



	[G	OD303] PHYSICAL A	SSETS MAN	AGEMENT			
		GENERAL IN	FORMATION				
Studies	DEGREE IN INDU ENGINEERING	JSTRIAL ORGANIZATION	Subject	PRODUCTION	ENGINEERIN	IG	
Semester	2	Course 2	Mention / Field of				
Character	COMPULSORY		specialisation				
Plan	2022	Modality Face-to-face	Language	EUSKARA/CAS	TELLANO		
Credits	3	Hours/week 2.61	Total hours	47 class hours - hours	+ 28 non-class	hours =	= <u>75 tot</u>
		2030 AGEN	IDA GOALS				
IT WORK AND DHC GROWTH I I I I I I I I I I I I I I I I I I I							
		PROFE	SSORS				
URIZAR AI	ZPURU, ENERITZ						
OSINAGA	URIZAR, BEÑAT						
		REQUIRED PREVI		GE			
	Subje	cts		Knowl	edge		
(No	o specific previous	subjects required)	(1	No previous knov	vledge require	d)	
		LEARNING					
ARNING RESI	JLTS				кс ѕк	АВ	ECTS
OR205 - To deve	lop preventive and	corrective maintenance plans to	guarantee the availab	oility of	x		2,6
RTR1 - To deve coming aware of pact of the proprant-garde, dem	lop interdisciplinary of respect for huma loosed solutions on onstrating the abili	y projects specific to their specialt an rights and fundamental rights, a the SDGs - to acquire and/or app ty to work in multidisciplinary tean	y and of gradual comp and analyzing and ass ly basic, advanced an ns and/or undertake fu	plexity, - sessing the nd/or urther studies	x		0,24
th a high degree RTR2 - To expre herent manner, urces, using inc	of autonomy ess information, ide orally and in writin clusive and non-dis	eas and the arguments that suppo ig, based on quality information, s criminatory language	ort them in an orderly, elf-made or obtained	clear and from different	x		0,16
: Knowledge or Co	ntent / SK: Skills / AB: A	Abilities			r	Fotal:	3
NAEE LEARNI	NG RESULTS						ECTS
NAE02 - Knowle ngineering.	dge and understar	nding: A systematic understanding	of the key aspects a	nd concepts of th	neir branch of		1
NAE04 - Knowle NAE05 - Analysi ngineering prob	dge and understar s in engineering: A lems using establis	nding: To be aware of the multidise whility to apply their knowledge and shed methods.	ciplinary context of en d understanding in ide	ngineering. entifying, formula	ting and solvir	ng	0,14 0,14
NAE06 - Analysi ethod engineer	s in engineering: A	bility to apply their knowledge and	d understanding in an	alysing product,	process and		0,34
NAE08 - Engine	ering projects: Abil	ity to apply their knowledge in the	development and cor	mpletion of proje	cts which mee	et	0,34
NAE17 - Transv	ersal competences	: To work effectively, both individu	ually and in a team.				0,34
NAE18 - Transve	ersal competences neral	: To use different methods to com	municate effectively	with the engineer	ring communit	у	0,34
NAE19 - Transve engineering, th	ersal competences le social and enviro practical application	: Demonstrate that they are aware onmental impact, and show comm on of engineering.	e of the responsibility itment with professior	implied in the prant in the pra	actical applica nsibility and	tion	0,34
egulations of the							
egulations of the					Т	otal:	3
egulations of the		SECONDARY LEA	ARNING RESULT	rs	Т	otal:	3
2RGO290 (2 s	em)	SECONDARY LEA	ARNING RESULT	rs	Te	otal:	3
2RGO290 (2 s	em) ;TIVITIES	SECONDARY LEA	ARNING RESULT	ГS СН	T(otal: TH	3
2RGO290 (2 s LEARNING AC Carrying out/re- interdisciplinary	em) TIVITIES solving projects/ch r contexts, real and	SECONDARY LEA allenges/cases, etc. to provide so d/or simulated, individually and/or	ARNING RESULT	сн	NCH 2 h.	otal: TH 2 h	3



100%



Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory 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

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

RG0210 [!] Utiliza los datos recogidos para mejorar continuamente la disponibilidad de los medios productivos

LEARNING ACTIVITIES			СН	NCH	тн
Personal study and flexible development of concepts and foster more meaningful learning		3 h.	3 h.		
Conducting tests, giving presentations, presenting defend checkpoints	2 h.		2 h.		
Carrying out/resolving projects/challenges/cases, etc. to p interdisciplinary contexts, real and/or simulated, individua	4 h.	3 h.	7 h.		
Presentation by the teacher in the classroom, in participa procedures associated with the subjects	10 h.		10 h.		
Carrying out exercises and solving problems individually and/or in teams				2 h.	8 h.
EVALUATION SYSTEM W MAKE-UP MECHANIS					
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	orts on the completion of exercises, case studies, 30% Reports on the comp puter exercises, simulation exercises, laboratory cises, term projects, challenges and problems projects, challenges		on of exer ercises, la problems	cises, case stu boratory exerc	idies, computer ises, term
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	30%	Individual written and/or coding/programming test	oral tests ts	or individual	
Individual written and/or oral tests or individual coding/programming tests	40%				
CH - Class hours: 22 h. NCH - Non-class hours: 8 h. TH - Total hours: 30 h.					

2RGO291 (2 sem)								
LEARNING ACTIVITIES			СН	NCH	ТН			
Carrying out/resolving projects/challenges/cases, etc. to provide solutions to problems in 2 h. 2 h. interdisciplinary contexts, real and/or simulated, individually and/or in teams								
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 mech	anisms)				
CH - Class hours: 0 h. NCH - Non-class hours: 2 h. TH - Total hours: 2 h.								

2RGO292 (2 sem)



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					Superior
			СН	NCH	ТН
Carrying out/resolving projects/challenges/cases, etc. to p interdisciplinary contexts, real and/or simulated, individua	provide solu ally and/or in	utions to problems in n teams		2 h.	2 h.
EVALUATION SYSTEM	W	MAKE-UP MECHAN	ISMS		
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	100%		(No mech	anisms)	
H - Class hours: 0 h. CH - Non-class hours: 2 h. H - Total hours: 2 h.					
2RG0293 (2 sem)					
LEARNING ACTIVITIES			СН	NCH	тн
Development and writing of records, reports, presentatior projects/work experience/challenges/case studies/experir individually and/or in teams	ns, audiovis mental inve	sual material, etc. on stigations carried out		2 h.	2 h.
EVALUATION SYSTEM	w	MAKE-UP MECHAN	ISMS		
computer practical work, simulation practical work, laboratory practical work, term projects, end of degree project, master's thesis, challenges and problems H - Class hours: 0 h. CH - Non-class hours: 2 h. H - Total hours: 2 h.					
2RG0294 (2 sem)			СН	NCH	TH
2RG0294 (2 sem) LEARNING ACTIVITIES Development and writing of records, reports, presentatior	ns, audiovis	sual material, etc. on	<u>СН</u> 1 h.	<u>NCH</u> 1 h.	<i>TH</i> 2 h.
ERG0294 (2 sem) LEARNING ACTIVITIES Development and writing of records, reports, presentation projects/work experience/challenges/case studies/experin individually and/or in teams	ns, audiovis mental inve	sual material, etc. on stigations carried out	СН 1 h.	<u>NCH</u> 1 h.	<i>TH</i> 2 h.
EVALUATION SYSTEM 2RG0294 (2 sem) LEARNING ACTIVITIES Development and writing of records, reports, presentatior projects/work experience/challenges/case studies/experir individually and/or in teams	ns, audiovis mental inve W	sual material, etc. on stigations carried out MAKE-UP MECHAN	<u>СН</u> 1 h. ISMS	<u>ИСН</u> 1 h.	<u>ТН</u> 2 h.
2RGO294 (2 sem) LEARNING ACTIVITIES Development and writing of records, reports, presentatior projects/work experience/challenges/case studies/experir individually and/or in teams EVALUATION SYSTEM 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	ns, audiovis mental inve <u>w</u> 100%	sual material, etc. on stigations carried out <u>MAKE-UP MECHAN</u>	CH 1 h. ISMS (No mech	NCH 1 h. anisms)	<u>TH</u> 2 h.
2RGO294 (2 sem) LEARNING ACTIVITIES Development and writing of records, reports, presentatior projects/work experience/challenges/case studies/experir individually and/or in teams EVALUATION SYSTEM 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 :H - Class hours: 1 h. ICH - Non-class hours: 1 h. H - Total hours: 2 h.	ns, audiovis mental inve W 100%	sual material, etc. on stigations carried out <u>MAKE-UP MECHAN</u>	CH 1 h. ISMS (No mech	NCH 1 h. anisms)	<u>TH</u> 2 h.
2RG0294 (2 sem) LEARNING ACTIVITIES Development and writing of records, reports, presentatior projects/work experience/challenges/case studies/experindividually and/or in teams EVALUATION SYSTEM 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 H - Class hours: 1 h. H - Non-class hours: 1 h. H - Total hours: 2 h.	ns, audiovis mental inve <u>W</u> 100%	sual material, etc. on stigations carried out MAKE-UP MECHAN	CH 1 h. ISMS (No mech	NCH 1 h. anisms)	<u>TH</u> 2 h.
2RGO294 (2 sem) LEARNING ACTIVITIES Development and writing of records, reports, presentation projects/work experience/challenges/case studies/experin individually and/or in teams EVALUATION SYSTEM 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 H - Class hours: 1 h. H - Total hours: 2 h.	ns, audiovis mental inve W 100%	sual material, etc. on stigations carried out <u>MAKE-UP MECHAN</u>	CH 1 h. ISMS (No mech	NCH 1 h. anisms)	

LEARNING ACTIVITIES	СН	NCH	ТН	
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	4 h.	2 h.	6 h.	
Personal study and flexible development of concepts and subjects using active dynamics, to foster more meaningful learning		4 h.	4 h.	



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Course: 2024 / 2025 - Course planning

1 h. 5 h. Conducting tests, giving presentations, presenting defences, taking examinations and/or doing 4 h. checkpoints Presentation by the teacher in the classroom, in participatory classes, of concepts and 10 h. 10 h. procedures associated with the subjects Carrying out exercises and solving problems individually and/or in teams 6 h. 4 h. 10 h. **EVALUATION SYSTEM** w MAKE-UP MECHANISMS Reports on the completion of exercises, case studies. Reports on the completion of exercises, case studies, computer 30% computer exercises, simulation exercises, laboratory exercises, simulation exercises, laboratory exercises, term exercises, term projects, challenges and problems projects, challenges and problems Presentation and defence of exercises, case studies, 30% Individual written and/or oral tests or individual computer practical work, simulation practical work, coding/programming tests laboratory practical work, term projects, end of degree project, master's thesis, challenges and problems 40% Individual written and/or oral tests or individual coding/programming tests CH - Class hours: 24 h. NCH - Non-class hours: 11 h. TH - Total hours: 35 h.

CONTENTS

 Maintenance in the industrial company 1. Introduction to Industrial Maintenance 2.From customized prod uction to world class maintenance. 3. Maintenance objectives and actions 4. Levels of participation 5. In the organization chart of the maintenance company. 6. Types of maintenance and techniques used 7. Basic indicators 8. Classic indicators 9. Maintenance KPI 2. RELIABILITY of machine elements. 1. Planning, con trol and improvement of reliability. 2. Reliability: Statistical concepts 3. Reliability of an element 4. Reliability of a system 3. Establishment of a maintenance system 1. Prerequisites 2. Coding 3. Mea ns analysis (FMEA) 4. The functional structure of the maintenance service. 5. Basic information 6. Cor rective maintenance organization. 7. Organization of Preventive Maintenance 8. Control and Improvement of Maintenance Management 4.INTRODUCTION TO TOTAL PRODUCTIVE MAINTENANCE

LEARNING RESOURCES AND BIBLIOGRAPHY				
Learning resources	Bibliography			
[!] Apuntes de la asignatura [!] Plataforma Moodle [!] Presentaciones en clase	Introducción al TPM. Seiichi Nakajima. 1991. Tecnologías de Gerencia y Producción.			
	• Moubray John, RCM II Mantenimiento Centrado en Confiabilidad, Aladon LLC, 2004			
	TPM en Industrias de Proceso. Tokutaro Suzuki. 1996. Productivity Press			
	TPM for Every Operator. Japan Institute of Plant Maintenance. 1996. Productivity Press.			