Universitat Autònoma de Barcelona

2019/2020

History of Biology

Code: 100744
ECTS Credits: 6

Degree	Type	Year	Semester
2500250 Biology	OT	4	0

Contact

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Use of Languages

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

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

- Be able to analyse and synthesise
- Be able to organise and plan.
- Develop a historical vision of biology.
- Develop a sensibility towards environmental issues.
- Develop critical thinking and reasoning and communicate ideas effectively, both in the mother tongue and in other languages.
- Develop independent learning strategies.
- Respect diversity in ideas, people and situations
- Work in teams.

Learning Outcomes

1. Analyse and describe, in general terms, the role and position of biology and its presence in society, now and across history.
2. Be able to analyse and synthesise.
3. Be able to organise and plan.
4. Develop a sensibility towards environmental issues.
5. Develop critical thinking and reasoning and communicate ideas effectively, both in the mother tongue and in other languages.
6. Develop independent learning strategies.
7. Explain, from a social and historical standpoint, the different perspectives on the nature of biology.
8. Identify and characterise the major phases in the history of biology.
9. Identify and critically analyse the principal historiographic currents in biology.
10. Respect diversity in ideas, people and situations.
11. Work in teams.

Content

Distributive blocks

A. Introduction to the history of natural sciences and biological thought in the field of history of science.

B. Mythical narratives, daily narratives.

C. East / West.

D. The mathematization of nature.

E. The two cultures.

F. The construction of contemporary biology.

G. The historical vision of life.

H. Individuals, society and information.

I. Urban narratives about nature.

J. Conclusion: debates and challenges.

Methodology

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
	6 Theoretical Classes (60 min each)	Block E. The two cultures
	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

Activities

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

Assessment

The course evaluation is continued in relation to:

The active participation in the course, and the presentation of two brief assays which will be assigned during the semester (40% of final grade)

A final and brief assay preparation (40% of final grade) and its oral presentation (20% 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.

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Active participation in class (two short assays)	40%	2	0.08	1, 6, 5, 7, 9, 10, 4, 2, 3
Final assay	40%	3.5	0.14	1, 6, 5, 7, 9, 8, 10, 4, 2, 3, 11
Oral exposition	20%	2	0.08	1, 6, 5, 7, 9, 8, 10, 4, 2, 3

Bibliography

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.