Goi Eskola Politeknikoa Escuela Politécnica Superior

		[GCO302] INDUST					
		GENERAL I	NFORMATION				
Studies	DEGREE IN EN ECO-TECHNOL	GINEERING IN OGY IN INDUSTRIAL PROCESS	Subject	?			
Semester	1	Course 3	Mention / Field of				
Character	COMPULSORY		specialisation				
	2022	Modality Face-to-face	Language				
Credits	4,5	Hours/week 2.11	Total hours	38 class hours hours	+ 74.5 nor	n-class hou	rs = <u>112.5 to</u>
		2030 AGE	NDA GOALS				
IT WORK AND IMED CROWTH MED CROWTH MED VERSING AND ALL							
		PROF	ESSORS				
URIZAR AI	ZPURU, ENERIT						
		REQUIRED PREV	IOUS KNOWLED				
	Subj				ledge		
(No	o specific previous	s subjects required)		No previous kno	wledge red	quired)	
		LEARNIN	G RESULTS		KO 0	× 45	5070
EARNING RESU CR310 - Applies		ation knowledge to improve produ	uction in industrial plan	ts			2,78
RTR1 - To deve ecoming aware on pact of the prop vant-garde, dem	lop interdisciplina of respect for hum posed solutions or onstrating the abi	ry projects specific to their specia nan rights and fundamental rights, the SDGs - to acquire and/or ap lity to work in multidisciplinary tea	Ity and of gradual com and analyzing and as ply basic, advanced ar	plexity, - sessing the nd/or	x		0,4
th a high degree		deas and the arguments that supp	ort them in an orderly.	clear and	x		0,32
herent manner,	orally and in writi	ing, based on quality information, iscriminatory language					
bherent manner, burces, using inc	orally and in writi	scriminatory language	self-made or obtained	from different		Total:	4,5
bherent manner, burces, using inc	orally and in writi clusive and non-di ntent / SK: Skills / AB:	Abilities	self-made or obtained	from different		Total:	4,5
oherent manner, ources, using inc C: Knowledge or Col	orally and in writi clusive and non-di ntent / SK: Skills / AB: em)	Abilities	self-made or obtained	from different	псн	Total: -	
berent manner, burces, using inc C: Knowledge or Col 1RGC391 (1 s LEARNING AC Development a	orally and in writi clusive and non-di ntent / SK: Skills / AB: em) CTIVITIES nd writing of reco xperience/challer	Abilities	self-made or obtained	from different	<u>NСН</u> 3 h.		H
Development a projects/work e	orally and in writi clusive and non-di ntent / SK: Skills / AB: em) CTIVITIES nd writing of reco xperience/challer l/or in teams	Abilities SECONDARY LE	self-made or obtained	from different TS CH t		ŢĮ	H
C: Knowledge or Col C: Knowledge or Col IRGC391 (1 s LEARNING AC Development a projects/work e individually and EVALUATION Self-assessmen Co-assessmen Comments: As followed methods	orally and in writi clusive and non-di ntent / SK: Skills / AB: em) CTIVITIES Ind writing of reco xperience/challer l/or in teams SYSTEM Int t ssessment of the a dology to solve the , conflict manage	Abilities SECONDARY LE rds, reports, presentations, audio nges/case studies/experimental in	self-made or obtained	from different TS CH t ANISMS (No mec. inuous assessm meetings and t corrected and th	3 h. <i>hanisms)</i> hent. The p	77 3 roject is ma	H h. anaged h the
C: Knowledge or Col C: Knowledge or Col IRGC391 (1 s LEARNING AC Development a projects/work e individually and EVALUATION Self-assessmen Co-assessmen Comments: As followed methods	orally and in writi clusive and non-di ntent / SK: Skills / AB: em) CTIVITIES nd writing of reco xperience/challer l/or in teams SYSTEM nt t ssessment of the a dology to solve the , conflict manage ctives, planning, rs: 0 h. s hours: 3 h.	Abilities SECONDARY LE rds, reports, presentations, audio nges/case studies/experimental in W 50% 50% acquired transversal skills: e project: team work, decision ment Project management:	ARNING RESULT	from different TS CH t ANISMS (No mec. inuous assessm meetings and t corrected and th	3 h. <i>hanisms)</i> hent. The p	77 3 roject is ma	H h. anaged h the
Comments: As Comments: As C	orally and in writiclusive and non-di- sheem) CTIVITIES Ind writing of reco- xperience/challer //or in teams SYSTEM Int t ssessment of the a dology to solve the conflict manage ctives, planning, rs: 0 h. s hours: 3 h. s: 3 h.	Abilities SECONDARY LE rds, reports, presentations, audio nges/case studies/experimental in W 50% 50% acquired transversal skills: e project: team work, decision ment Project management:	ARNING RESULT	from different TS CH t ANISMS (No mec. inuous assessm meetings and t corrected and th	3 h. <i>hanisms)</i> hent. The p	77 3 roject is ma	H h. anaged h the
IRGC391 (1 s LEARNING AC Development a projects/work e individually and EVALUATION Self-assessmen Co-assessmen Comments: As followed methods lefinition of object CH - Class hour NCH - Non-class TH - Total hours	orally and in writiclusive and non-di ntent / SK: Skills / AB: em) CTIVITIES Ind writing of reco xperience/challer I/or in teams SYSTEM Int t seessment of the a lology to solve the , conflict manage ctives, planning, rs: 0 h. s hours: 3 h. s: 3 h.	Abilities SECONDARY LE rds, reports, presentations, audio nges/case studies/experimental in W 50% 50% acquired transversal skills: e project: team work, decision ment Project management:	ARNING RESULT	from different TS CH t ANISMS (No mec. inuous assessm meetings and t corrected and th	3 h. <i>hanisms)</i> hent. The p	Ti 3 roject is ma gs held with guidelines a	H h. anaged h the are given to

Course: 2024 / 2025 - Course planning

projects/work experience/challenges/case studies/experimental investigations carried out individually and/or in teams

EVALUATION SYSTEM	w	MAKE-UP MECHANISMS
Presentation and defence of exercises, case studies, 100% computer practical work, simulation practical work, laboratory practical work, term projects, end of degree project, master's thesis, challenges and problems Comments: Assessment of the acquired transversal skills: Followed methodology to solve the project: team work, decision making methods, conflict management Project management: definition of objectives, planning, Written and oral communication		(No mechanisms) Comments: Continuous assessment. The project is managed through the tutoring meetings and the meetings held with the experts, errors are corrected and the precise guidelines are given to overcome the project.
CH - Class hours: 0 h. NCH - Non-class hours: 4 h. TH - Total hours: 4 h.		

RCC325 Identify and apply the different techniques and tools for the overall improvement of the productive flow of an industrial plant, which will reduce the productive waste

LEARNING ACTIVITIES	СН	NCH	ТН		
Conducting tests, giving presentations, presenting defences, taking examinations and/or doing checkpoints			1 h.	5 h.	6 h.
Carrying out/resolving projects/challenges/cases, etc. to p nterdisciplinary contexts, real and/or simulated, individual		•		17,75 h.	17,75 h.
Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects					10 h.
Carrying out exercises and solving problems individually and/or in teams				10 h.	21 h.
Role-playing games			2 h.	2 h.	4 h.
EVALUATION SYSTEM W MAKE-UP MECHANISM					
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	70%	Reports on the completion of exercises, case studies, complexercises, simulation exercises, laboratory exercises, term projects, challenges and problems			
ndividual written and/or oral tests or individual ^{30%} Individual written and/or coding/programming tests				or individual	

CH - Class hours: 24 h. NCH - Non-class hours: 34,75 h. TH - Total hours: 58,75 h.

DELIVERY POPBL 30%

10% 5S WORK EN3 10% SMED WORK EN4 5% EXERCISES

1RGC393 (1 sem)					
LEARNING ACTIVITIES		СН	NC	сн	тн
Development and writing of records, reports, presentation projects/work experience/challenges/case studies/experin individually and/or in teams EVALUATION SYSTEM			4 h	1.	4 h.
			and the meeti	projec	eld with the

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Course: 2024 / 2025 - Course planning

CH - Class hours: 0 h. NCH - Non-class hours: 4 h. TH - Total hours: 4 h.

LEARNING ACTIVITIES			СН	NCH	тн
Conducting tests, giving presentations, presenting defend checkpoints	ces, taking	examinations and/or doing	1 h.	3 h.	4 h.
Checkpoints Carrying out/resolving projects/challenges/cases, etc. to provide solutions to problems in interdisciplinary contexts, real and/or simulated, individually and/or in teams				15 h.	15 h.
Presentation by the teacher in the classroom, in participa procedures associated with the subjects			6 h.		6 h.
Carrying out exercises and solving problems individually	and/or in to	eams	5 h.	3,75 h.	8,75 h.
Role-playing games			2 h.		2 h.
EVALUATION SYSTEM	W	MAKE-UP MECHANISI	MS		
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	Reports on the completi exercises, simulation ex projects, challenges and	ercises, la	boratory exerci		
ndividual written and/or oral tests or individual oding/programming tests	45%	Individual written and/or coding/programming tes	oral tests		
ELIVERY POPBL 30%					
CH - Non-class hours: 21,75 h. 1 - Total hours: 35,75 h.					
CH - Non-class hours: 21,75 h. I - Total hours: 35,75 h. RGC390 (1 sem)			СН	NCH	ТН
H - Class hours: 14 h. CH - Non-class hours: 21,75 h. H - Total hours: 35,75 h. IRGC390 (1 sem) LEARNING ACTIVITIES Development and writing of records, reports, presentation projects/work experience/challenges/case studies/experin individually and/or in teams	mental inve	estigations carried out		<u>NCH</u> 4 h.	TH 4 h.
CH - Non-class hours: 21,75 h. 1 - Total hours: 35,75 h. RGC390 (1 sem) LEARNING ACTIVITIES Development and writing of records, reports, presentation projects/work experience/challenges/case studies/experin ndividually and/or in teams EVALUATION SYSTEM	mental inve		MS	4 h.	
CH - Non-class hours: 21,75 h. 1 - Total hours: 35,75 h. RGC390 (1 sem) LEARNING ACTIVITIES Development and writing of records, reports, presentation projects/work experience/challenges/case studies/experience/challenges/case studies/case studies/experienc	mental inve w 100% Is: cision nent:	estigations carried out	MS (No mech s assessme ings and th	4 h. anisms) ent. The projec ne meetings he	4 h. t is managed ld with the

 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
 3 h.
 3 h.

1RGC392 (1 sem)

Course: 2024 / 2025 - Course planning

individually and/or in teams

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 Comments: Assessment of the acquired transversal skills: Followed methodology to solve the project: team work, decis making methods, conflict management Project manageme definition of objectives, planning, Written and oral commun	sion nt:	(No mechanisms) Comments: Continuous assessment. The project is managed through the tutoring meetings and the meetings held with the experts, errors are corrected and the precise guidelines are given to overcome the project.
CH - Class hours: 0 h. NCH - Non-class hours: 3 h. TH - Total hours: 3 h.		

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CONTENTS

1.New Industrial paradigm: Introduction to Lean Manufacturing2.Just in time: Plant distribution and Cell design3.Stability: Efficiency (OEE)4.Stability: 5S and Autonomous Maintenanace5.Just in time: Rapid Chang eover (SMED)6.Just in time: Fifo Lane and Kanban Supermarkets

LEARNING RESOURCES AND BIBLIOGRAPHY			
Learning resources	Bibliography		
[!] Plataforma Moodle [!] Presentaciones en clase	LEAN MANUFACTURING. Exposición adaptada a la fabricación de familias de productos mediante procesos discretos. Francisco Larrañaga. 2013		
	LA MÁQUINA QUE CAMBIÓ EL MUNDO. Womack, J.P.; Jones, A.T. y Ross, D. Ed. McGraw-Hill 1992		
	LEAN THINKING. Cómo utilizar el pensamiento Lean para eliminar los despilfarros y crear valor en la empresa Womack, J.P.; Jones, A.T. y Ross, D. Ed. McGraw-Hill 1992		