uc3m Universidad Carlos III de Madrid

Big Data

Academic Year: (2023 / 2024) Review date: 26-04-2023

Department assigned to the subject: Social Sciences Department Coordinating teacher: GARCIA ALBACETE, GEMA MARIA

Type: Compulsory ECTS Credits: 3.0

Year: 1 Semester: 2

OBJECTIVES

CB6: Possess and understand knowledge that provides a basis or opportunity to be original in the development and / or application of ideas, often in a research context

CB7: To know how to apply the knowledge acquired and their ability to solve problems in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their area of study

CB8: That students are able to integrate knowledge and face the complexity of formulating judgments based on information that, being incomplete or limited, includes reflections on social and ethical responsibilities linked to the application of their knowledge and judgments

CB10: That students have the learning skills that allow them to continue studying in a way that will be largely self-directed or autonomous.

CG1: Ability to plan and carry out autonomously an investigation in the field of public opinion or political behavior.

CG2: Ability to interpret and integrate information from the political and social environment in order to be able to effectively provide analyses based on incomplete information.

CG3 - Be able to analyze social and political phenomena following the scientific method, using a critical perspective and recognizing the plurality of theoretical-methodological perspectives of the fields and subdisciplines linked to Political Science

CG4 - Know how to transfer the knowledge and skills acquired to face practical problems in the different areas in which professional opportunities are specified

CG5 - Being able to communicate, defend, and refute arguments on the most relevant issues in Political Science, both orally and in writing.

CG6: Ability to elaborate and communicate political analyses in a clear manner and to present them to both specialized and non-specialized publics.

CE2: Ability to understand and analyze in a rigorous way surveys in the field of political behavior.

CE3: Mastery of quantitative data analysis instruments to apply them to the study of political behavior.

CE6: Mastery of the theoretical and methodological tools to analyze the main determinants of political behavior (electoral and non-electoral) in the democracies of our environment.

CE7: Ability to analytically and professionally apply the latest advanced political behavior theories to new political and social phenomena.

DESCRIPTION OF CONTENTS: PROGRAMME

Big Data:

- 1. Theoretical and empirical considerations
- Data mining for social science analysis
- 3. Social media networks characteristics and data acquisition
- 4. Social and political analyses of social media (Web and Twitter)

ASSESSMENT SYSTEM

- SE1 Participación in class: 10%
- SE2 Individual or group presentations: 20% (dos entregas)
- SE3 Papers or exercises realized individually or in groups: 70%

Extraordinary evaluation: EXAM. The exam evaluates the global acquisition of knowledge, abilities and capabilities during the course.

% end-of-term-examination: 0
% of continuous assessment (assignments, laboratory, practicals...): 100

BASIC BIBLIOGRAPHY

- Jungherr, Andreas Analyzing Political Communication with Digital Trace Data. The Role of Twitter Messages in Social Science Research, Springer, 2015
- Melova, Yelena, Ingmar Weber and Michael W. Macy Twitter: A Digital Socioscope, Cambridge University Press, 2015
- Russell, Matthew A. and Mikhail Klassen Mining the Social Web: Data Mining Facebook, Twitter, LinkedIn, Google+, GitHub, and More, O'Reilly, 2018

ADDITIONAL BIBLIOGRAPHY

- Jungherr, A. Twitter use in election campaigns: a systematic literature review, Journal of Information Technology & Politics 13(1), 72-91., 2016
- Lazer, David and Jason Radford Data ex Machina: Introduction to Big Data, Annual Review of Sociology Vol. 43:19-39, 2017
- Salganik, Matthew J. Bit by Bit: Social Research in the Digital Age, Princeton University Press, 2017