

Degree	Type	Year
Science, Technology and Humanities	OB	2

## Contact

Name: Francesc Xavier Roque Rodriguez

Email: xavier.roque@uab.cat

## Teachers

(External) Alberto Murcia Carbonell

## Teaching groups languages

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

## Prerequisites

There are none.

## Objectives and Contextualisation

To know the differences and influences between technological change and cultural change.

To become familiar with the major technological transitions.

To become familiar with the concepts of material culture.

## Competences

- Identify the various philosophical, ethical and sociological conceptions of science and technology and recognise their evolution throughout history.
- Make critical use of digital tools and interpret specific documentary sources.
- Recognise the political, social and cultural dimension of science and technology development in the different historical periods.
- Students must be capable of collecting and interpreting relevant data (usually within their area of study) in order to make statements that reflect social, scientific or ethical relevant issues.
- Students must be capable of communicating information, ideas, problems and solutions to both specialised and non-specialised audiences.
- Work collaboratively in teams.

## Learning Outcomes

1. Assess the reliability of sources, select important data and cross-check information.
2. Describe the concept of material culture and the relationship it has with technological development.
3. Develop teamworking skills, blend in and actively collaborate in achieving common goals.
4. Discern and discuss the theses of technological determinism and interaction between technology and culture.
5. Present and interpret results from searches in bibliography and other important sources.
6. Present your own scientific results to both professionals and the general public.
7. Understand the most important relationships of dependency created between technology, science and culture.
8. Understand the technological basis for the great cultural periods with regard to the possibilities for controlling matter, energy and information.

## Content

### Week 1

Conceptions of culture: biological and anthropological

Conceptions of culture: critical

### Week 2

Technique as material culture

Artefacts: design

### Week 3

Artefacts: senses

Experience and affordances

### Week 4

The shaping of experience

Practice and evaluation

### Week 5

Landscapes: the technique of the gaze

Audiotopies

### Week 6

Aromas and flavours of modernity

Touch and technique

### Week 7

Practice and evaluation

Metaphysical conception of technology

### Week 8

Critical conception of technology

Dialectical conception of technology

### Week 9

Technology and culture: historicity

Paradigms and revolutions in technology and culture

### Week 10

Practice and evaluation

Matter and design

Week 11  
Paradigms and revolutions in energy  
Work and energy  
Time and work

Week 12  
Informational transitions  
Writing cultures

Week 13  
Immaterial representations  
Digital revolution

Week 14  
Practice and evaluation  
Fourth industrial revolution

## Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Learning exercises	16	0.64	2, 3, 8, 5, 6, 1
Lectures	33	1.32	7, 2, 4, 8
Type: Supervised			
Essay supervision	4.25	0.17	3, 5, 6, 1
Type: Autonomous			
Essay writing and personal study	92.75	3.71	7, 2, 4, 8, 5, 6, 1

Lectures.  
Cooperative learning.  
Text discussion.  
Classroom practices.  
Essay writing.  
Seminars.

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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Essays and presentations	25%	0	0	7, 2, 3, 4, 8, 5, 6, 1
In-class tests	25%	0	0	7, 2, 4, 8, 6
Partial exam 1	25%	2	0.08	7, 2, 4, 8
Partial exam 2	25%	2	0.08	7, 2, 4, 8

Entrega de ensayos y exposiciones en clase 25%.

Examen parcial 1 25%, 2 horas.

Examen parcial 2 25%, 2 horas.

Pruebas de duración breve en horario de clase 25%.

In the event of a student committing any irregularity that may lead to a significant variation in the grade awarded to an assessment activity, the student will be given a zero for this activity, regardless of any disciplinary process that may take place. In the event of several irregularities in assessment activities of the same subject, the student will be given a zero as the final grade for this subject.

#### Single assessment

Students who opt for the single assessment system will have to submit an essay (50%) and take an exam (50%), on the indicated date.

This subject allows the use of AI technologies exclusively for support tasks such as [bibliographic or content-based searches, text correction or translations, where applicable]. Other specific situations may be contemplated, as deemed appropriate by the teacher. The student must clearly (i) identify which parts have been generated using AI technology; (ii) specify the tools used; and (iii) include a critical reflection on how these have influenced the process and final outcome of the activity. Lack of transparency regarding the use of AI in the assessed activity will be considered academic dishonesty; the corresponding grade may be lowered, or the work may even be awarded a zero. In cases of greater infringement, more serious action may be taken.

## Bibliography

### Essential readings

Fernando Broncano. *La escala de las cosas*. Delirio, 2023.

George Basalla. *La evolución de la tecnología*. Madrid: Alianza Editorial, 1988.

Hans Blumenberg. *Historia del espíritu de la técnica*. Valencia: Pre-Textos, 2013.

Jacques Le Goff. *Por otra Edad Media: tiempo, trabajo y cultura*. Madrid: Taurus, 2020.

Javier de Lorenzo. *Un mundo de artefactos*. Madrid: Trotta, 2020.

Lewis Mumford. *Técnica y Civilización*. Logroño: Pepitas de Calabaza, 1934.

Lewis Mumford. *El pentágono del poder*. Logroño: Pepitas de calabaza, 1964.

Lewis Mumford. *Arte y técnica*. Logroño: Pepitas de calabaza, 1952.

### Additional readings

David Edgerton. *The Shock of the Old*. Profile Books, 2008. Hay trad. cast.: *Innovación y tradición. Historia de la tecnología moderna* (Barcelona: Crítica, 2007).

George Basalla. *The Evolution of Technology*. Cambridge: Cambridge University Press, 1989.

Ian McNeill. *An Encyclopedia of the History of Technology*. London: Routledge, 1990.

Jared Diamond. *Armas, gérmenes y acero*. Barcelona: DeBolsillo, 2016.

### Digital resources

Technology and culture: <http://https://www.press.jhu.edu/journals/technology-and-culture>

## Software

No specific software 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
(PAUL) Classroom practices	20	Spanish	first semester	morning-mixed
(TE) Theory	20	Spanish	first semester	morning-mixed