History of Science

Code: 100305
ECTS Credits: 6

2024/2025

Degree	Type	Year
2500246 Philosophy	FB	1
2502758 Humanities	FB	1

Contact

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Teachers

Jaume Valentines Álvarez

Teaching groups languages

You can view this information at the end of this document.

Prerequisites

There are none.

Objectives and Contextualisation

The subject encourages Philosophy or Humanities undergraduates to develop their own vision of the history of science from Antiquity to the present, based on the problems and methods of the social sciences and the humanities.

The subject examines key issues of the evolution of science, trying to critically connect the different areas of knowledge. We consider science as a social and cultural practice, intimately related to politics, gender, health, technology, and the environment, and linked to the materiality of objects and spaces.

In the 1st part of the course we will approach the origins of science in Antiquity and its development up to the Enlightenment, in order to understand the transformations within natural philosophy and the use of instruments and experiments in the modern period.

In the 2nd part we will analyse the social and cultural relations of science and technology in the last two centuries. In this case, students should be able to understand contemporary technosciences as a global phenomenon.

The subject also aims at improving students' oral and written skills.

Competences

Philosophy

- Students must be capable of applying their knowledge to their work or vocation in a professional way and they should have building arguments and problem resolution skills within their area of study.
- 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.
- Students must develop the necessary learning skills 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.

Humanities

- Respecting the diversity and plurality of ideas, people and situations.
- Students must be capable of applying their knowledge to their work or vocation in a professional way and they should have building arguments and problem resolution skills within their area of study.
- 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.
- 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. Accessing electronic information sources and producing and communicating this information in electronic format.
2. Accurately using specific lexicon of science history.
3. Accurately using the specific lexicon of science history.
4. Analysing a contemporary fact and relating it to its historical background.
5. Analysing historical cases about scientific facts.
6. Carrying out a planning for the development of a subject-related work.
7. Critically analysing the past, the nature of the historical speech and the social function of historical science.
8. Critically taking part in classroom oral debates and using the discipline's specific vocabulary.
9. Engaging in debates about historical facts respecting the other participants' opinions.
10. Enumerating historical facts that could have affected the scientific development.
11. Explaining aspects of the history of science by using the discipline's specific terminology.
12. Explaining the specific notions of the Contemporary History.
13. Explaining the specific notions of the History of Science.
14. Explaining the specific notions of the Modern History.
15. Identifying and analysing the specific vocabulary of every analysed social formations.
16. Identifying and interpreting the several historical periods from Prehistory to the Late Modern Period.
17. Identifying the characteristic methods of the history of philosophy and using them in the analysis of concrete facts.
18. Identifying the context of the historical processes.
19. Identifying the main ideas of a related text and drawing a diagram.
20. Identifying the relationships between science, philosophy, art, religion, and politics that derive from the sociocultural context.
21. Identifying the specific methods of history and their relationship with the analysis of particular facts.
22. Indicating political, artistic, literary, social and other movements that had an impact in an historic event.

23. Interpreting the plurality and heterogeneity of the cultural development of Humanity.
24. Properly using the specific vocabulary of History.
25. Recognising the bases of the most appropriate bibliographic databases in order to obtain sources of a specific issue.
26. Relating elements and factors involved in the development of historical processes.
27. Relating elements and factors involved in the development of scientific processes.

Content

1st part

Origins: Scientific Cultures in the Ancient Mediterranean World

Medieval Science: Interactions, Universities and Theology

Scientific Revolutions? Machines, Universes, Experiments and Mathematics

2nd part

Enlightened Science: Electricity, Systems and Public Sphere in the Eighteenth Century

Science and Society in the Nineteenth Century: Industry, Empire and Evolution

Science in the Twentieth Century: Technoscience and Power

Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Lectures	50	2	
Type: Supervised			
Discussion and preparation of essays	20	0.8	
Type: Autonomous			
Estudio, lectura y redacción de trabajos	70	2.8	

For each topic there are some reference texts, which the student must use to prepare for discussion in the classroom, as a complement of the lecturer's presentation. Texts will be available in advance in the Virtual Campus, along with some guiding questions, power point presentations of each session, web links and additional readings.

The professor will devote 15 minutes in one of the sessions so that the students can answer the evaluation poll.

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

Continous Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Exam 1st part	30 %	2.5	0.1	7, 10, 11, 13, 14, 18, 16, 22, 23, 27, 26, 24, 3, 2, 20
Exam 2nd part	30 %	2.5	0.1	7, 10, 11, 12, 13, 18, 17, 21, 15, 16, 22, 23, 27, 26, 24, 3, 2, 20
Exercises 1st part	20 %	2.5	0.1	1, 5, 7, 10, 6, 11, 13, 14, 18, 17, 15, 16, 19, 22, 23, 9, 8, 25, 27, 26, 24, 3, 20
Exercises 2nd part	20 %	2.5	0.1	1, 5, 7, 4, 10, 6, 11, 12, 13, 18, 17, 21, 15, 16, 19, 22, 23, 9, 8, 25, 27, 26, 24, 3, 2, 20

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

CONTINUOUS ASSESSMENT

The continuous assessment will consist in:

1st part

30% from a partial exam, which will consist of questions, similar to those proposed in the Virtual Campus or those that we have raised and debated in the classroom.

20% from 2 written or oral exercises, the format and percentage of which will be annnounced in due course.

2nd part

30% from a partial exam, which will consist of questions, similar to those proposed in the virtual Campus or those that we have raised and debated in the classroom.

20% from 2 written or oral exercises, the format and percentage of which will be annnounced in due course.

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, a 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. 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.

The assessment activities in which irregularities have been committed cannot be reassessed.

Reassessment will consist in repeating the failed partial exams and submitting again the exercices 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) A written exercise (30%) 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

None.

Language list

Name	Group	Language	Semester	Turn
(PAUL) Classroom practices	1	Catalan	second semester	morning-mixed
(PAUL) Classroom practices	2	Catalan	second semester	morning-mixed
(TE) Theory	1	Catalan	second semester	morning-mixed
(TE) Theory	2	Catalan	second semester	morning-mixed