

## Information and Communication Technologies

Code: 103852  
ECTS Credits: 6

**2025/2026**

Degree	Type	Year
Journalism	FB	2

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### Teaching groups languages

You can view this information at the [end](#) of this document.

### Prerequisites

A good level of English reading comprehension is required. Previous degree content is taken for granted.

### Objectives and Contextualisation

This subject is located within the Communication domain, taught in the first and second year of the degree. Therefore, it has 6 ECTS credits and implies a basic formation with other subjects as Història de la comunicació, Estructura de la comunicació, Teories de la comunicació and Audiovisual languages.

Therefore, the subject fits into the group of specific subjects related to communication. The objective is to provide the basic keys for the interpretation of technologies and their role in society. It is a deep and theoretical introduction to build up the bases of thinking to future subjects.

As defined in the Memory of the Degree, the objective of this subject is the study of the technologies associated with the development of the information and knowledge society from a social and historical perspective, paying special attention to innovation and the creation of socio-cultural environments. It is about reflecting on the role of technology in society and the communication industry, as well as its role in contemporary society. Special attention is paid to the adoption of technology in the communication sector and the professional transformations it can generate.

Specifically, the objectives of the subject are the following:

Identify the role of social actors and their ideologies in the configuration and evolution of information and communication technologies. Know the role of journalism in the dissemination and adoption of information and communication technologies.

Know the role of technologies in the processes of social and professional change.

Critically reflect on the technological discourse and the application of information and communication technologies to journalistic and media work.

## Competences

- Act with ethical responsibility and respect for fundamental rights and duties, diversity and democratic values.
- Demonstrate a critical and self-critical capacity.
- Demonstrate a self-learning and self-demanding capacity to ensure an efficient job.
- Differentiate the discipline's main theories, its fields, conceptual developments, theoretical frameworks and approaches that underpin knowledge of the subject and its different areas and sub-areas, and acquire systematic knowledge of the media's structure.
- Disseminate the area's knowledge and innovations.
- Research, select and arrange in hierarchical order any kind of source and useful document to develop communication products.
- Students can apply the knowledge to their own work or vocation in a professional manner and have the powers generally demonstrated by preparing and defending arguments and solving problems within their area of study.
- Students must be capable of communicating information, ideas, problems and solutions to both specialised and non-specialised audiences.
- Students must develop the necessary learning skills in order to undertake further training with a high degree of autonomy.
- Students must have and understand knowledge of an area of study built on the basis of general secondary education, and while it relies on some advanced textbooks it also includes some aspects coming from the forefront of its field of study.
- Take account of social, economic and environmental impacts when operating within one's own area of knowledge.
- Take sex- or gender-based inequalities into consideration when operating within one's own area of knowledge.
- Value diversity and multiculturalism as a foundation for teamwork.

## Learning Outcomes

1. Communicate using language that is not sexist or discriminatory.
2. Critically analyse the principles, values and procedures that govern the exercise of the profession.
3. Demonstrate a critical and self-critical capacity.
4. Demonstrate a self-learning and self-demanding capacity to ensure an efficient job.
5. Differentiate the specificities of audiovisual languages.
6. Disseminate the area's knowledge and innovations.
7. Identify the social, economic and environmental implications of academic and professional activities within one's own area of knowledge.
8. Link social analysis and impacts of new communication technologies.
9. Propose projects and actions that are in accordance with the principles of ethical responsibility and respect for fundamental rights and obligations, diversity and democratic values.
10. Research, select and arrange in hierarchical order any kind of source and useful document to develop communication products.

11. Students can apply the knowledge to their own work or vocation in a professional manner and have the powers generally demonstrated by preparing and defending arguments and solving problems within their area of study.
12. Students must be capable of communicating information, ideas, problems and solutions to both specialised and non-specialised audiences.
13. Students must develop the necessary learning skills in order to undertake further training with a high degree of autonomy.
14. Students must have and understand knowledge of an area of study built on the basis of general secondary education, and while it relies on some advanced textbooks it also includes some aspects coming from the forefront of its field of study.
15. Value diversity and multiculturalism as a foundation for teamwork.
16. Weigh up the impact of any long- or short-term difficulty, harm or discrimination that could be caused to certain persons or groups by the actions or projects.

## Content

### 1. Conceptual introduction to ICT

What do we understand by Information and Communication Technologies? Data / Information / Knowledge.

### 2. The technological discourse

Approach to the main currents that have studied technology from various points of view, with special attention to the determinist and constructivist discourse.

### 3. Technologies' life cycle

Analysis of the life cycle of technologies to better understand their evolution and possible disappearance. Idea of planned obsolescence.

### 4. Innovation diffusion

Approach to innovation and its dissemination, with special attention to the proposal of Everett M. Rogers.

### 5. Digitization

Description and analysis of the digitization process of the media and cultural industries and its professional, industrial and social implications.

### 6. Digital divides

Critical analysis of the concept of digitization based on the inclusion/exclusion dynamics that any technology generates.

### 7. Artificial Intelligence

Description of the technologies available under this name and critical and historical analysis of their social implementation, especially in the communication industry

## Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
Type: Directed			

Lectures	37.5	1.5
Seminars	15	0.6
Type: Supervised		
Tutorials	7.5	0.3
Type: Autonomous		
Readings, analysis, preparation and writing of the group dissertation	82.5	3.3

The acquisition of knowledge and skills by the students will be carried out through various methodological procedures that include lectures and seminars. There will be readings, listenings, and viewings of material, which will be discussed collectively. Classroom exercises will also be carried out, both individually and in groups.

The bulk of the course will be dedicated to designing and producing a journalistic podcast that addresses a controversy about information and communication technologies; in which students will have to apply the knowledge acquired in the subject.

In the continuous assessment modality, it is done in groups. For students in continuous assessment, the podcast will be done individually. The methodology on which this course work design is based is authentic learning. The course work of this subject is materialized in a journalistic format to promote the praxis of the students' future profession. This proposal is part of a teaching innovation project funded by the UAB shared with other theoretical subjects of the faculty: Structure of Communication (first year) and History of Journalism (third year). The optional subject Multiplatform Journalistic Production (UABmèdia) (third and fourth year) also participates.

The content of the subject will be sensitive to aspects related to gender perspective and the use of inclusive language.

The detailed calendar with the content of the different sessions will be presented on the day of the subject's introduction. It will also be posted on the Virtual Campus where students can find a detailed description of the exercises and practices, the various teaching materials, and any necessary information for the proper follow-up of the subject. In case of a change in teaching modality due to force majeure according to the competent authorities, the teaching staff will inform of the changes that will occur in the subject's programming and teaching methodologies.

Fifteen minutes of a class will be reserved, within the calendar established by the center/degree, for the completion by the students of the surveys evaluating the performance of the teaching staff and the evaluation of the subject/module.

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

## Assessment

### Continuous Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
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Dissertation	40%	2.5	0.1	2, 10, 1, 3, 6, 7, 9, 14, 13, 12, 11, 8, 15, 16
Seminars	30%	3.5	0.14	2, 10, 1, 4, 3, 5, 6, 7, 14, 13, 12, 11, 8, 15
Theoretical Exam	30%	1.5	0.06	4, 3, 7, 14, 13, 8

Information and Communication Technologies is part of the group of subjects that have two evaluation systems: continuous and single-assessment.

#### Continuous Evaluation:

Continuous evaluation consists of three distinct parts, each of which must be passed with a minimum grade of 5 to pass the subject:

- Project (40%)
- Theoretical Exam (30%)
- Seminars (30%)

The project is a group activity that involves the production and creation of a journalistic podcast addressing a controversial topic about technology based on the content taught in theoretical classes. Students must demonstrate the ability to critically read contemporary technological discourse, relating the subject's theory to specific cases. At the beginning of the course, a protocol detailing how to proceed will be posted.

The seminars will be used to produce the podcast and work on aspects related to the informative coverage of technology. The seminars will have protocols, which will be published at the beginning of the course, along with the schedule for each session. They will combine both classroom work and the presentation of work done outside class hours. Absences will affect the grade depending on the characteristics of each seminar. Missing a graded seminar will result in a zero. To pass the seminars, students must have attended at least 2/3 of the scheduled sessions.

The theoretical exam will include what has been seen and done in theoretical class sessions, seminars, and mandatory readings that must be done throughout the course. The characteristics of the exam will be detailed at the beginning of the course.

#### Single-assessment Evaluation:

Single evaluation consists of three distinct parts, each of which must be passed with a minimum grade of 5 to pass the subject:

- Project (40%)
- Theoretical Exam (30%)
- Synthesis Exercise (30%)

The project is the individual production and creation of a journalistic podcast with the same formal characteristics as the continuous evaluation but of shorter duration and less complexity.

The theoretical exam will include what has been seen and done in theoretical class sessions, seminars, and mandatory readings that must be done throughout the course.

The synthesis exercise is a face-to-face test in which students must relate the theory seen in class to one or more current news items provided by the professor on the day of the exam. Students who choose the single evaluation may attend seminars as listeners if they wish. More details about this test will be given on the Virtual Campus.

#### Regarding the recovery period and conditions:

Students will have the right to recover the exam and the project or both parts as long as they have been evaluated for the set of activities whose weight is equivalent to a minimum of 2/3 of the total grade of the subject.

To be eligible for the recovery of the project and/or the exam, a minimum average grade of 3.5 must have been obtained in the subject.

Activities excluded from the recovery process are the continuous evaluation seminars.

On plagiarism:

Any student who commits any irregularity (copying, plagiarism, identity theft, etc.) that may lead to a significant variation in the grade of an evaluation act will be graded with 0 for that evaluation act. If multiple irregularities occur, the final grade for the subject will be 0. This also applies to the fraudulent use of generative artificial intelligence applications.

On Artificial Intelligence:

In general, the use of Artificial Intelligence (AI) technologies is allowed as part of the development of the project, as long as the final result reflects a significant contribution from the student in analysis and personal reflection. Students must clearly identify which parts have been generated with this technology, specify the tools used, and include a critical reflection on how these have influenced the process and the final result of the activity. Lack of transparency in the use of AI will be considered academic dishonesty and may result in a penalty in the activity grade or more severe sanctions in serious cases.

In some specific exercises, the use of AI will be prohibited, at least in some phases of task completion. In these cases, it will be stated in the corresponding protocol.

## Bibliography

- Abar, Eduard (2023). *El culto a la innovación: Estragos de una visión sesgada de la tecnología*. Barcelona: Ned ediciones.
- Anderson, Philip i Tushman, Michael (1990) "Technological Discontinuities and Dominant Designs: A Cyclical Model of Technological Change", *Administrative Science Quarterly*, 35(4): 604-633.
- Balbi, Gabriele i Paolo Maggaura (2018). *A history of digital media*. Londres: Routledge.
- Bonini, Tiziano i Treré, Emiliano (2024). *Algorithms of resistance: The everyday fight against platform power*. Cambridge: MIT Press.
- Bijker, Wiebe E., Hughes, Thomas P. i Pinch, Trevor J. (eds.) (1989) *The Social construction of technological systems: new directions in the sociology and history of technology*. Cambridge (EUA): MIT Press.
- Bonet, Montse (2016). *El imperio del aire: espectro radioeléctrico y radiodifusión*. Barcelona: Editorial UOC.
- Bonini, Tiziano i Emiliano Treré (2024). *Algorithms of resistance; the everyday fight againsts platform power*. Cambridge: MIT Press.
- Bolder, Margaret A. (2022). *Inteligencia Artificial*. Madrid: Turner Publicaciones.
- Boulamwini, Joy (2023). *Unmasking AI: my mission to protect what is human in a world of machines*. Nova York: Random House
- Buckland, Michael Keeble (2017). *Information and Society*. Cambridge: MIT Press.
- Carey, John i Martin C.J. Elton (2010) *When Media are New: Understanding the Dynamics of New Media Adoption and Use*. Ann Arbor: University of Michigan Press.
- Christensen, Clayton M. (2016). *The innovator's dilemma: when new technologies cause great firms to fail*, Boston, Massachusetts: Harvard Business Review Press.
- Coeckelbergh, Mark (2024). *Why AI undermines democracy and what to do about it*. Cambridge: Polity Press.
- Dencik, Lina et al. (2024). *Justicia de datos. consecuencias sociales de los macrodatos, la tecnología inteligente y la IA*. Barcelona: Editorial UOC.
- Diéguez, Antonio (2024). *Pensar la tecnología. Una guía para comprender filosóficamente el desarrollo tecnológico actual*. Barcelona: Shacklethom Books.

- Fernandez, Luke i Matt, Susan (2020). *Bored, lonely, angry, stupid: Changing feelings about technology, from the telegraph to Twitter*. Harvard University Press.
- Gasser, Urs i Viktor Mayer-Schönberger (2024). *Guardrails: guiding human decisions in the age of AI*. Princeton: Princeton University Press.
- Grimonport, Arthur (2023). Algoritmocràcia: viure en llibertat en temps d'algoritmes. Girona: Llibres del segle.
- Guersenzvag, Ariel (2021). *The goods of design*. Lanham: Rowman & Littlefield Publishers.
- Krawford, Kate (2023). *Atlas de IA*. Barcelona: Nuevos Emprendimientos Editoriales.
- Harris, Malcom (2022). *Palo Alto; a history of California, capitalism and the world*. London: Riverrun.
- Lee, Kai Fu (2018). *AI Superpowers: China, Silicon Valley, and the New World Order*. Boston: Houghton MifflinHarcourt.
- Lax, Stephen (2009). *Media and Communication Technologies. A Critical Introduction*, Basingstoke: Palgrave Macmillan.
- Lehman-Wilzig, Sam i Cohen-Avigdor, Nava (2004). "The natural life cycle of new media evolution: Inter-media struggle for survival in the internet age", *New Media & Society*, 6(6): 707-730.
- Lievrouw, Leah A. i Livingstone, Sonia (eds.) (2002). *Handbook of new media: social shaping and consequences of ICTs*. London: Sage.
- López de Mántaras, Ramon i Meseguer, Pedro (2017). *Inteligencia artificial*. Madrid: Libros de la Catarata.
- López de Mántaras i Badia, Ramon (2023). *100 coses que has de saber sobre intel·ligència artificial*. Valls: Cossetània
- Marçal, Katrine (2022). *La madre del ingenio. Cómo se ignoran buenas ideas en una economía diseñada para hombres*. Barcelona: Principal del libros.
- McLuhan, Marshall (1996). *Comprender los medios de comunicación. Las extensiones del ser humano*. Barcelona: Paidós (original de 1964).
- Merchant, Brian (2017). *The one device*. Londres: Transworld Publishers.
- Merchant, Brian (2023). *Blood in the Machine*. Boston: Little, Brown and company.
- Miller, Chris (2023). *La guerra de los chips: la gran lucha por el dominio mundial*. Barcelona: Península
- Morozov, Evgeny (2014). *To save everything, click here: the folly of technological solutionism*, New York: PublicAffairs.
- Morozov, Evgeny (2024). *The Santiago boys*. <<https://the-santiago-boys.com/>> [Podcast]
- Morozov, Evgeny (2024). *A sense of rebellion*. <<https://www.sense-of-rebellion.com/>> [Podcast]
- Mueller, Milton (2017). *Will the Internet fragment?: sovereignty, globalization and cyberspace*. Cambridge, Polity Press.
- Noble, David F. (2011). *Forces of production*. London: Routledge.
- Narayanan, Arvind i Kapoor, Sayash. (2024). *AI snake oil: What artificial intelligence can do, what it can't, and how to tell the difference*. In *AI Snake Oil*. Princeton University Press.
- Nyholm, Sven (2023). *This is technology ethics: an introduction*. Londres. Wiley-Blackwell.
- Pasquale, Frank (2015). *The black box society. The secret algorithms that control money and information*. Cambridge: Harvard University Press.
- Quintanilla, Miguel Angel; Parselis, Martin; Sandrone, Darío y Lawler, Diego (2021). *Tecnologías entrañables: ¿es posible un modelo alternativo de desarrollo tecnológico?*. Madrid: Los Libros de la Catarata.
- Raynaud, Dominique (2018). *¿Qué es la tecnología?* Pamplona: Laetotí.
- Ruiz de Querol, Ricard (2022). *No es inevitable. Un alegato para futuros digitales alternativos*. Barcelona: Alternativas Económicas.
- Rogers, Everett M. (2003) *Diffusion of Innovations*, 5a ed. New York: Free Press.
- Schaake, Marietje (2024). *The Tech Coup: How to Save Democracy from Silicon Valley*. In *The Tech Coup*. Princeton University Press.
- Selwyn, Neil (2025). *Digital degrowth: Radically rethinking our digital futures*. Cambridge: Polity.
- Schmidt, Eric i Cohen, Jared (2014). *El Futuro digital*. Madrid: Anaya Multimedia.
- Tarnoff, Ben (2025). *Internet para la gente: La lucha por nuestro futuro digital*. Madrid: Debate.
- Thomas, Alexander (2024). *The politics and ethics of transhumanism*. Bristol: Bristol University Press.
- Vea, Andreu (2013). *Cómo creamos internet*. Barcelona: Península.
- Wu, Tim (2011). *The Master switch: the rise and fall of information empires*, New York, N.Y.: Vintage Books.

## Software

Audacity is required.

## Groups and Languages

Please note that this information is provisional until 30 November 2025. You can check it through this [link](#). To consult the language you will need to enter the CODE of the subject.

Name	Group	Language	Semester	Turn
(SEM) Seminars	11	Catalan	first semester	morning-mixed
(SEM) Seminars	12	Catalan	first semester	morning-mixed
(SEM) Seminars	13	Catalan	first semester	morning-mixed
(SEM) Seminars	21	Catalan	first semester	morning-mixed
(SEM) Seminars	22	Catalan	first semester	morning-mixed
(SEM) Seminars	23	Catalan	first semester	morning-mixed
(TE) Theory	1	Catalan	first semester	morning-mixed
(TE) Theory	2	Catalan	first semester	morning-mixed