

**COURSE DATA****DATA SUBJECT****Code:** 36632**Name:** Data journalism**Cycle:** Undergraduate Studies**ECTS Credits:** 6**Academic year:** 2026-27**STUDY (S)**

Degree	Center	Acad. year	Period
1334 - Degree in Journalism	Facultat de Filologia, Traducció i Comunicació	4	First quarter

SUBJECT-MATTER

Degree	Subject-matter	Character
1334 - Degree in Journalism	Información periodística y su tecnología	COMPULSORY

COORDINATION

CANO ORON LORENA

SUMMARY

Data Journalism belongs to the module of compulsory subjects and it aims to equip students with the skills needed to access, manage, analyze, and interpret public-interest databases for their application in journalistic practice. Throughout the course, students will work on core concepts of statistics, data analysis techniques, and practical skills for producing effective data visualizations using specialized digital tools. The course emphasizes the use of data as a foundation for investigative reporting aimed at fostering an informed and engaged citizenry. The ultimate goal is for students to be able to communicate complex content with rigor, clarity, and transparency through accessible journalistic storytelling.

This subject aligns with the Sustainable Development Goals (SDGs), particularly SDG 4 (Quality Education), SDG 16 (Peace, Justice and Strong Institutions), and SDG 17 (Partnerships for the Goals), by promoting evidence-based journalism oriented towards accountability, institutional transparency, and informed democratic participation.

PREVIOUS KNOWLEDGE**RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE**



There are no specified enrollment restrictions with other subjects of the curriculum.

OTHER REQUIREMENTS

This course explores in depth the analysis and processing of data for the production of data-driven journalistic content. Students are encouraged to apply concepts and skills acquired in previous subjects from the curriculum, such as *Communicative Documentation*, *News Genres*, *Multimedia Journalism*, and *Graphic Design and Infographics*. A strong command of the official languages is recommended.

COMPETENCES / LEARNING OUTCOMES

1334 - Degree in Journalism

Students must be able to apply their knowledge to their work or vocation in a professional manner and have acquired the competences required for the preparation and defence of arguments and for problem solving in their field of study.

Students must be able to communicate information, ideas, problems and solutions to both expert and lay audiences.

Students must be able to communicate in their own language through traditional forms of media (the press, photography, radio, television), through new combined forms (multimedia), through new digital forms (the internet), or through hypertextuality.

Students must be able to design both formal and aesthetic aspects in written, graphic, audiovisual and digital media, as well as the use of computer techniques for the representation of facts and data through infographic systems.

Students must be able to reasonably propose ideas from the basics of rhetoric, as well as to communicate through the techniques of persuasion.

Students must be able to use the communicative and informative technologies and techniques in different medias and combined/interactive systems (multimedia).

Students must have acquired knowledge and understanding in a specific field of study, on the basis of general secondary education and at a level that includes mainly knowledge drawn from advanced textbooks, but also some cutting-edge knowledge in their field of study.

Students must have an understanding of the data and mathematical operations performed, with some of them commonly used in the media. Students must know how to use data and statistics in a correct and understandable way for global dissemination.

Students must have the ability to gather and interpret relevant data (usually in their field of study) to make judgements that take relevant social, scientific or ethical issues into consideration.

Students should be able to adapt to technological and socio-occupational changes.

Students should be able to experiment and innovate through the understanding and use of the applied methods and technologies.



Students should be able to express themselves fluently and effectively in their own languages, as well as in a third language (preferably English), taking advantage of the linguistic and literary resources that are most appropriate for the different forms of media.

Students should be able to obtain and select relevant information and sources in order to solve problems and elaborate on strategies.

Students should be able to recover, organize, analyse and process information and communication with the purpose of private or collective uses through various media and supports or in the creation of productions of any kind.

Students should be able to search for, select, read, interpret and analyse both written and audiovisual texts and documents (analytically, synthetically and critically).

Students should be able to work as a team, communicate their own ideas and integrate themselves into group projects aimed at achieving results.

DESCRIPTION OF CONTENTS

1. Use of Databases

1.1. Introduction to Data Journalism

- 1.1.1. Background of data journalism. Precision journalism
- 1.1.2. Data journalism: definition and key references
- 1.1.3. A datafied present

1.2. Data Journalism in Newsrooms

- 1.2.1. Professional profile
- 1.2.2. Work team
- 1.2.3. Journalistic genres related to data
- 1.2.4. Quality standards

1.3. Information Sources

- 1.3.1. Types of information sources
- 1.3.2. Criteria for data reliability
- 1.3.3. Advanced data extraction techniques
- 1.3.4. Public information requests. Transparency laws
- 1.3.5. Artificial intelligence

2. Basic Concepts of Statistics



2.1. Definitions

2.2. Comparisons

2.3. Basic operations

2.4. Surveys, sample studies

2.5. Audiences

2.6. Errors to avoid

3. Data Analysis

3.1. Assisted data analysis techniques

3.2. Data interpretation: in search of the news

4. Data Visualization (Theory and Practice)

4.1. Types of charts and their uses

4.2. Data visualization tools

4.3. Composition

5. Developing a Journalistic Report Using This Approach

5.1. Content publishing formats

This content plan will be reflected in the following learning outcomes:

- Identify the capacity and ability to narrate current events and to use computer systems and resources.
- Be able to locate databases and, if necessary, perform scraping or request public information.
- Master the fundamental concepts of descriptive statistics and data analysis in order to carry out descriptive tasks on databases.



-Translate data into accessible language, creating an appropriate narrative for its communication, including data visualizations that facilitate the understanding of the information presented.

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Theory	20,00
Computer classroom practice	40,00
Total hours	60,00

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	0,00
Individual or group project	30,00
Independent study and work	35,00
Preparation of lessons	15,00
Preparation for assessment activities	10,00
Resolution of case studies	0,00
Total hours	90,00

TEACHING METHODOLOGY

The in-person teaching hours will consist of two types of sessions:

a) **Theoretical sessions**, in which the foundational content of the course, as detailed in the syllabus, will be taught. In addition to the knowledge presented in class and obtained through the required readings, the instructor will also upload supplementary texts to the virtual classroom, which will be highly recommended for reading. The purpose of these additional materials is to encourage students to engage in independent learning outside of class hours.

b) **Practical sessions**, in which practical knowledge related to various tasks and exercises will be introduced. Students will be allowed to carry out activities designed to reinforce the essential concepts.

Through tutoring sessions, the instructor commits to continuing to support students' learning and addressing any questions that may arise throughout the course period.

Additionally, and occasionally, when circumstances allow, the instructor may organize guest lectures by experts. These special sessions will aim to take place within the established schedule.

EVALUATION



The general grading system will follow the regulations of the University of Valencia approved by the Governing Council on May 30, 2017. ACGUV 108/2017.

First call

ORDINARY EVALUATION: The ordinary evaluation consists of a continuous evaluation that has several evaluation modalities:

-There will be a final group/group work of practices (SE4), which will count for 50% of the final grade. Part of the development of this work will be carried out in class hours. In addition to the work, students will have to submit a technical sheet specifying the role played by each member of the group in the development of the work.

-Several individual practicals will be carried out during the practical sessions (SE3), which will be worth 10% of the final mark.

-There will be a theory exam (SE1), which will be worth 40% of the final mark. It will consist of two parts, questions on theoretical issues of the subject and a critical analysis of a news item of data journalism.

It is possible to do voluntary work that can raise your final grade by up to 0.5 points.

It will be essential to obtain a 5 in each of the evaluated parts (both theory and practice) to pass the subject.

EXTRAORDINARY EVALUATION: In the period of time foreseen for the final exam of the subject, different tests will be carried out to evaluate the theoretical knowledge (40%) and the practical knowledge (60%) through different types of exercises.

Second call

In the case of having passed the practicals throughout the course, only the written test (theory exam) included in the Ordinary Assessment will be taken. In the case of not having done the practicals or not having passed them, the Extraordinary Assessment will be carried out.

It will be essential to obtain a 5 in each of the evaluated parts (both theory and practice) to pass the subject.

Academical honesty

Intellectual honesty is vital in academic communities, and for the fair assessment of student work. All work



submitted for this course must be original authorship. Papers that make use of fraudulent collaboration or composition with the help of artificial intelligence (ChatGPT or others) will not be accepted, unless it forms part of the course content and is authorised by the teaching staff.

In the case of plagiarism in a student's assessment work, this may be marked with a numerical grade of zero and lead to the suspension of the course, regardless of the disciplinary procedure that may be initiated and, if applicable, the appropriate sanction in accordance with current legislation.

The following will also be considered serious misconduct and, therefore, may result in immediate suspension from the exam session: copying or facilitating the copying of work among undergraduate students; irregularly accessing or appropriating in advance the content of a test or exam; facilitating or procuring the appropriation, alteration or subsequent destruction of the content or results of an assessable activity and impersonation of the person in exams. When the serious misconduct mentioned in this point is detected, the teacher must notify the Grade Coordination.

The presentation of work and/or exams with spelling or typographical mistakes and/or errors in syntax, coherence or writing will be penalised and may lead to the suspension of the exam.

REFERENCES

Basic

Bounegru, L., Chambers, L., Gary, J (Eds.). (2020). *The Data Journalism Handbook II. Towards a Critical Data Practice*. European Journalism Centre and Google News Initiative. <https://datajournalism.com/read/handbook/two>

Cairo, A. (2016). *The Truthful Art: Data, charts, and maps for communication*. New Riders.

Dougherty, J., & Ilyankou, I. (2021). *Hands-on data visualization*. O'Reilly Media.

Jauset, J.A. (2007). *Estadística para periodistas, publicitarios y comunicadores* (1 ed.). UOC.

Martínez Pastor, J. I. (2019). *Los datos sin tapujos: cómo interpretar y difundir las estadísticas sociales*. Catarata.

VVAA. (2015). *Manual de periodismo de datos iberoamericano*. HIVOS, International Center for Journalists (ICFJ) y la Escuela de Periodismo de la Universidad Alberto Hurtado de Chile. <http://manual.periodismodedatos.org/index.php>

Complementary

Córdoba-Cabús, A., García-Borrego, M., & López-Martín, Á. (2020). El periodismo de datos durante la crisis



sanitaria del Covid-19 en la prensa española. *Revista Ibérica de Sistemas e Tecnologias de Informação*, (E35), 325-337.

Córdoba-Cabús, A., & López-Martín, Á. (2022). Anatomía de las visualizaciones en el periodismo de datos. Los casos de España y Estados Unidos: Los casos de España y Estados Unidos. *VISUAL REVIEW. International Visual Culture Review/Revista Internacional de Cultura Visual*, 9(Monográfico), 1-9.

Ferreras Rodríguez, E.M. (2016). El periodismo de Datos en España. *Estudios sobre el Mensaje Periodístico*, 22(1), 255-272

Healy, K. (2018). *Data visualization: a practical introduction*. Princeton University Press.

Herrero de la Fuente, M., Saavedra Llamas, M. & Castillo, E. (2022). Periodismo de datos contra desinformación. Competencias, perfiles y formación requerida en el periodismo de datos. *Estudios sobre el mensaje periodístico*, (28), 827-840.

La-Rosa, L., Sandoval-Martín, T. (2016). La insuficiencia de la Ley de Transparencia para el ejercicio del Periodismo de datos en España. *Revista Latina de Comunicación Social*, 71, 1208-1229.

Llaneras, K. (2022). *Piensa claro: Ocho reglas para descifrar el mundo y tener éxito en la era de los datos*. Debate.

López-Hernández, M. Á., Muñoz-García, F. J., & Domínguez-Delgado, R. (2022). El trabajo en equipo como elemento imprescindible en el periodismo de datos. *Ibersid: revista de sistemas de información y documentación*, 16(2), 45-56.

Mancheño, A. A., Robles, F. A., & Avilés, J. A. G. (2022). Transparencia, conservación y paridad en los grandes proyectos de datos: el caso de los Data Journalism Awards (DJA) y Sigma Awards (2013-2020). *Mediatika. Cuadernos de Medios de Comunicación*, (19).