

Course: 2024 / 2025 - Course planning



						S	uperior
	[GEA303] S	TATISTICS					
	GENERAL IN	FORMATION					
Studies DEGREE IN INDUS ENGINEERING	STRIAL ELECTRONICS	Subject	MATHEMATICS	3			
Semester 2	Course 1	Mention / Field of					
Character BASIC TRAINING		specialisation					
Plan 2022	Modality Face-to-face	Language	EUSKARA				
Credits 6	Hours/week 5.11	Total hours	92 class hours - hours	+ 58 r	ion-clas	ss hours =	= <u>150 to</u>
	2030 AGEN	DA GOALS					
	PROFE	SSORS					
ZUBIRIA ULACIA, MARIA							
	REQUIRED PREVIO	OUS KNOWLED	GE				
Subjec	ts		Knowl	edge			
(INO Specific previous s			vo previous knov	weag	e requil	rea)	
	LEARNING	RESULIS		кс	SK	AB	ECTS
R101 - To solve mathematical prob	lems that may arise in engineerir	ng. Apply knowledge	about:	NO		X	5,4
merical algorithms; statistics and op RTR1 - To develop interdisciplinary coming aware of respect for human pact of the proposed solutions on th ant-garde, demonstrating the ability the bind degree of autogenuity	otimization projects specific to their specialty rights and fundamental rights, a te SDGs - to acquire and/or apply to work in multidisciplinary team	v and of gradual comp nd analyzing and ass y basic, advanced an s and/or undertake fu	plexity, - sessing the id/or urther studies		x		0,36
RTR2 - To express information, idea herent manner, orally and in writing urces, using inclusive and non-disc	is and the arguments that suppor , based on quality information, se riminatory language	rt them in an orderly, elf-made or obtained	clear and from different		x		0,24
	11.1 · · · ·					Total:	6
: Knowledge or Content / SK: Skills / AB: Ab	liities						
NAEE LEARNING RESULTS NA101 - Knowledge and comprehen ngineering speciality, at a level that	sion: Knowledge and understand allows them to acquire the other	ling of mathematics a competencies of the	and other basic s degree.	cienc	es inhe	erent in the	em
NA103 - Knowledge and comprehen	sion: Awareness of the multidisci	iplinary context of en	gineering.				
NA104 - Analysis in engineering: The levant analytical. calculation and ex	 ability to analyse complex produces perimental methods in a suitable 	ucts, processes and way: and correctly in	systems in their nterpret the resu	field of a	of study such ar	r; choose⇒ nalvses.	and app
NA106 - Engineering projects: Ability rocesses and systems of their speci nvironmental, economic and industr NA113 - Practical application of engi rocesses and their limitations in the	v to project, design and develop c ality, which meet the established ial aspects, as well as selecting a neering: Knowledge of applicatio field of their speciality	complex products (pa requirements, includ and applying appropri n of materials, equip	irts, components ling awareness of iate project meth ment and tools, of	, finis of the ods. engine	hed pro social, eering t	oducts, etc health and technolog	c.), d safety y and
NA119 - Communication and Teamy	vork: Ability to effectively communication	nicate information, id	eas, problems a	nd so	utions	in the field	d of
NA120 - Communication and Teamv nd to cooperate with both engineers	vork: Ability to operate effectively and people from other discipline	in domestic and inte	rnational context	ts, ind	lividuall	y and as	a team,
	SECONDARY LEA	RNING RESULT	ſS				
2RGE190 (2 sem)							
LEARNING ACTIVITIES			СН		NCH	тн	
Carrying out/resolving projects/chal interdisciplinary contexts, real and/o	lenges/cases, etc. to provide solution of the	utions to problems in n teams	2 h.		1 h.	3 h	
EVALUATION SYSTEM	W	MAKE-UP MECH	ANISMS				

EVALUATION SYSTEM

Observation (technical capacity, attitude and participation) 100%

MAKE-UP MECHANISMS

Observation (technical capacity, attitude and participation) Comments: The evaluation is continuous.

CH - Class hours: 2 h.





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

22(H=101 (2 som)					
LEARNING ACTIVITIES			СН	NCH	тн
Carrying out/resolving projects/challenges/cases, etc. to printerdisciplinary contexts, real and/or simulated, individual	rovide solu y and/or ir	utions to problems in teams	2 h.	1 h.	3 h.
EVALUATION SYSTEM	w	MAKE-UP MECHANIS	SMS		
Observation (technical capacity, attitude and participation)	100%	Observation (technical Comments: Continuor	l capacity, at us assessme	ttitude and par ent.	ticipation)
CH - Class hours: 2 h. NCH - Non-class hours: 1 h. TH - Total hours: 3 h.					
2RGE193 (2 sem)					
					T 11
LEARNING ACTIVITIES Development and writing of records, reports, presentations	s. audiovis	ual material, etc. on	<u>сн</u> 1 h.	2 h.	3 h.
projects/work experience/challenges/case studies/experim individually and/or in teams	ental inves	stigations carried out			0
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%	Reports on the comple exercises, simulation e projects, challenges an Comments: - Continue the document.	etion of exer exercises, la nd problems ous assessn	cises, case stu boratory exerc nent It may b	dies, computer ises, term be asked to redo
CH - Class hours: 1 h. NCH - Non-class hours: 2 h. TH - Total hours: 3 h.					
2RGE194 (2 sem)					
			СН	NCH	тн
Development and writing of records, reports, presentations projects/work experience/challenges/case studies/experim individually and/or in teams	s, audiovis iental inve	ual material, etc. on stigations carried out	1 h.	2 h.	3 h.
EVALUATION SYSTEM	W	MAKE-UP MECHANI	SMS		
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%	Presentation and defe practical work, simulat term projects, end of d and problems	nce of exercion practical legree proje	tises, case stud work, laborate ct, master's the	dies, computer ory practical work, esis, challenges
		comments. The evalu	auon is con	10005.	
CH - Class hours: 1 h. NCH - Non-class hours: 2 h. TH - Total hours: 3 h.					





RGE125 [!] Utiliza las principales distribuciones muestrales para resolver problemas de estimación de parámetros y contrastes de hipótesis

LEARNING ACTIVITIES			СН	NCH	ТН
Conducting tests, giving presentations, presenting defences, taking examinations and/or doing checkpoints			2 h.	2 h.	4 h.
Computer simulation exercises, individually and/or in teams			2 h.	2 h.	4 h.
Presentation by the teacher in the classroom, in participa procedures associated with the subjects	tory class	es, of concepts and	6 h.		6 h.
Carrying out exercises and solving problems individually	and/or in t	teams	7 h.	6 h.	13 h.
EVALUATION SYSTEM	w	MAKE-UP MECHANISM	IS		
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	15%	Individual written and/or coding/programming tes Comments: - Students v	oral tests ts with less th	or individual nan a 5 at the	control point m
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems Individual written and/or oral tests or individual coding/programming tests	15% 75%	Individual written and/or coding/programming tes Comments: - Students v retake the exam Final n and retake 75%.	oral tests ts with less th ote of the	or individual nan a 5 at the control point: o	control point n control point 2
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems Individual written and/or oral tests or individual coding/programming tests Self-assessment	15% 75% 10%	Individual written and/or coding/programming tes Comments: - Students v retake the exam Final n and retake 75%.	oral tests ts with less th ote of the	or individual nan a 5 at the control point: o	control point n control point 2

RGE123 [!] Calcula y analiza parámetros estadísticos de un conjunto de datos y obtiene modelos de regresión lineal simple

LEARNING ACTIVITIES				NCH	тн
Computer simulation exercises, individually and/or in teams			3 h.	3 h.	6 h.
Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects			6 h.		6 h.
Carrying out exercises and solving problems individually and/or in teams			4 h.	5 h.	9 h.
Carrying out work experience in real environments and writing the corresponding report			9 h.	6 h.	15 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	67%	Prototype / Product Comments: - It will b of the project In the p	e possible to project / PBL	improve with t there will not b	he technical grade le any retake of
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	12%	the individual defense.	-		
Individual written and/or oral tests or individual coding/programming tests Comments: - PBL project grade: 30% product, 20% tech content of the report and 50% individual technical defense	21% inical				
CH - Class hours: 22 h. NCH - Non-class hours: 14 h. TH - Total hours: 36 h.					
2RGE192 (2 sem)					

LEARNING ACTIVITIES			СН	NCH	тн
Carrying out/resolving projects/challenges/cases, etc. to pro interdisciplinary contexts, real and/or simulated, individually	utions to problems in teams	2 h.	1 h.	3 h.	
EVALUATION SYSTEM	W	MAKE-UP MECHANIS	SMS		





Observation (technical capacity, attitude and participation) 100%

Observation (technical capacity, attitude and participation) **Comments:** Continuous assessment.

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

LEARNING ACTIVITIES			СН	NCH	тн
Conducting tests, giving presentations, presenting defendence checkpoints	ces, taking	g examinations and/or doing	2 h.	10 h.	12 h.
Computer simulation exercises, individually and/or in tea	ms		4 h.	4 h.	8 h.
Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects			28 h.		28 h.
Carrying out exercises and solving problems individually and/or in teams			9 h.	10 h.	19 h.
Self-assessment tests in a context of autonomous and continuous learning			2 h.	3 h.	5 h.
EVALUATION SYSTEM	w	MAKE-UP MECHANISM	IS		
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	25%	Individual written and/or coding/programming test Comments: - If the avera	oral tests ts age of the	or individual two tests doe	s not reach a 5
ndividual written and/or oral tests or individual 75% recovery exam must be to control point 25% and re			ken Fina ke 75%.	al note of the c	control point:
Comments: - There will be 2 written tests, average grade robability (30%) and Random variables (70%) - The minin verage grade is 5	e: mum				
:H - Class hours: 45 h.					
ICH - Non-class hours: 27 h					

CONTENTS

1. Descriptive statistics2. Probability3. Random variable4. Inference5. Linear regression

LEARNING RESOURCES AND BIBLIOGRAPHY

Learning resources	Bibliography
Subject notes Moodle Platform	D. Soler, Probabilidad y estadística, 2nd ed. Mondragon Unibertsitateko Zerbitzu editoriala, 2022.
Video projections	W. C. Navidi, Estadística para ingenieros y científicos. McGraw-Hill, 2006
	D. C. Montgomery and G. C. Runger, Probabilidad y estadística aplicadas a la inegeniería. McGraw-Hill, 2010.
	R. E. Walpole, R. H. Myers, and S. L. Myers, Probabilidad y estadística para ingenieros, 6a. ed. Prentice Hall, 2012