

SUBJECT TEACHING GUIDE

251 - SOCIAL SCIENCES

University Master's Degree in Data Science

Academic year 2023-2024

1. IDENTIFYING DATA					
Degree	University Master's Degree in Data Science			Type and Year	Optional. Year 1
Faculty	Faculty of Sciences				
Discipline	DATA LABORATORIES				
Course unit title and code	251 - SOCIAL SCIENCES				
Number of ECTS credits allocated	3	Term	Semester based (2)		
Web					
Language of instruction	Spanish	English Friendly	Yes	Mode of delivery	Face-to-face

Department	DPTO. INGENIERÍA INFORMÁTICA Y ELECTRÓNICA				
Name of lecturer	DIEGO GARCIA SAIZ				
E-mail	diego.garcia@unican.es				
Office	Facultad de Ciencias. Planta: + 1. DESPACHO INVESTIGADOR (1068)				
Other lecturers	FRANCISCO MATORRAS WEINIG OLGA DE COS GUERRA				

3.1 LEARNING OUTCOMES

- To know the more relevant sites, data bases, repositories, softwares and tools to approach a use case in the knowledge area.

4. OBJECTIVES

- Management of Geographic Information Systems for the treatment of data from Social Science field.
- Social Network Analysis

6. COURSE ORGANIZATION	
CONTENTS	
1	Geographic Information Systems: 1.1. Introduction to data from Social Sciences 1.2. Introduction to Web Mapping 1.3. Geographic data management with GIS 1.4. Application of ML techniques to geographic data
2	Social Network Analysis: 2.1. Introduction. 2.2. Graph algorithms and other techniques 2.3. Practical cases of SNA with data from well-known Social Networks.

7. ASSESSMENT METHODS AND CRITERIA				
Description	Type	Final Eval.	Reassessn	%
Geographic Information Systems laboratory	Laboratory evaluation	No	No	10,00
Geographic Information Systems exercise	Work	No	Yes	40,00
Social Network Analysis Laboratory	Laboratory evaluation	No	No	10,00
Social Network Analysis exercise	Work	No	Yes	40,00
TOTAL				100,00
Observations				
All non-passed exercises can be recuperated in a final exam.				
Observations for part-time students				
As far as possible laboratories can be adapted for partial-time students				

8. BIBLIOGRAPHY AND TEACHING MATERIALS
BASIC
OLAYA, V. (2014): Sistemas de Información Geográfica. Disponible en formato Pdf en https://volaya.github.io/libro-sig
Social network analysis with applications McCulloh, Ian ISBN: 9781118169476 Wiley & Sons, Inc., 2013
The SAGE Handbook of Social Network Analysis Scott, John ISBN: 9781847873958 SAGE Publications, Limited, 2011 SAGE Knowledge Complete Books and Reference Collection 2019