Goi Eskola Politeknikoa | Mondragon Unibertsitatea
Course: 2023 / 2024 - Course planning

[MNA003] DATA VISUALISATION

GENERAL INFORMATION

Studies	MASTER DEGREE IN DATA ANALYSIS, CYBERSECURITY AND CLOUD COMPUTING	**Subject**	Data Analysis
Semester	1	**Course** 1	**Mention / Field of specialisation**
Character	COMPULSORY		
Plan	2019	**Modality** Adapted Face-to-face	**Language** CASTELLANO
Credits	3	**Hours/week** 0	**Total hours** 33 class hours + 42 non-class hours = **75 total hours**

PROFESSORS

BARREIRO BUEZO, UNAI

REQUIRED PREVIOUS KNOWLEDGE

Subjects	**Knowledge**
(No specific previous subjects required)	*(No previous knowledge required)*

SKILLS

VERIFICA SKILLS

SPECIFIC

MNCE05 - Designing, developing and implementing the model of data representation according to their nature and interpreting them to extract knowledge.

CROSS

MNCTR1 - Ability to work in multidisciplinary teams and in a multilingual environment (Basque/Spanish/English) and to communicate, both orally and in writing, knowledge, procedures, results and ideas related to the life cycle of the data, cybersecurity, and development and operations.

BASIC

M_CB8 - To be able to integrate different types of knowledge and make complex judgements based on information that, in spite of being partial or limited, includes ideas on the social and ethical responsibilities associated with the application of knowledge

LEARNING RESULTS

RA151 [!] *Conoce y comprende los conceptos del análisis visual e interacción hombre máquina*

LEARNING ACTIVITIES	CH	NCH	TH
Development and writing of records, reports, presentations, audiovisual material, etc. on projects/work experience/challenges/case studies/experimental investigations carried out individually and/or in teams	4 h.	12 h.	16 h.
Conducting tests, giving presentations, presenting defences, taking examinations and/or doing checkpoints	1 h.		1 h.
Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects	9 h.		9 h.
Carrying out exercises and solving problems individually and/or in teams	4 h.	10 h.	14 h.

EVALUATION SYSTEM	W	MAKE-UP MECHANISMS
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	20%	Individual written and/or oral tests or individual coding/programming tests
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	40%	
Individual written and/or oral tests or individual coding/programming tests	40%	

CH - Class hours: 18 h.
NCH - Non-class hours: 22 h.
TH - Total hours: 40 h.

RA153 [!] *Analiza y evalúa los datos de forma visual para generar y/u obtener información o valor, de forma individual y en*

grupo

LEARNING ACTIVITIES	CH	NCH	TH
Development and writing of records, reports, presentations, audiovisual material, etc. on projects/work experience/challenges/case studies/experimental investigations carried out individually and/or in teams	3 h.	12 h.	15 h.
Conducting tests, giving presentations, presenting defences, taking examinations and/or doing checkpoints	1 h.		1 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	5 h.	8 h.	13 h.

EVALUATION SYSTEM	W	MAKE-UP MECHANISMS
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	20%	Individual written and/or oral tests or individual coding/programming tests
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	40%	
Individual written and/or oral tests or individual coding/programming tests	40%	

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

CONTENTS

- Introduction to data visualization
- Data Visualization Libraries and Frameworks
- Visual Analytics
- Human-Computer Interaction and evaluation of Visual Analytics applications

LEARNING RESOURCES AND BIBLIOGRAPHY

Learning resources	Bibliography
Subject notes	http://katalogoa.mondragon.edu/janium-bin/janium_login_opac_re_lnk.pl?grupo=MASTERDATUANALISIA11&ejecuta=15&
Topic related web quires	
Technical articles	