Course: 2024 / 2025 - Course planning

Goi Eskola Politeknikoa Escuela Politécnica Superior

		GENE	:RAL IN	FORMATION					
		E IN DATA ANALYSIS, AND CLOUD COMPL	JTING	Subject	Cybersecurity				
Semester Character	1 COMPULSORY	Course 1		Mention / Field of specialisation					
Plan 2	2024	Modality Face	-to-face	Language	ENGLISH				
Credits (	6	Hours/week 0		Total hours	64 class hours <del>+</del> hours	- 86 n	ion-clas	s hours	= <u>150 to</u>
			PROFE	SSORS					
	GARITANO, IÑAK	l							
TI URBE UR	RETXA, MIKEL	REQUIRED							
	Subjec		PREVIC	OUS KNOWLED	Knowle	anhe	\ \		
(No	specific previous s			Able to install and r network infrastructu Able to install and r services on this ope	manage both phy ure. manage the GNU	sical	and virt		
				Able to install and r computers.	manage a networ	k of b	oth phy	vsical and	d virtual
		LEA	ARNING	RESULTS					
ARNING RESU	-	uter threats and vulner				кс	SK x	AB	<b>ECTS</b>
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**RA211** Is able to analyze, evaluate and select appropriate security measures to ensure confidentiality, integrity and availability of information in different environments.

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LEARNING ACTIVITIES			СН	NCH	TH
Development and writing of records, reports, presentation projects/work experience/challenges/case studies/experin individually and/or in teams				15 h.	15 h.
Conducting tests, giving presentations, presenting defend checkpoints	es, taking	examinations and/or doing	2 h.	12 h.	14 h.
Presentation by the teacher in the classroom, in participa procedures associated with the subjects	tory classe	es, of concepts and	12 h.		12 h.
Carrying out exercises and solving problems individually	and/or in t	eams	7 h.	12 h.	19 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	40%	Individual written and/or coding/programming test		or individual	
Individual written and/or oral tests or individual coding/programming tests	60%				

RA212 Obtains a thorough knowledge of existing s	ecurity threa	ats and their impact on o	perations		
LEARNING ACTIVITIES			СН	NCH	ТН
Development and writing of records, reports, presentati projects/work experience/challenges/case studies/experindividually and/or in teams	'	,	-	7 h.	7 h.
Conducting tests, giving presentations, presenting defe checkpoints	ences, taking	examinations and/or doing	g 2 h.	3 h.	5 h.
Presentation by the teacher in the classroom, in particip procedures associated with the subjects	patory classe	s, of concepts and	5 h.		5 h.
Carrying out exercises and solving problems individual	ly and/or in te	eams		8 h.	8 h.
EVALUATION SYSTEM	W	MAKE-UP MECHANIS	MS		
Individual written and/or oral tests or individual coding/programming tests	100%	Individual written and/o coding/programming te		or individual	

CH - Class hours: 7 h. NCH - Non-class hours: 18 h. TH - Total hours: 25 h.

## CONTENTS

- 1. Introduction
- 2. Cryptography
- 3. Node Security
- 4. Network Security
  - 1. Network Protocol Security
  - 2. Firewalls
    3. VPNs
- 4. User identification 5. Attack Detection
  - - 1. Signature-based detection 2. Anomaly Detection Systems

    - 3. Attack response
    - 4. Intrusion/Anomaly detection in industrial environments
    - 5. SIEM and log analysis

## LEARNING RESOURCES AND BIBLIOGRAPHY



Learning resources	Bibliography
Moodle Platform	http://katalogoa.mondragon.edu/janium-bin/janium_login_opac_re_In
Subject notes	k.pl?grupo=MASTERDATUANALISIA11&ejecuta=20&

[MNB101] Infrastructure and Network Security