

History of Biology

Code: 101902
ECTS Credits: 6

2024/2025

Degree	Type	Year
2501230 Biomedical Sciences	OT	4

Contact

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Teaching groups languages

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

Prerequisites

None

Objectives and Contextualisation

History of Biology is taken in the 4th year of the Degree of Biology and is part of the group of optional subjects.

The main objectives are:

Introduce the student to the consideration and experimentation of history as a vehicle for reflection and cultural construction, as an instrument of research, documentation and popularization, and as a pedagogical tool in the field of science. Within the specific scope of the history of biology, give the student the necessary tools to identify and critically analyze the main historiographical currents related to the natural sciences.

Introduce the student to the knowledge of the processes of generation, circulation, communication and management of scientific knowledge (particularly in the natural sciences), as well as his impact on socio-cultural transformations throughout history.

Introduce the student to the analysis of the role and the situation of the natural sciences and their social relations today and throughout history. Consider the social, cultural, strategic and economic importance of life sciences in society. And thus, give the student the necessary tools to synthesize, from the historical consideration of the natural sciences, a perspective of the current and future reach of these sciences.

Competences

- Act with ethical responsibility and respect for fundamental rights and duties, diversity and democratic values.
- Display knowledge of the concepts and language of biomedical sciences in order to follow biomedical literature correctly.
- Make changes to methods and processes in the area of knowledge in order to provide innovative responses to society's needs and demands.

- 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.
- Take account of social, economic and environmental impacts when operating within one's own area of knowledge.
- Take sex- or gender-based inequalities into consideration when operating within one's own area of knowledge.
- Work as part of a group with members of other professions, understanding their viewpoint and establishing a constructive collaboration.

Learning Outcomes

1. Act with ethical responsibility and respect for fundamental rights and duties, diversity and democratic values.
2. Analyse and describe, in general terms, the role and position of biology and its presence in society, now and across history.
3. Identify and critically analyse the principal historiographic currents in biology.
4. Make changes to methods and processes in the area of knowledge in order to provide innovative responses to society's needs and demands.
5. 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.
6. 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.
7. Students must be capable of communicating information, ideas, problems and solutions to both specialised and non-specialised audiences.
8. Students must develop the necessary learning skills to undertake further training with a high degree of autonomy.
9. 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.
10. Take account of social, economic and environmental impacts when operating within one's own area of knowledge.
11. Take sex- or gender-based inequalities into consideration when operating within one's own area of knowledge.
12. Work as part of a group with members of other professions, understanding their viewpoint and establishing a constructive collaboration.

Content

Distributive blocks

1. History, science, history of science.
2. Ways of looking.

3. East / West.
4. Universe, printing, anatomy.
5. Narratives of nature.
6. The two cultures.
7. Specialization and institutionalization
8. The historical vision of life.
9. The death of nature.
10. Individual, society and information.
11. Chaos, order and dinosaurs.
12. Conclusions and perspectives.

Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Theoretical classes / Discussion sessions with TIC support	45	1.8	2, 3
Type: Supervised			
Solving problems and tasks autonomously, participation in discussions	7.5	0.3	1, 11, 10, 2, 3, 4, 12
Type: Autonomous			
Independent study, consultation of bibliography and realization of works	90	3.6	2, 3, 9, 8, 7, 5, 6, 12

LEARNING ACTIVITIES

Type of activity	Activity	Date and title
Directed	3 Theoretical Classes (60 min each)	Block A. Introduction to the history of natural sciences and biological thought in the field of history of science
	3 Theoretical Classes (60 min each)	Block B. Mythical narratives, daily narratives
	3 Theoretical Classes (60 min each)	Bloc C. East / West
	6 Theoretical Classes (60 min each)	Block D. The mathematization of nature
		Block E. The two cultures

6 Theoretical Classes
(60 min each)

4 Theoretical Classes
(60 min each)

Block F. The construction of contemporary biology

6 Theoretical Classes
(60 min each)

Block G. The historical vision of life

6 Theoretical Classes
(60 min each)

Block H. Individuals, society and information

6 Theoretical Classes
(60 min each)

Block I. Urban narratives about nature

2 Theoretical Classes
(60 min each)

Block J. Conclusion: debates and challenges

Subtotal: Theoretical Classes 45,00 horas

Supervised

Individual problem solving and active participation in the discussions

Every one of the lectures and activities scheduled

Subtotal: active participation in the discussions: 7,50 horas

AUTONOMOUS ACTIVITIES

Autonomous

Individual study, bibliography consultation and performance of works

Subtotal: 90,00 horas

DELIVERABLES

DATE

DELIVARABLE

PLACE

MATERIAL

LEARNING OUTCOMES

To determine throughout the semester	Assays integrated to the contents and competences of the course	Campus Virtual	Email	Collect, organize and present in a standardized format the outcomes of the activities' performance during the course
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Note: 15 minutes of a class will be reserved, within the timetable established by the centre/title, for the complementation by the students of the assessment surveys of the teaching staff's performance and the assessment of the subject.

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
Final assay	40%	3.5	0.14	1, 11, 10, 2, 3, 4, 9, 8, 7, 5, 6, 12
Short essay 1	30%	2	0.08	1, 11, 10, 2, 3, 4, 9, 8, 7, 5, 6
Short essay 2	30%	2	0.08	1, 11, 10, 2, 3, 4, 9, 8, 7, 5, 6

The course evaluation is continued in relation to:

Active participation in class discussions, which will include two short essays to be assigned during the semester (30% of the final grade each written essay).

A final and brief assay preparation (40% of final grade) about some concrete topic of the course's themes and competences, in which the students have to evidence their capacity of historically locating and critically analyzing any issue related with the history of biology.

To the effectiveness of evaluation, the students have to approve each one of the proves separately.

The student who has not approve the course could present a recuperation prove. To that the student should be previously evaluated minimums to the three quarters of the total evaluation of the course. Additionally, the student must obtain, at least, 3.5 in the total evaluation of the course.

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.

Students will obtain a "Not assessed/Not submitted" course grade unless they have submitted more than 30% of the assessment items.

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 evaluation:

If necessary, a single assessment test will be carried out for those students who, for justified reasons, cannot take the continuous assessment tests of the subject (essays and participation in class debates). This test will consist of the preparation, in person, at a date, time and classroom to be determined, of a brief final written essay (in this case 100% of the mark) in relation to a specific topic integrated into the contents and competences of the subject, and in which the student must demonstrate his/her ability to historically situate and critically analyze any problem related to the history of biology. The teaching staff will assist students who require a single assessment with a specific tutorial related to each of the main blocks.

The students who take advantage of the single evaluation and who do not take the indicated test will be considered as "Not evaluated", exhausting the rights to enroll in the subject.

Bibliography

Bibliographic sources of digital access will be provided during the semester. However, below are reference works that may also be used.

Bibliography

Alexander, Denis R.; Numbers, Ronald L. (eds.) *Biology and ideology from Descartes to Dawkins*. Chicago: University of Chicago Press; 2010.

Barona, Josep Lluís. *Història del pensament biològic*. València: Universitat de València; 2003.

Brunton, Deborah (eds.) *Medicine transformed: health, disease and society in Europe, 1800-1930*. Manchester: Manchester University Press in association with the Open University; 2004.

Giordan, André (eds.) *Conceptos de Biología* (vols. 1&2). Madrid: Labor; 1988.

Jahn, Ilse, Löther, Rolf; Senglaub, Konrad. *Historia de la biología: teorías, métodos, instituciones y biografías breves*. Barcelona: Labor; 1990.

Jardine, N.; Secord, J.A.; Spary E.C. (eds.) *Cultures of natural history*. Cambridge: Cambridge University Press; 1996.

Further bibliography will be offered throughout the semester.

Software

In addition to web and Office tools, such as the campus online, email, Google docs, word, powerpoint and excel, tools such as wetransfer, dropbox or the VLC audiovisual file reader will be used.

Language list

Name	Group	Language	Semester	Turn
(TE) Theory	14	Catalan/Spanish	first semester	morning-mixed