

**Culture and Technology**

Code: 106230  
ECTS Credits: 6

Degree	Type	Year	Semester
2504235 Science, Technology and Humanities	OB	2	1

**Contact**

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**Use of Languages**

Principal working language: spanish (spa)  
Some groups entirely in English: No  
Some groups entirely in Catalan: No  
Some groups entirely in Spanish: No

**External teachers**

Fernando Broncano Rodríguez

**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

Part I. Theoretical aspects of technology as a cultural form

Cultural evolution and technical evolution

Dimensions of the technical control of reality: matter, energy and information

Technological revolutions and paradigms and economic and social transitions

The controversy over technological determinism in history

Part II. The great transitions in the relationship between technology and culture

Technical culture and homo sapiens: from lithic cultures to the neolithic revolution

Writing as information technology

The material culture of modernity

Steam and electricity: energy technologies and romantic culture

Modernism and the Second Industrial Revolution

The miniaturization of artifacts and the technologies of domestic and everyday life

Information technologies and the digitization of the world

The fourth industrial revolution

## Methodology

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.

## Activities

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	94.75	3.79	7, 2, 4, 8, 5, 6, 1

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## Assessment

Exam.  
Partial essays about seminars.  
Participation in seminars.  
Final essay.

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.

## Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Exam	50%	2	0.08	7, 2, 4, 8
Final essay	25%	0	0	7, 2, 3, 4, 8, 5, 6, 1
Partial essays about seminars	10%	0	0	6, 1
Participation in seminars	5%	0	0	3, 6

## Bibliography

### Essential readings

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.