Goi Eskola Politeknikoa Escuela Politécnica Superior

Studios		GEN						
	MASTER DECRE				Data Analysia			
Studies	CYBERSECURIT	Y AND CLOUD COMP	, UTING	Subject	Data Analysis			
Semester	1	Course 1		Mention / Field of				
Character	COMPULSORY			specialisation				
Plan	2024	Modality Face	e-to-face	Language	CASTELLANC)		
Credits	3	Hours/week 0		Total hours	34 class hours hours	s + 41 non-	class hou	ırs = <u>75 to</u>
			PROFES	SSORS				
AGUIRRE	ORTUZAR, AITOR							
		REQUIRED	PREVIC	OUS KNOWLED	GE			
	Subje	cts		(1		ledge	auired)	
		16			vo previous kric	owiedge re	quired)	
			AKNING	RESULTS		KC	K AP	ECT
101 - Know, u	understand and apr	bly the basic fundament	als of mach	nine learning.			x	2,4
1210 - Possess	s the learning skills	that will enable them to	continue s	studying in a largely s	self-directed or	i	x	0,6
onomous way.								
							Total	: 3
Knowledge or Co	ntent / SK: Skills / AB: A	Abilities						
		SECONDA	ARY LEA	RNING RESUL	5			
EARNING AC	CTIVITIES	de reporte presentation		sual material etc. on	200 3 h	6 h	1	7H 9 h
projects/work endividually and	xperience/challeng d/or in teams	jes/case studies/experii	mental inve	estigations carried ou	t	011.		011.
Conducting tests, giving presentations, presenting defences, taking examinations and/or de					doing ^{1 h.}	2 h.		3 h.
Presentation by	y the teacher in the sociated with the su	eclassroom, in participa ubjects	tory classe	s, of concepts and	8 h.			8 h.
nocedures ass		a problems individually	and/or in te	ams	4 h.	11 h		15 h
Carrying out ex	cercises and solving	g problems individually						1511.
Carrying out ex	kercises and solving		W	MAKE-UP MECH	ANISMS			1511.
Carrying out ex EVALUATION Reports on the computer exercise	SYSTEM completion of exer	rcises, case studies, (ercises, laboratory	W 20%	MAKE-UP MECH Reports on the co exercises, simulat	ANISMS mpletion of exe	ercises, cas aboratory	se studies	, compute
EVALUATION Reports on the computer exercises, term	SYSTEM completion of exer cises, simulation ex projects, challeng	rcises, case studies, (ercises, laboratory es and problems	W 20%	MAKE-UP MECH Reports on the co exercises, simulat projects, challeng	ANISMS mpletion of exe ion exercises, l es and problem	ercises, cas aboratory Is	se studies exercises	, compute , term
EVALUATION Reports on the exercises, term Presentation at aboratory prace	SYSTEM completion of exercises, simulation ex projects, challeng nd defence of exerc tical work, simulatio tical work, term pro-	rcises, case studies, kercises, laboratory es and problems cises, case studies, on practical work, ojects, end of degree	W 20% 5%	MAKE-UP MECH Reports on the co exercises, simulat projects, challeng Individual written a coding/programmi	ANISMS mpletion of exe ion exercises, I es and problem and/or oral tests ing tests	ercises, cas aboratory is s or individ	se studies exercises lual	, compute , term
EVALUATION Reports on the computer exercises, term Presentation an computer pract aboratory prace project, master ndividual writte coding/program	SYSTEM completion of exercises, simulation ex- projects, challeng nd defence of exerc tical work, simulation tical work, term pro- 's thesis, challenge en and/or oral tests nming tests	rcises, case studies, kercises, laboratory les and problems cises, case studies, on practical work, ojects, end of degree as and problems or individual	W 20% 5% 75%	MAKE-UP MECH Reports on the co exercises, simulat projects, challeng Individual written a coding/programmi	ANISMS mpletion of exe ion exercises, I es and problem and/or oral tests ing tests	ercises, cas aboratory is s or individ	se studies exercises lual	, compute
EVALUATION Reports on the computer exerce exercises, term Presentation an computer pract aboratory prace roject, master ndividual writte coding/program	SYSTEM completion of exercises, simulation exercises, simulation exercises, simulation exercises, simulation exercises, schalleng nd defence of exercitical work, simulation tical work, simulation 's thesis, challenge en and/or oral tests nming tests rs: 16 h. s hours: 19 h.	g problems individually rcises, case studies, kercises, laboratory les and problems cises, case studies, on practical work, ojects, end of degree as and problems or individual	W 20% 5% 75%	MAKE-UP MECH Reports on the co exercises, simulat projects, challeng Individual written a coding/programmi	ANISMS mpletion of exe ion exercises, I es and problem and/or oral tests ing tests	ercises, cas aboratory is s or individ	se studies exercises lual	, compute
EVALUATION Reports on the computer exercises, term Presentation and computer pract laboratory pract project, master Individual writte coding/program	SYSTEM completion of exercises, simulation exercises, simulation exercises, simulation exercises, simulation exercises, simulation exercises, schallenge and defence of exercises work, term process (stress, challenge en and/or oral tests naming tests) rs: 16 h. s hours: 19 h.	g problems individually rcises, case studies, kercises, laboratory les and problems cises, case studies, on practical work, ojects, end of degree as and problems or individual	W 20% 5% 75%	MAKE-UP MECH Reports on the co exercises, simulat projects, challeng Individual written a coding/programmi	ANISMS mpletion of exe ion exercises, I es and problem and/or oral tests ing tests	ercises, cas aboratory is s or individ	se studies exercises lual	, comput , term



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Course: 2024 / 2025 - Course planning

individually and/or in teams

inuividually and/or in teams					
Conducting tests, giving presentations, presenting defence checkpoints	3 h.	2 h.	5 h.		
Presentation by the teacher in the classroom, in participate procedures associated with the subjects	5 h.		5 h.		
Carrying out exercises and solving problems individually a	ams	5 h.	7 h.	12 h.	
EVALUATION SYSTEM	W	MAKE-UP MECHANISN	IS		
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	20%	Reports on the completic exercises, simulation exe projects, challenges and	on of exe ercises, l problem	rcises, case stu aboratory exerc s	idies, computer cises, 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	15%	Individual written and/or coding/programming test	oral tests s	s or individual	
Individual written and/or oral tests or individual coding/programming tests	65%				
CH - Class hours: 18 h. NCH - Non-class hours: 22 h. TH - Total hours: 40 h.					

CONTENTS

- 1. Introduction
- 2. Algebra and maths review
- 3. numpy bases
- 4. Data analysis process
- 5. Pandas
- 6. Statistics review
- 7. Exploratory data analysis
 8. Metrics and evaluation method

LEARNING RESOURCES AND BIBLIOGRAPHY

Learning	resources
Louining	103001003

Bibliography

http://katalogoa.mondragon.edu/janium-bin/janium_login_opac_re_ln k.pl?grupo=MASTERDATUANALISIA11&ejecuta=5&

Subject notes Topic related web quires **Technical articles** Moodle Platform Labs **Class presentations** Computer practical training