

[GJL202] ELECTRICAL POWER SYSTEMS							
	GENE	RAL INF	ORMATION				
Studies DEGREE IN ME	CHATRONICS ENGINEE	RING	Subject	?			
Semester 1	Course 2		Mention / Field of	???			
Character OPTIONAL			specialisation				
Plan 2022	Modality Face-t	o-face	Language	EUSKARA/CA	STELLANO		
Credits 6	Hours/week 5.11		Total hours	92 class hours hours	s + 58 non-cla	iss hours =	<u>150 total</u>
	2030	AGEN	DA GOALS				
	F	PROFES	SORS				
SAGREDO BLANCO, ENRIC	QUE						
ARRATIBEL GARCIA, ANDO	INC						
	REQUIRED	PREVIC		GE			
Subj	ects			Know	/ledge		
FOUNDATIONS OF ELECTRICAL	ENGINEERING		[!]				
	LEA	RNING	RESULTS				
LEARNING RESULTS					KC SK	AB	ECTS
GJR204 - To know the principles of G-RTR1 - To develop interdisciplina	electrical power systems a ry projects specific to their	and their a specialty	pplications and of gradual comp	olexity, -	x x		5,4 0,36
becoming aware of respect for human rights and fundamental rights, and analyzing and assessing the							
avant-garde, demonstrating the abi	i the SDGs - to acquire an lity to work in multidisciplin	a/or apply arv teams	s and/or undertake fu	a/or urther studies			
with a high degree of autonomy	,	,					
G-RTR2 - To express information, ic	deas and the arguments th	at suppor	t them in an orderly,	clear and	x		0,24
sources, using inclusive and non-di	iscriminatory language	nation, se	II-made of obtained	from different			
						—	
KC: Knowledge or Content / SK: Skills / AB:	Abilities					lotal:	6
	SECONDA		RNING RESULT	S			
RGJ212 [!] Comprende y anali	iza circuitos de corriente	alterna t	rifásica				
LEARNING ACTIVITIES				СН	NCH	тн	
Conducting tests, giving present	ations, presenting defence	s, taking e	examinations and/or	doing ^{4 h.}	4 h.	8 h.	
checkpoints							
Carrying out/resolving projects/challenges/cases, etc. to provide solutions to problems in ^{16 h.}			16 h.	12 h.	28 h	1.	
Presentation by the teacher in the classroom, in participatory classes, of concepts and 8 h. 2 h.			2 h.	10 h	۱.		
procedures associated with the s	subjects	,	,				
Carrying out exercises and solvi	ng problems individually ar	nd/or in te	ams	12 h.	8 h.	20 h	۱.
Practical work in workshops and	/or laboratories, individuall	y and/or ii	n teams	18 h.	6 h.	24 h	1.
EVALUATION SYSTEM		W	MAKE-UP MECH	ANISMS			
Reports on the completion of exe	ercises, case studies,	35%	Reports on the co	mpletion of exe	ercises, case	studies, co	mputer
computer exercises, simulation e	exercises, laboratory		exercises, simulat	ion exercises, l	aboratory exe	ercises, ter	m
Presentation and defence of exe	yes and problems	20%	Individual written :	es and problem	is s or individua	1	
computer practical work, simulat	individual whiten and/or oral tests or individual individual whiten and/or oral tests or individual individual individual whiten and/or oral tests or individual indinatio individual individual individual indiv						
laboratory practical work, term p	rojects, end of degree		Comments: For e	ach assessme	nt system, the	e final mark	c is
project, master's thesis, challeng	project, master's thesis, challenges and problems determined by a weighted average of 25% of the control point and					oint and	
Individual written and/or oral tests or individual 45% 75% of the recovery of the control point.							
3., 2 <u>3</u>							
CH - Class hours: 58 h.							
TH - Total hours: 90 h.							



Course: 2024 / 2025 - Course planning

RGJ213 [!] Representa circuitos eléctricos de potencia mediante software de CAD eléctrico

LEARNING ACTIVITIES			СН	NCH	ТН
Development and writing of records, reports, presentation projects/work experience/challenges/case studies/experin individually and/or in teams	s, audiov nental inv	isual material, etc. on restigations carried out	4 h.	2 h.	6 h.
Conducting tests, giving presentations, presenting defences, taking examinations and/or doing checkpoints				4 h.	8 h.
Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects				3 h.	6 h.
Practical work in workshops and/or laboratories, individua	lly and/or	r in teams	14 h.	11 h.	25 h.
EVALUATION SYSTEM	w	MAKE-UP MECHANISM	IS		
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 Individual written and/or oral tests or individual coding/programming tests Observation (technical capacity, attitude and participation)	20% 20%) 60%	Individual written and/or coding/programming tes Comments: If the praction the end of the semester.	oral tests s æ is not p	or individual assed, it must	be repeated at
CH - Class hours: 25 h. NCH - Non-class hours: 20 h. TH - Total hours: 45 h.					

1RGJ291 (1 sem)

EVALUATION SYSTEM W MAKE-UP MECHANISMS Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory 100% (No mechanisms) Comments: With the project of the second semester	Carrying out/resolving projects/challenges/cases, etc. to p interdisciplinary contexts, real and/or simulated, individua	provide sol Ily and/or i	utions to problems in n teams	2 h.	1 h.	3 h.
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory 100% (No mechanisms) Comments: With the project of the second semester	EVALUATION SYSTEM	w	MAKE-UP MECHAN	SMS		
exercises, term projects, challenges and problems	Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	100%	Comments: With the	(No mech project of the	<i>anisms)</i> e second seme	ester

1RGJ292 (1 sem)						
LEARNING ACTIVITIES			СН	NCH	ТН	
Carrying out/resolving projects/challenges/cases, etc. to p interdisciplinary contexts, real and/or simulated, individua	provide sol Ily and/or i	utions to problems in n teams	2 h.	1 h.	3 h.	
EVALUATION SYSTEM	W	MAKE-UP MECHANI	SMS			
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	100%		(No mech	anisms)		
CH - Class hours: 2 h. NCH - Non-class hours: 1 h. TH - Total hours: 3 h.						

1RGJ293 (1 sem) LEARNING ACTIVITIES СН NCH ΤН Development and writing of records, reports, presentations, audiovisual material, etc. on 2 h. 1 h. 3 h. projects/work experience/challenges/case studies/experimental investigations carried out individually and/or in teams w **EVALUATION SYSTEM** MAKE-UP MECHANISMS 100% Reports on the completion of exercises, case studies, (No mechanisms) computer exercises, simulation exercises, laboratory Comments: Revision and correction of the written report of the exercises, term projects, challenges and problems semester project CH - Class hours: 2 h. NCH - Non-class hours: 1 h. TH - Total hours: 3 h.

1RGJ290 (1 sem)					
LEARNING ACTIVITIES			СН	NCH	тн
Carrying out/resolving projects/challenges/cases, etc. to p interdisciplinary contexts, real and/or simulated, individual	rovide sol ly and/or i	utions to problems in n teams	2 h.	1 h.	3 h.
EVALUATION SYSTEM	w	MAKE-UP MECHANI	SMS		
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	100%	Comments: With the	<i>(No mech</i> project of the	anisms) second seme	ster
CH - Class hours: 2 h. NCH - Non-class hours: 1 h. TH - Total hours: 3 h.					
1RGJ294 (1 sem)					
LEARNING ACTIVITIES			СН	NCH	TH
Development and writing of records, reports, presentation: projects/work experience/challenges/case studies/experim individually and/or in teams	s, audiovis nental inve	sual material, etc. on estigations carried out	1 h.	2 n.	3 h.
EVALUATION SYSTEM	W	MAKE-UP MECHANI	SMS		
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	100%	(No mechanisms) Comments: With the oral presentation of the project of the second semester			ject of the second
CH - Class hours: 1 h. NCH - Non-class hours: 2 h. TH - Total hours: 3 h.					

CONTENTS

1. Analysis of three-phase alternating current circuits 1. Characteristics of three-phase systems 2. Star and delta connections 3. Powers of three-phase loads 4. Power factor correction2. Graphic repres entation of electrical power systems 1. Industrial electrical elements 2. Use of catalogs (selection



Course: 2024 / 2025 - Course planning

criteria) 3. Symbology, referencing and terminal counting 4. Development of schematics: types of draw ings 5. Starting maneuvers of three-phase asynchronous motors. 6. Variable speed drives 7. Electric al CAD based on EPLAN

LEARNING RESOURCES AND BIBLIOGRAPHY

Learning resources	Bibliography
[!] Plataforma Moodle [!] Presentaciones en clase [!] Proyección de videos [!] Software específico de la titulación [!] Realización de prácticas en laboratorio	Schneider Telesquemario http://katalogoa.mondragon.edu/janium-bin/janium_login_opac_re_ln k. pl?grupo=MECATRONICA21&ejecuta=35&_ST "Circuitos Eléctricos" 2ª Edición 2019 (Castellano) JESÚS FRAILE MORA. ISBN: 978-84-1622-847-8 www.enlan.es

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