	60%	Individual written and/or oral tests or individual coding/programming tests **Comments:** Final mark: written retake exam (75%) + exam (25%).
Individual written and/or oral tests or individual coding/programming tests	40%	Laboratory practices and exercises will be made-up by on-going evaluation.

CH - Class hours: 30 h.
NCH - Non-class hours: 20 h.
TH - Total hours: 50 h.

2RGJ293 (2 sem) Correctly draft and structure the project report, using appropriate language. To do so, search for and use the appropriate sources of information.

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	1 h.	1 h.	2 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:** Revision and correction of the written report of the semester project

CH - Class hours: 1 h.
NCH - Non-class hours: 1 h.
TH - Total hours: 2 h.

2RGJ290 (2 sem)Propose the objectives and planning of a project that will enable you to acquire and/or reinforce your knowledge of technologies—which are sometimes at the cutting edge of knowledge—and define an effective learning strategy.

LEARNING ACTIVITIES	CH	NCH	TH
Carrying out/resolving projects/challenges/cases, etc. to provide solutions to problems in interdisciplinary contexts, real and/or simulated, individually and/or in teams	2 h.	1 h.	3 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: 2 h.
NCH - Non-class hours: 1 h.
TH - Total hours: 3 h.

RGJ245 **They apply Mechatronic Engineering concepts and tools in a practical environment**

LEARNING ACTIVITIES	CH	NCH	TH
Carrying out/resolving projects/challenges/cases, etc. to provide solutions to problems in interdisciplinary contexts, real and/or simulated, individually and/or in teams	6 h.	4 h.	10 h.
Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects	5 h.	2 h.	7 h.
Practical work in workshops and/or laboratories, individually and/or in teams	18,5 h.	15 h.	33,5 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:** Laboratory practices and exercises will be made-up by on-going evaluation

CH - Class hours: 29,5 h.
NCH - Non-class hours: 21 h.
TH - Total hours: 50,5 h.

2RGJ294 **(2 sem) Give an oral presentation of the project, arguing effectively and using language correctly.**

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	1 h.	1 h.	2 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: 1 h.
NCH - Non-class hours: 1 h.
TH - Total hours: 2 h.

CONTENTS

1. IDENTIFICATION OF THE TECHNICAL-ADMINISTRATIVE DOCUMENTATION OF ELECTRICAL INSTALLATIONS AND SYSTEMS.2. REPRESENTATION OF ELECTRICAL INSTALLATIONS3. ELABORATION OF THE GRAPHIC DOCUMENTATION OF ELECTRICAL INSTALLATION PROJECTS.4. PREPARATION OF BUDGETS FOR ELECTRICAL INSTALLATIONS AND SYSTEMS5. ELABORATION OF PROJECT DOCUMENTS6. ELABORATION OF MANUALS AND DOCUMENTS ANNEXED TO THE INSTALLATION PROJECTS.

LEARNING RESOURCES AND BIBLIOGRAPHY

Learning resources	Bibliography
Slides of the subject Topic related web quires	http://katalogoa.mondragon.edu/janium-bin/janium_login_opac_re_lnk.pl?grupo=MECATRONICA22&ejecuta=50&_ST

Labs
Moodle Platform