

**COURSE DATA****DATA SUBJECT****Code:** 36642**Name:** Science, health and environmental 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	Second quarter

SUBJECT-MATTER

Degree	Subject-matter	Character
1334 - Degree in Journalism	Periodismo especializado	COMPULSORY

COORDINATION

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SUMMARY

Science, Health and Environmental Journalism is a compulsory subject that focuses on the study of facts and debates in the scientific and technological fields as disseminated through the media, social networks, and specialised platforms. It has a dual objective: on one hand, to analyse the various journalistic genres currently used in science, health and environmental journalism; and on the other hand, to examine the international science and technology system so that students become familiar with global scientific activity and its main sources of funding. The general topics covered in the course include: a) Introduction and history of science journalism; b) Science as a news event; c) Journalistic genres in science reporting; d) Sources of scientific information; and e) The media treatment of science.

This course contributes to the achievement of the Sustainable Development Goals, particularly SDG 3 (Good Health and Well-being), SDG 4 (Quality Education), SDG 13 (Climate Action), and SDG 16 (Peace, Justice and Strong Institutions), by promoting rigorous, accessible, and critical communication on key scientific, health, and environmental issues essential to sustainable development.

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



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

OTHER REQUIREMENTS

No prior knowledge is required.

COMPETENCES / LEARNING OUTCOMES

1334 - Degree in Journalism

Que los estudiantes sepan aplicar sus conocimientos a su trabajo o vocación de una forma profesional y posean las competencias que suelen demostrarse por medio de la elaboración y defensa de argumentos y la resolución de problemas dentro de su área de estudio

Que los estudiantes tengan la capacidad de reunir e interpretar datos relevantes (normalmente dentro de su área de estudio) para emitir juicios que incluyan una reflexión sobre temas relevantes de índole social, científica o ética

Students have demonstrated that they possess and understand knowledge in an area of study that forms the basis of general secondary education and is usually at a level that, while supported by advanced textbooks, also includes some aspects that involve knowledge from the forefront of their field of study.

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 search, select, contextualise and order any type of source or document (written, audio, visual etc.) useful for the elaboration and processing of information, as well as for persuasive communicative or fictional and entertainment uses.

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 should be able to defend a culture of peace and respect for the fundamental human rights within the processes of communication, specifically in regards to equality between women and men in all types of communication (informative, interpretative, semiotic, dialogic and opinion).

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.



Students should have the capacity and creativity necessary to take expressive and thematic risks within the scope and timeframes of communicative production, applying well-founded solutions and perspectives to the development of projects.

Students should show solidarity with people across the planet, as well as knowledge of the main cultural currents in relation to individual and collective values and respect for human life.

DESCRIPTION OF CONTENTS

1. Introduction and history of scientific, medical and environmental journalism

1.1. Discursive strategies of scientific information in the digital society

1.1.1. Characteristics, functions and dysfunctions of scientific information.

1.1.2. Scientific information professionals: specialized journalists?

1.1.3. Relationships between scientists and journalists.

1.1.4. Scientific language versus journalistic language: recontextualizing scientific messages. Topic treatment.

1.1.5. Specialized scientific information.

1.1.6. Public communication of science.

2. Science as an event

2.1. Ethics in scientific and technical information

2.1.1. Conflicts between science and information: scientific controversies.

2.1.2. Embargoed or withheld information.

2.1.3. Quality control in scientific information.

2.1.4. Scientific fake news.

2.1.5. Conflicts of interest of scientists and major multinational corporations.

3. Journalistic genres in scientific reporting

3.1. Science news coverage in digital press

3.1.1. Evolution of science's role in the news agendas of digital newspapers.

3.1.2. Public opinion on scientific and technological topics.

3.1.3. Content analysis for the study of scientific discourse in the press. Framing analysis by topic.

3.1.4. Advantages and opportunities in digital journalism.

3.2. Science news coverage on digital radio



- 3.2.1. Radio podcasts as a medium for science communication.
- 3.2.2. Characteristics of science-focused radio programmes.
- 3.2.3. Science in radio news broadcasts.
- 3.2.4. Timing, editing, and innovative approaches to attract audiences.

3.3. Science news coverage on TV, web TV, and cinema

- 3.3.1. Science and technology on television.
- 3.3.2. Issues in presenting science on television.
- 3.3.3. Science, television and education.
- 3.3.4. Scientific documentaries and educational science films.
- 3.3.5. New platforms and science, science fiction, and science animation. Netflix, HBO Max, Amazon Prime Video, Disney+, Filmin, Movistar Plus+, Apple TV+ and Atresplayer.

3.4. Institutional science communication through social media: visibility and opportunities

- 3.4.1. Institutional communication in public research bodies. Scientific Culture and Innovation Units.
- 3.4.2. Institutional communication at universities.
- 3.4.3. Institutional communication in multinational companies.
- 3.4.4. Communication from reference healthcare centres.
- 3.4.5. Science communication by local, regional, and national governments.

4. Scientific, medical, technical and environmental information sources

4.1. Information sources in scientific reporting

- 4.1.1. Introduction and classification of scientific information sources.
- 4.1.2. Researchers as sources of scientific information.
- 4.1.3. Non-governmental organizations.
- 4.1.4. Books and specialized journals.
- 4.1.5. Networks and databases.
- 4.1.6. Transparency law.
- 4.1.7. Collaborative science projects.
- 4.1.8. The general public as information producers.
- 4.1.9. Citizen science.

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

- Identify, analyse, and develop the ability to construct communicative strategies for political, social, cultural, economic, and scientific information.
- Apply a critical perspective (analysis, comprehension, and interpretation skills) to the topics that shape political, social, cultural, economic, and scientific-technological journalism.



- Identify knowledge of the main contemporary debates related to the political, social, cultural, economic, scientific, and technological spheres, as well as local and regional debates (territorial debates), and the forms of expression and argots used in their public construction.
- Critically analyse the elements and communicative strategies in media coverage of environmental, political, social, and health-related crises and catastrophes.
- Organise knowledge about the foundations of specialised journalism in different subject areas, its methods, and research perspectives.
- Classify the elements involved in the genesis and configuration of current political and social affairs, as well as the main theoretical approaches that analyse and study political, scientific, and social journalism.

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Theory	30,00
Computer classroom practice	30,00
Total hours	60,00

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	20,00
Individual or group project	45,00
Independent study and work	25,00
Preparation of lessons	0,00
Preparation for assessment activities	0,00
Resolution of case studies	0,00
Total hours	90,00

TEACHING METHODOLOGY

On-site activities: attendance at lectures, seminars, in-class practical sessions, group work, and classroom debates.

Off-site activities: preparation and development of a group project with a maximum of 3 students.

Readings and the study of a course manual are required for **students who are unable to attend any classes during the semester** due to health issues, work commitments, an excessive academic workload,



participation in the Erasmus program, or any other duly **justified and documented reason**. The required readings and course manual will be specified at the beginning of each academic year on the virtual classroom platform.

This course is part of the educational innovation project Code UV-SFPIE_PIEE-3325253 'Artificial Intelligence in Communication', and follows the activities approved by the Office for Continuing Education and Educational Innovation (SFPIE), which include: fostering digital competencies, especially those related to the effective, ethical, and responsible use of AI tools; strengthening students' critical thinking and intellectual autonomy, particularly regarding AI use; and encouraging teaching collaboration across different courses and degree programs. In addition to participating in transversal content activities, students will also complete a questionnaire on the use of AI within the course.

EVALUATION

A. FOR STUDENTS WHO REGULARLY ATTEND CLASS

First call

Completion of six scheduled activities during class (60% of the grade) and one team project (10% of the grade).

In addition, students must complete a **multiple-choice test** based on the theoretical content of the course (30%).

Details of the practical activities and their percentage value:

-Compulsory theoretical assignment (group work, 10%): Students must complete a research-based project in the field of science journalism and communication. The project must meet the required criteria, be carried out collectively (up to 3 members), and be presented in class at the end of the course. Content from these projects may appear in the multiple-choice exam. The project may fail if the elaboration guidelines covered in class are not followed.

-Scheduled practical activities (60%): Students must complete SIX out of EIGHT proposed activities. They can choose which ones to do. Activities may be individual or in groups (maximum three students). Each task will be explained in class. Summary:

P1: writing a press release about a scientific article/project

P2: attending a lecture by a researcher and writing a press call + press release

P3: editing and correcting articles on Wikipedia



P4: creating a scientific infographic based on a chosen research article

P5: producing a scientific podcast

P6: transmedia narrative/classroom debate

P7 & P8: simulate a science journalist's profile: (P7) outline and design a basic web/blog with a homepage and one additional section; and (P8) create Twitter and Instagram profiles for that identity (others like Twitch, TikTok or YouTube may also be considered).

Submission deadline for activities and group project: the final day of lectures. Group work must be presented in class and submitted individually by each member on the virtual platform. Each activity must be submitted to its designated task space in the virtual classroom on the scheduled day or shortly thereafter. **No email submissions** will be accepted. Late work will not be accumulated or accepted.

REQUIREMENTS

Students must obtain a minimum grade of 5 in both the exam and practical work. A 4 can be compensated by a 6 in the other part, but neither part can be below 4.

Second call

Failed sections must be retaken in the second call, retaining the grade of the passed part.

B. FOR STUDENTS WHO DO NOT REGULARLY ATTEND CLASS

First call

Students who do not attend class and thus will not participate in classroom activities. These students must complete **only one written exam** based on required readings provided at the beginning of the course via the virtual platform. The written exam will cover only those readings and will account for **100% of the final grade**. These students do not need to complete practical activities, attend lectures, or take the multiple-choice test.

Second call

If they fail, they must retake the written exam during the second call.



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.

ACADEMIC HONESTY

Intellectual honesty is vital in academic communities and for the fair assessment of students' work. All work submitted for this course must be the student's own original work. Assignments involving fraudulent collaboration will not be accepted, in accordance with the "Protocol on dealing with fraudulent practices at the University of Valencia", approved by the Governing Council on 14 July 2020. ACGIV 123/2020. The use of artificial intelligence tools shall comply with the provisions of the "Guidelines for the responsible use of artificial intelligence (AI) in teaching and assessment activities at the University of Valencia" or any regulations that may replace them.

Severe violations include:

- Copying or facilitating cheating
- Unauthorized access to exams or content
- Altering or destroying results
- Impersonation during assessments

Any of these will be reported to the program coordinator.

Spelling, grammar, or syntactic errors in assignments or exams will be penalized and may result in **failing the task**.

CODE OF CONDUCT

This course aims to provide skills in science journalism and communication. Therefore, the classroom must be a **safe and inclusive environment**, respectful of all identities and backgrounds (nationality, gender, age, religion, disability, etc.). We ask all students to contribute to a respectful and welcoming atmosphere.

REFERENCES



Basic references

Calvo Roy, A., & Moreno-Castro, C. (Coords.). (2021). *Periodismo científico en España, una especialidad con pasado, presente y futuro*. Fundación Ramón Areces.

Elena, A. (1993). De *Medlies* a *Terminator*: Imágenes de la ciencia en el cine de ficción. *Árbor*, 569, 9¿16.

Elena, A. (1997). Skirts in the lab: Madame Curie and the image of the woman scientist in the feature film. *Public Understanding of Science*, 6, 269¿278.

León, B., Moreno, C., Refojo, C., Revuelta, G., & Sanz, E. (Coords.). (2023). *Informando de ciencia con ciencia*. Fundación Lilly.

Moreno-Castro, C. (2009). *Comunicar los riesgos. Ciencia y tecnología en la sociedad de la información*. Biblioteca Nueva/OEI.

Moreno-Castro, C. (2011). *Periodismo y divulgación científica. Tendencias en el ámbito iberoamericano*. Biblioteca Nueva/OEI.

Moreno-Castro, C., & Gil Pérez, A. (2014). ¿Periodismo diletante o ciencia mediática? La metamorfosis del artículo científico en noticia de prensa. (*Falta la fuente completa para cerrar la cita según APA; si puedes aportarla, la completo.*)

Nelkin, D. (1990). *La ciencia en el escaparate*. Fundesco.

Ramentol, S. (2000). *Els silencis de la ciència*. Edicions 3 i 4.

Revuelta, G., León, B., López-Goñi, I., Pérez, M., & Sanz, E. (Eds.). (2025). *Comunicando ciencia con ciencia*. Fundación Lilly.

Complementary references

Bucchi, M., & Trench, B. (2025). *Science communication: The basics*. Taylor & Francis.