# UAB Universitat Autònoma de Barcelona

# Science and Technology in the Modern Age

Code: 103985 ECTS Credits: 6

### 2024/2025

2500241 Archaeology OT 3   2500241 Archaeology OT 4   2500501 History OT 4	Degree	Туре	Year	
	2500241 Archaeology	ОТ	3	
2500501 History OT 4	2500241 Archaeology	ОТ	4	a second and
	2500501 History	ОТ	4	

# Contact

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#### Prerequisites

None

# Teaching groups languages

You can view this information at the <u>end</u> of this document.

# **Objectives and Contextualisation**

On completing this subject, students will be able to: interpret and understand the issues involved in science history and use technical and documentation tools to understand science. The purpose of this subject is a) provide an in-depth overview of science and technology during Early Modern times, and b) offer an essential perspective to contextualize and understand the events of the entire history of mankind.

# Competences

Archaeology

- Contextualizing and analysing historical processes.
- 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 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.

History

- Contextualizing the historical processes and analysing them from a critical perspective.
- 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 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. Identifying the context of the historical processes.
- 2. Identifying the specific methods of History and its relationship with the analysis of particular facts.
- 3. Identifying the specific methods of history and their relationship with the analysis of particular facts.
- 4. Interpreting and analysing documentary sources.
- 5. Interpreting material and documentary sources.
- 6. Interpreting material sources and the archaeological record.
- 7. Mastering the diachronic structure of the past.
- 8. Using specialized knowledge acquired in an interdisciplinary context when debating.
- 9. Using the specific interpretational and technical vocabulary of the discipline.
- 10. Using the specific technical and interpretational vocabulary of the discipline.

#### Content

Recent historiographical trends

Periodisation

Revolutions and continuities. Astronomy, medicine, natural sciences, alchemy, chemistry, physics.

Scientifics utopias and Science Fiction.

Documentation and technical tools

# **Activities and Methodology**

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Exercices	10	0.4	1, 2, 3
tutorials	30	1.2	1, 2, 3
Type: Supervised			
Seminars, visits and presentations	10	0.4	8
tutorials	10	0.4	
Type: Autonomous			
Personal study	48	1.92	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
Research and reading. Preparation of exercices	30	1.2	1, 2, 3, 4, 5, 6, 7, 8, 9, 10

To achieve the established objectives, this subject involves both lectures and practical classes.

- Students must keep abreast of the news and information published on the Virtual Campus / Moodle.

- All activity deadlines are indicated in the subject's schedule and must be strictly adhered to.

- The work students carry out mainly consists of lectures, reading assignments and exercises to be performed in class

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
Attendance and active monitoring	10%	1	0.04	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
Essays and other activities	50%	7.5	0.3	1, 2, 5, 6, 7, 8, 9
Final Exam	40%	3.5	0.14	1, 2, 5, 6, 7, 9

Continuous Assessment:

Critic essays on the subject's topics: 50%.

Final exam: 40%

Participation and active monitoring (debates, forums, etc.): 10%

Assessment is continuous. Students must provide evidence of their progress by completing tasks and tests.

At the time of completion/delivery of each assessment activity, the teacher will inform (Moodle, SIA) of the procedure and date of revision of the grades.

Classification as "not assessable": The student will be classified as Non-evaluable when he has not delivered more than 30% of the evaluation activities.

Retake: will be made on the dates specified by the faculty; will not be to improve grade; the maximum rating is 5.0. To participate in the process you must have obtained a final minimum grade of 3.5.

Single Assessment:

- Written exam (within the same date of the final exam of the continuous assessment): 70%

It will consist of two parts:

o A first part consisting of a long single question regarding the topics of the course's lessons: 35%

o A second part consisting of a critical essay: 35%

- A book review (which will be handed out on the day of the written exam): 30%

Misconduct in assessment activities: 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 begiven a zero as the final grade for this subject.

In the written activities, spelling, syntactic or lexical errors are taken into account. The penalty can be between 0.1-0.2 points on the final grade for each mistake made. Repeated errors can discount.

#### Bibliography

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BOWLER, Peter J.; MORUS, Iwan Rhys (2007), Panorama general de la ciencia moderna. Crítica. Barcelona.

DEBUS, Allen G. (1985) Hombre y naturaleza en el Renacimiento. Fondo de Cultura Económica. México (1<sup>ª</sup> ed. 1978).

FARA, Patricia (2009) Breve historia de la ciencia. Ariel. Barcelona

GARBER, Daniel i AYERS, Michael (eds.) (2008). The Cambridge History of Seventeenth-Century Philosophy. Cambridge University Press.

HENRY, John (2002). The Scientific Revolution and the Origins of Modern Science. Palgrave. New York.

KUHN, Thomas S. (1962) The Structure of Scientific Revolutions. Chicago University Press. Chicago.

OLBY, G.N. CANTOR, J.R.R. CHRISTIE, M.J.S. HODGE (eds.) (1990) Companion to the History of Modern Science. Routletge. Londres.

OSLER, Margaret J. (ed.) (2000) Rethinking the Scientific Revolution. Cambridge University Press.

PESTRE, Dominique (2008) Ciència, diners i política: assaig d'interpretació Obrador Edèndum. Santa Coloma de Queralt.

ROSSI, Paolo (1998) El nacimiento de la ciencia modernaen Europa. Crítica. Barcelona.

SOLIS, Carlos; SELLÉS, Manuel (2005) Historia de la Ciencia. Espasa. Madrid.

WESTFALL, Richard S. (1977). The Construction of Modern Science. Cambridge

#### Software

#### Language list

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