Goi Eskola Politeknikoa Escuela Politécnica

	[MRB10	11 DAT	A ANALYTICS	·			
	GENE		FORMATION				
Studies Master's Degree			Subject ?)			
SYSTEMS			Cusjoor .				
Semester 1	Course 1		Mention / Field of				
Character COMPULSORY			specialisation				
Plan 2023	Modality Face	e-to-face	Language E	INGLISH			
Credits 3	Hours/week 0		Total hours 2	9 class hours	+ 46 non-cla	ss hours =	= <u>75 to</u>
		PROFES	SSORS				
DOK-BARREIRO BUEZO, U	JNAI						
GALLARDO ARRIETA, IKER	२						
	REQUIRED	PREVIC	OUS KNOWLEDG	E			
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(INO SPECIFIC PREVIOU	s subjects required)			o previous kno	wieage requi	rea)	
	LE	ARNING	RESULTS		KC SK	AR	FOT
208 - Design and implement da	ata preprocessing and mo	odeling tech	nniques to predict, clas	sify and	<u>x</u>	AD	2,4
up data, being able to interpret	and validate the models of	created for	knowledge extraction.				
223 - Ability to work in multidisc orally and in writing, knowledg	ciplinary teams and in a r	nultilingual nd ideas rel	environment and to co ated to subjects relate	ommunicate, d to the	x		0,2
ster's degree							
228 - To communicate your con pecialized and non-specialized	nclusions and the knowle audiences in a clear and	edge and ul Lunambique	timate reasons that sup	pport them	x		0,4
		anambiga					
						Total:	3
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Knowledge or Content / SK: Skills / AB.	: Abilities SECONDA	ARY LEA	RNING RESULTS	8			
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Mondragon Unibertsitatea Goi Eskola Politeknikoa Escuela Politécnica Superior

Course: 2024 / 2025 - Course planning

CH - Class hours: 13 h. NCH - Non-class hours: 17 h. TH - Total hours: 30 h.

RA092 [!] Desarrolla y propone soluciones cuya base sea el análisis de datos utilizando los conceptos del aprendizaje automático comunicando sus conclusiones de manera argumentada en un segundo idioma

LEARNING ACTIVITIES	СН	NCH	ТН		
Development and writing of records, reports, presentation projects/work experience/challenges/case studies/experin individually and/or in teams	2 h.	16 h.	18 h.		
Conducting tests, giving presentations, presenting defenc checkpoints	2 h.	3 h.	5 h.		
Presentation by the teacher in the classroom, in participat procedures associated with the subjects	2,5 h.		2,5 h.		
Carrying out exercises and solving problems individually a	9,5 h.	10 h.	19,5 h.		
EVALUATION SYSTEM W MAKE-UP MECHANIS			IS		
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	ts on the completion of exercises, case studies, 20% Individual written and/c coding/programming te ses, term projects, challenges and problems		oral tests c ts	or individual	
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	20%				
Individual written and/or oral tests or individual 60% coding/programming tests					
Comments: All activities (control points, individual and greetc.) must have a minimum grade of 5 and an opportunity for recovery (except the PBL). If a control point is not passed (a 5), ​​the retake is mandatory and the final will be the grade obtained in the retake. If an individual or g work is not passed (less than 5), the retake is mandatory arfinal grade will be a maximum of 5. In the activities carried on necessary to obtain a minimum mark of 4 to calculate the a mark of the learning result. Otherwise, the note of the learning will be the another of the activity. The average will be a maximum of the entire of the learning result.					

CH - Class hours: 16 h. NCH - Non-class hours: 29 h. TH - Total hours: 45 h.

final grade with the RA, applying the percentages defined in IKOF.

CONTENTS

0 Python basics for dala analytics

- 1 Data preprocessing
- 1.1 Cleaning
- 1.2 Transformations
- 1.3 Missing values and outliers
- 1.4 Feature selection/extraction/discretization 1.5 Imbalanced data treatment

- 2 Data analytics
- 2.1 Problem types a) Classification
- b) Regression
- c) Clustering
- 2.2 Families of models
- 2.3 Model selection
- 2.4 Model validation



Course: 2024 / 2025 - Course planning

Goi Eskola Politeknikoa Escuela Politécnica Superior

LEARNING RESOURCES AND BIBLIOGRAPHY

Learning resources	Bibliography
Subject notes	http://katalogoa.mondragon.edu/janium-bin/janium_login_opac_re_In
Technical articles	k.pl?grupo=MASTERROBOTIKA11&ejecuta=5&_ST
Topic related web quires	

Technical articles Topic related web quires Moodle Platform Class presentations Computer practical training Slides of the subject Specific Master Software