

Degree	Type	Year
2504235 Science, Technology and Humanities	FB	1

Contact

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Teachers

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Teaching groups languages

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

Prerequisites

There are none.

Objectives and Contextualisation

The goal of this subject is to be an introduction to the main debates in the philosophy of science and technology.

The first section revolves around five major debates that define a great part of the theoretical discussions in philosophy of science today. These are also five debates that characterize the evolution of this discipline since its beginnings in the twentieth century, when it separated from epistemology.

The goal of the second section is to provide tools in order to think critically about technology, and to put them in practice through the situated analysis of specific artefacts and technological systems. How to think philosophically about the material constitution of the worlds we inhabit? How does technology embody social relations, ideas and values? How does it materialize power relations and shapes forms of life?

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.

- Produce written papers and give effective oral presentations, adopting the appropriate register in different languages.
- 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 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.

Learning Outcomes

1. Construct philosophical arguments with rigour.
2. Correctly, accurately and clearly communicating the acquired philosophical knowledge in oral and written form.
3. Express ideas in specific vocabulary appropriate to the discipline.
4. Present the concepts specific to ethics apply and apply them to the problems of science and technology.
5. Present the concepts specific to the philosophy of science.
6. Present the concepts specific to the philosophy of technology.
7. Produce organised, correct discourse, oral and written, in the corresponding language.
8. Search for, select and manage information independently, both from structured sources (databases, bibliographies, specialist journals) and from the web.
9. Use digital tools to collect, classify, analyse and interpret significant data related to philosophy studies.

Content

SECTION A

A.1. Is the goal of science to describe reality?

What role should the philosophy of science play in scientific activity? What are the implications of conceiving science as a human activity? What is the relationship between theory and experimentation in scientific activity? What is the relationship between predictive and manipulative success and truth? Does science represent or transform reality? Can we consider scientific laws to be true in a strict sense? Should scientists dispense with the notion of causality?

A.2. Is there progress in science?

We contrast Popper's proposal that science progresses and brings us ever closer to a definitive truth with Kuhn's view from the history of science, in whose model of scientific revolution it does not make sense to establish progress in science, but simply a change of paradigms.

A.3. Does science have ideology?

Is science a dispassionate search for truth or, on the contrary, is it just another social product that includes a whole series of ideological principles that indicate what makes sense to investigate and what does not? Is scientism, the idea that the only reliable knowledge is scientific knowledge, a scientific proposition or an ideology? Is our experience of the world totally loaded with theoretical presuppositions? Can science be analyzed without paying attention to its history? Are the different theories and worldviews commensurable? What motivates scientists?

A.4. How do we interact in science and technology? And how do these interact with the humanities?

Would the scientific theory be developed first and, once contrasted, would various devices be created based on that scientific theory? But we can find the opposite. Science and technology offer new perspectives to the humanities. But can the humanities offer new perspectives to science and technology? What can science and art offer if they work together?

SECTION B

B.1. The question concerning technology: Fundamental debates in philosophy of technology

An introduction to some of the main debates about technology from the point of view of the philosophical tradition.

B.2. Design: The social shaping of technology

Departing from the debates about technological determinism and the autonomy of technology, we ask whether (and in what sense) technology is a social construction, as it is argued by the SCOT program in constructivist sociology of technology.

B.3. Interactions: The technological shaping of society

Departing from the debates about the degree of agency of technological objects and systems, we introduce the actor-network theory approach and reflect about notions such as "technical delegation" and "technical mediation".

B.4. Technopolitics: Materiality, power and forms of life

Departing from the debates about progress and the neutrality of technology we ask whether (and how) artifacts have politics.

Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Practical work at class	16	0.64	2, 1, 7, 4, 5, 6, 3, 9
Theoretical classes	33	1.32	1, 4, 6, 3
Type: Supervised			
Office hours and supervision of essays	4.25	0.17	1, 7, 3
Type: Autonomous			
Autonomous study	86.75	3.47	8, 2, 1, 7, 4, 6, 3, 9

This subject combines theoretical classes with discussion in class. The first section will deal thematically with key current debates in the philosophy of science, that will also serve to make an overview of the main approaches within the discipline throughout the twentieth century. The second section will deal with one or several philosophical, historical or sociological perspectives about technology, that will always be discussed in relation to specific and situated tools, artefacts or technical systems. Further bibliographical references for each of the topics will be published in the campus virtual.

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
Partial Exam Section A	20%	1.5	0.06	2, 1, 7, 4, 5, 3
Partial Exam Section B	20%	1.5	0.06	2, 1, 7, 4, 6, 3
Written Essay Section A	30%	3.5	0.14	8, 2, 1, 7, 4, 5, 3, 9
Written Essay Section B	30%	3.5	0.14	8, 2, 1, 7, 4, 6, 3, 9

This course can be assessed through two modalities, continuous assessment and single assessment.

CONTINUOUS ASSESSMENT

The continuous assessment will consist in:

A) Two partial exams (20% + 20%), one for each section. The format will be announced in due time.

B) Two written assignments (30% + 30%), one for each section. The format will be announced in due time.

All assessment activities will have the opportunity to be revised. On carrying out each evaluation activity, lecturers will inform students (on Moodle) of the procedures to be followed for reviewing all grades awarded, and the date on which such a review will take place.

To pass the subject through continuous assessment, an average minimum of 5 is required.

The student will be given the grade of "non-assessable" if less than 30% of the assessment activities are submitted.

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, and it will not be able to reassess it. 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.

For their admission to reassessment, students must have been previously assessed from a set of activities that are equivalent to a minimum of 2/3 parts of the whole qualification. The minimum average grade of the assessed activities cannot be inferior to 3 nor higher than 5.

Re-assessment will consist in submitting again the assessment activities in which the student failed. The format will be announced with enough anticipation.

Any change related to assessment, methodology, etc., will appear at the Virtual Campus in due course.

SINGLE ASSESSMENT

The single assessment modality consists in:

A) A final exam (70%).

B) Two written exercises (15% + 15%), one for each section of the course, that will be submitted the day of the final exam. The format will be announced in due course.

All assessment activities will have the opportunity to be revised. To pass the subject through final assessment, an average minimum of 5 is required.

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.

For their admission to reassessment, the minimum average grade of the assessed activities cannot be inferior to 3 nor higher than 5. The reassessment will consist in the repetition of the assessed activities in the same format.

Any change related to assessment, methodology, etc., will appear at the Virtual Campus in due course.

Bibliography

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Software

No specific software is required.

Language list

Name	Group	Language	Semester	Turn
(PAUL) Classroom practices	1	Spanish	second semester	morning-mixed
(TE) Theory	1	Spanish	second semester	morning-mixed