# COURSE DATA

## DATA SUBJECT

**Code:** 46476
**Name:** History of Scientific Communication
**Cycle:** Master's Degree / Doctorate
**ECTS Credits:** 6
**Academic year:** 2025-26

## STUDY (S)

| Degree | Center | Acad. year | Period |
|---|---|---|---|
| 2252 - Master's Degree in History of Science and Scientific Communication | Facultat de Medicina i Odontologia | 1 | First quarter |
| 3129 - PhD Social and Hist. Studies on Science, Med. | Escola de Doctorat | | First quarter |
| 3129 - PhD Social and Hist. Studies on Science, Med. | Escola de Doctorat | | First quarter |

## SUBJECT-MATTER

| Degree | Subject-matter | Character |
|---|---|---|
| 2252 - Master's Degree in History of Science and Scientific Communication | Historia de la comunicación científica | COMPULSORY |
| 3129 - PhD Social and Hist. Studies on Science, Med. | | |
| 3129 - PhD Social and Hist. Studies on Science, Med. | | |

## COORDINATION

SUAY MATALLANA IGNACIO

BERTOMEU SANCHEZ JOSE RAMON

# SUMMARY

This module provides a comprehensive introduction to the history communication in (and of) science, technology, and medicine. Its main purpose is to present current research on these subjects while challenging dominant narratives that have been discarded in academic circles but persist in mass media . The module aims to provide historical perspectives that enable critical thinking about scientific communication. It is relevant for students seeking professional careers in the field of scientific journalism, as well as those pursuing academic paths in the history of science or scientific communication studies.
The module adopts a chronological and thematic approach, exploring various spaces and media (such as books, museums, classrooms, magazines, and cinema) in order to offer broad insights into the subject matter, often utilizing specific examples. The topics covered serve as an introductory overview, laying the

groundwork for further study in subsequent courses. Alongside fundamental concepts, chronological references, and representative case studies, the module incorporates practical exercises to actively engage students in the use of the conceptual framework.

## PREVIOUS KNOWLEDGE

### RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE

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

### OTHER REQUIREMENTS

## COMPETENCES / LEARNING OUTCOMES

### 2252 - Master's Degree in History of Science and Scientific Communication

Aplicar métodos de análisis crítico para estudiar fuentes textuales, iconográficas y materiales relacionadas con la medicina, la ciencia y la tecnología.

Aplicar técnicas de búsqueda, identificación, selección y recogida de información especializada.

Conocer las características generales de la terminología médica y científica a través del estudio de su historia y su papel en la comunicación científica actual.

Conocer las diversas formas de popularización de la ciencia.

Conocer y analizar críticamente los procesos de circulación de saberes y prácticas científicas, así como sus principales protagonistas, escenarios, medios, mecanismos y consecuencias.

Conocer y analizar críticamente los procesos de divulgación de la ciencia considerando sus diversos protagonistas, contextos, medios, prácticas, finalidades y resultados.

Describir los procesos de producción y consumo del conocimiento científico, así como los mecanismos de comunicación social de la ciencia, con sus diversos medios, espacios y protagonistas.

Idear, planificar, organizar y redactar un trabajo de investigación.

Identificar e interpretar textos de carácter divulgativo, periodístico o ensayístico relacionados con la ciencia, la medicina y la tecnología.

Identificar las principales fuentes de información relacionadas con la comunicación científica, así como otras herramientas de recuperación de información (principales repertorios bibliográficos y bases de datos).

Identificar y analizar críticamente textos clásicos de la medicina y de la ciencia en sus diversas modalidades.

Identificar y analizar críticamente textos de divulgación de la ciencia en sus diversas modalidades.

Presentar en público un trabajo de investigación y debatir sus resultados con otros investigadores.

Students should apply acquired knowledge to solve problems in unfamiliar contexts within their field of study, including multidisciplinary scenarios.

Students should be able to integrate knowledge and address the complexity of making informed judgments based on incomplete or limited information, including reflections on the social and ethical responsibilities associated with the application of their knowledge and judgments.

Students should communicate conclusions and underlying knowledge clearly and unambiguously to both specialized and non-specialized audiences.

Students should demonstrate self-directed learning skills for continued academic growth.

## DESCRIPTION OF CONTENTS

### 0.

### 1. Introduction

Introduction: Science and its publics. General notions. Main studies on the history of science communication. Problems, protagonists, sources. Scientific communication and science communication. Popular knowledge and popularization of science. Cultural hegemony.

### 2. Books and journals

Books and journals. History of written culture and the history of science: from manuscript to printed documents. Genres of scientific literature. Journals, manuals, encyclopedias. Readership. Republic of Letters. Reading regimes.

### 3. Journals and newspapers

Journals and newspapers. Correspondence, memoirs and journals. First academic journals and science in the press. The scientific paper. 19th -century specialized journals. Censorship and peer review. Bibliographic directories and lists of journals. Scientific indicators. The science of science. Sciene in Newspapers: the birth of the newspapers and the public sphere in the 18th century: Science and medicine in the press during the 19th and 20th centuries. Main topics, protagonists, audiences.

## 4. Science in classrooms

Science classrooms, science in the classroom. Amphitheaters and universities. Public demonstrations in the 18th century: knowledge, utility and spectacle.
Public demonstrators. Science Faculties. The research seminars. The birth of secondary education. Debates on the role of science in the formation of citizenship. Science textbooks: authors, publishers, translators, booksellers, governments. The material and visual culture of the classroom: from experimental demonstrations to heuristic methods and the Nature Study movement.

## 5. Museums

Museums and material culture. From cabinets of curiosities to science museums and science centers. Visual and material cultures. Regimes of exhibition. Public and private collections. Universal exhibitions. Science and nation in science museums. Sites of memory. Science Centers: Hands-on and science without context. The return of the scientific heritage to the science museums.

## 6. Audiovisuals

Audiovisuals: Science and Technology in radio, cinema and television. Science and medicine in the origins of cinema. Fiction and reality in natural history documentaries. Medical documentaries and pharmaceutical advertising. Agricultural movies. Science and medicine in radio and television.

# WORKLOAD

### PRESENCIAL ACTIVITIES

| Activity | Hours |
|---|---|
| Theoretical and practical classes | 60,00 |
| **Total hours** | **60,00** |

### NON PRESENCIAL ACTIVITIES

| Activity | Hours |
|---|---|
| Attendance at other activities | 0,00 |
| Individual or group project | 0,00 |
| Independent study and work | 0,00 |
| Preparation of lessons | 0,00 |
| Preparation for assessment activities | 0,00 |
| Resolution of case studies | 0,00 |
| **Total hours** | **0,00** |

# TEACHING METHODOLOGY

We shall adopt a similar approach as the course Introduction to the History of Science, which is concurrently taught and has been conceived to be as a complementary course. There will be three categories of instructional activities:

1. Expository sessions: These sessions are intended to offering a lecture engaging students in different cognitive processes with the main aim of encouraging their active participation in the classroom. Each session will start by a theoretical presentation by the professors, lasting approximately one hour.

2. Cooperative learning: The objective is to foster active learning through collaborative strategies developped by the students, while encouraging values of shared responsibility towards achieving group objectives. Students will engage in collective work through a weekly online forum. The teacher will actively participate in organizing discussions to reach some final conclussion regarding the topics at stake

3. Individual work: Each student will be required to complete independent assignments based on the sources specified by the professors.

## EVALUATION

Students will be evaluated according to their participation in the sessions, their engagement in the debates in the forums, their comments in the blogs and the activities presented in the notebook elaborated during the course ( comments, discussions, written reports, etc.), always in accordance with the teachers' indications. This evaluation will be substantiated in:

1. Portfolio. This document has to be sent conveniently filled in with the obligatory and voluntary activities that will be commented during the classes with the indications of the professors and the bibliography recommended in each case [up to 70%].

2.- Participation in the forums and face-to-face online sessions [up to 30%]. This activity will not be recoverable to the extraordinary evaluation tests.

3.- Voluntary activities. These complementary activities are generally linked to the conferences and seminars organized at the López Piñero Institute and other similar centers. They are recommended by the teaching staff. Other issues could be also taken into account such as the work in social networks and all voluntary exercises suggested by the faculty throughout the course [may increase up to 15% of the grade].

Note: All work submitted for evaluation must be original and follow the guidelines indicated by the professors in terms of structure, content, length and sources of information to be used.

The usual procedures will be used to confirm the identity of the student and their authorship, applying, where appropriate, the corresponding regulations on plagiarism.

https://www.uv.es/plagio/pginas_web.html

https://sga.ua.es/es/normativa-academica/eees/evaluacion-de-los-aprendizajes/evaluacion-de-los-aprendizajes.html

https://estudios.umh.es/presentacion/normativas/evaluacion-y-progreso-y-permanencia-del-estudiantado-en-la-umh/

## REFERENCES


- Bertomeu Sánchez, JR (2023). Saberes en acció / Sabers en acció. Una nueva historia de la ciencia, la tecnología y la medicina: https://sabersenaccio.iec.cat/

- Knight, David. 2011. Public Understanding of Science: A History of Communicating Scientific Ideas. London: Routledge.

- Nieto Galán, Agustí. 2011. Los públicos de la ciencia. Expertos y profanos a través de la historia. Madrid: Marcial Pons (trad. inglesa 2016. London: Routledge).