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Mondragon Unibertsitatea Goi Eskola Politeknikoa Escuela Politécnica Superior

	OENEIN		FORMATION				
Studies DEGREE IN MEC	HATRONICS ENGINEERI	NG	Subject ?				
Semester 1	Course 4		Mention / Field of				
Character COMPULSORY			specialisation				
Plan 2022	Modality Face-to-	-face	Language EUS	SKARA/CAS	TELLANO/E	ENGLISH	ł
Credits 4,5	Hours/week 3.75		Total hours 67.5 hou		s + 45 non-c	lass hou	rs = <u>112.5</u>
	2030 4		DA GOALS	<u></u>			
	2030 F	10EN					
	PR	ROFE	SSORS				
ARANA OSTOLAZA, AITOR							
IZQUIERDO ORTIZ DE LAND							
	REQUIRED PI	REVIC	DUS KNOWLEDGE				
Subje	cts			Knowl	edge		
APHIC EXPRESION			(No pr	evious knov	vledge requi	red)	
/SICS							
CTROMECHANICAL SYSTEMS							
FERIAL STRENGTH AND ELAS							
	LEAR	NING	RESULTS				
ARNING RESULTS					KC SK	AB	ECTS
402 - To know and apply principle TR1 - To develop interdisciplinary					x	x	4,02 0,24
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RGJ491 [!] Coordinar el equipo de trabajo, estimulando la cohesión y buen clima para lograr la integración de todas las personas y su contribución para alcanzar un rendimiento apropiado, tanto a nivel individual como grupal, para el desarrollo del proyecto en						
LEARNING ACTIVITIES			СН	NCH	тн	
Carrying out/resolving projects/challenges/cases, etc. to p interdisciplinary contexts, real and/or simulated, individual			2 h.	1 h.	3 h.	
EVALUATION SYSTEM	W	MAKE-UP MECHANIS	SMS			
Reports on the completion of exercises, case studies,	100%		(No mech	anisms)		
computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems		Comments: Continuo	us assessme	ent. Retake is r	not foreseen.	
CH - Class hours: 2 h. NCH - Non-class hours: 1 h. TH - Total hours: 3 h.						
RGJ493 [!] Elabora la memoria del proyecto, aportano discriminatorio del lenguaje.	lo argume	ntos elaborados y haci	iendo un us	o correcto, in	clusivo y no	
LEARNING ACTIVITIES			СН	NCH	ТН	
Development and writing of records, reports, presentation projects/work experience/challenges/case studies/experim individually and/or in teams			2 h.	1 h.	3 h.	
EVALUATION SYSTEM	W	MAKE-UP MECHANIS	SMS			
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	100%	Comments: Continuo	(No mech us assessme	/	not foreseen.	
CH - Class hours: 2 h. NCH - Non-class hours: 1 h. TH - Total hours: 3 h.						

RGJ405 [!] Conocer y emplear técnicas y herramientas para el ensayo y monitorizado de salud de componentes mecánicos y máquinas

EARNING ACTIVITIES			СН	NCH	ТН
Development and writing of records, reports, presentations projects/work experience/challenges/case studies/experime ndividually and/or in teams			4 h.	2 h.	6 h.
Conducting tests, giving presentations, presenting defence checkpoints	s, taking	examinations and/or doing	5 h.	7 h.	12 h.
			11 h.	6 h.	17 h.
Presentation by the teacher in the classroom, in participato procedures associated with the subjects	ry classe	es, of concepts and	1111.	011.	
	ry classe <i>w</i>	es, of concepts and MAKE-UP MECHANISM		011.	
procedures associated with the subjects			//S oral tests		
brocedures associated with the subjects EVALUATION SYSTEM Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory	W	MAKE-UP MECHANISM	//S oral tests		

Goi Eskola Politeknikoa Escuela Politécnica Superior Course: 2024 / 2025 - Course planning

CH - Class hours: 20 h. NCH - Non-class hours: 15 h. TH - Total hours: 35 h.

RGJ490 [!] Definir y gestionar los objetivos y la planificación de un proyecto que permita adquirir y/o reforzar los conocimientos de tecnologías específicas de su especialidad,- que en ocasiones llegan a la vanguardia del conocimiento- y definir una estrategia LEARNING ACTIVITIES СН NCH ΤН Carrying out/resolving projects/challenges/cases, etc. to provide solutions to problems in 1 h. 2 h. 3 h. interdisciplinary contexts, real and/or simulated, individually and/or in teams **EVALUATION SYSTEM** w MAKE-UP MECHANISMS Reports on the completion of exercises, case studies, 100% (No mechanisms) computer exercises, simulation exercises, laboratory Comments: Continuous assessment. Retake is not foreseen. exercises, term projects, challenges and problems CH - Class hours: 1 h. NCH - Non-class hours: 2 h. TH - Total hours: 3 h. RGJ494 [!] Realiza una presentación oral del proyecto, justificando las soluciones propuestas con argumentos elaborados y precisos, y haciendo un uso correcto, inclusivo y no discriminatorio del lenguaje. 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 Reports on the completion of exercises, case studies, 100% (No mechanisms) computer exercises, simulation exercises, laboratory Comments: Continuous assessment. Retake is not foreseen. exercises, term projects, challenges and problems CH - Class hours: 2 h. NCH - Non-class hours: 1 h. TH - Total hours: 3 h. CONTENTS

[!]

1. ENSAYOS MECÁNICOS

- 1.1. Instrumentación, sensores y estensometría
- 1.2. Análisis tiempo vs frecuencia (monitorización máquinas)

2. DISEÑO MECÁNICO

2.1. Rodamientos



Dimensionado de rodamientos

Diseño de conjuntos basados en rodamientos

2.2. Acoplamientos

2.3. Uniones desmontables

2.4. Ejes

Diseño de ejes

Alineación de ejes

LEARNING RESOURCES AND BIBLIOGRAPHY					
Learning resources	Bibliography				
[!] Presentaciones en clase [!] Programas	J. Hamrock, O. Jacobson, R. Schmid. Fundamentals of machine elements. Third edition. Editorial Taylor & Francis Group, LLC. 2014				
 [!] Apuntes de la asignatura [!] Consultas en páginas web relacionadas con el tema 	Peter R.N.Childs. Mechanical Design Engineering Handbook. Elsevier Ltd. 2014				
	John Piotrowski. Shaft Alignment Handbook. CRC Press. 2006.				
	Hung Nguyen-Schäfer. Computational Design of Rolling Bearings. Springer (2016)				
	http://katalogoa.mondragon.edu/janium-bin/janium_login_opac_re_ln k.pl?grupo=MECATRONICA41&ejecuta=15&_ST				