UAB
Universitat Autònoma de Barcelona

History of Genetics

2026/2027

Code: 103628
Credits: 3

Degree programme	Type	Course
Medicine	OP	2

Contact lecturer

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Teaching staff

Carlos Tabernero Holgado

Group languages

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

Prerequisites

There is no prerequisite.

Objectives

The main objectives of the subject are to introduce the student to the consideration and experimentation of history as a vehicle for cultural reflection/construction, as an instrument for scientific research, documentation and popularization, and as a pedagogical tool in the field of science. Within the specific field of the history of genetics, the subject aims to give the student the necessary tools to identify and critically analyze the main historiographical trends related to genetics. Likewise, the subject aims to introduce the student to the knowledge of the processes of generation, circulation, communication and management of scientific (genetic) knowledge, as well as its intervention in sociocultural transformations throughout history. Finally, this subject aims to make the student reflect on the analysis of the role and situation of genetics and its social relations today and throughout history, while considering the social, cultural, strategic and economic importance of genetics and genomics in the life sciences, health and society. And thus, give the student the necessary tools to synthesize, based on the historical progress of genetics, a perspective on the current and future scope of this science.

Learning outcomes

1. Recognise health and illness as socially determined constructions that change over time.
2. Recognise and distinguish the different medical traditions that make up the current health panorama.
3. Identify the processes of professionalisation in the field of the health sciences and the tendency towards specialisation.
4. Demonstrate a diachronic vision of healthcare institutions and the healthcare strategies implemented.
5. Identify changes and continuities in the forms and contents of the medicalisation process.

6. Define the factors determining healthcare transition in today's world.
7. Understand medical science as knowledge in construction, subject to constant change, posing new challenges and opportunities.
8. Identify the origins and the institutionalisation of scientific activity, and the epistemological bases of scientific thought in the health sciences.
9. Recognise the scope and the limitations of scientific thought in the health sciences.
10. Make correct use of databases and works of reference (bibliographies, encyclopedias, and dictionaries) in the health sciences.
11. Demonstrate, in professional activity, a perspective that is critical, creative and research-oriented.
12. Demonstrate basic research skills.
13. Communicate clearly, orally and in writing, with other professionals and the media.
14. Use information and communication technologies in professional practice.

Contents

The course will begin with an introductory session aimed at familiarizing students with the characteristics, objectives, and basic practices of the discipline of the history of science, as well as the place of the history of genetics within it.

From there, the course is divided into four distinct blocks:

1.- Heredity throughout history: concepts and sociocultural relationships (up to the 18th century).

2.- Evolution and the pillars of contemporary biology (19th century).

3.- From Mendel to molecular biology, via the Synthetic Theory of Evolution: genetics and the historical view of life in the 20th century.

4.- Genetics, genomics, and sociobiology: contemporary debates and challenges.

Learning activities and methodology

Title	Hours	ECTS	Learning outcomes
TUTORIALS	11.25	0.45	
TASK DEVELOPMENT / PERSONAL STUDY / PAPER READING / INTEREST REPORTS	40	1.6	
THEORY (TE)	20	0.8	

The teaching methodology for this course will combine lectures with more dynamic, participatory activities, such as debates or workshops involving primary sources or audiovisual materials. In addition, students will be required to work independently to prepare for these activities by reading articles, watching films, or preparing for debates.

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	Weight	Hours	ECTS	Learning outcomes
Short presentation	20%	0	0	1, 2, 3, 6, 7, 8, 11, 13, 14
Portfolio	40%	1.75	0.07	1, 2, 3, 6, 7, 8, 9, 12, 14
Final Team Essay	40%	2	0.08	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Assessment for this course will be divided into two parts:

a) First, students must compile a portfolio containing assignments from each theory module; further details regarding this will be provided well in advance (40% of the final grade).

b) Second, a final written essay in teams (40% of the final grade) on a specific topic linked to the course content and competencies. In this essay, students must demonstrate their ability to place any issue related to the history of genetics in its historical context and analyze it critically.

c) Thirdly, a brief oral presentation on a chosen topic, details of which will be provided well in advance (20%).

The final grade will be the sum of the points obtained. To pass the course, students must successfully complete both parts separately. Students who do not pass the course will be eligible to take a retake exam.

In this course, the use of Artificial Intelligence (AI) technologies is permitted exclusively for support tasks, such as bibliographic or information searches. Students must clearly identify which parts were generated using this technology, specify the tools employed, and include a critical reflection on how these tools influenced the process and final outcome of the activity. Failure to be transparent about the use of AI in an assessable activity will be considered a lack of academic honesty and may result in a partial or total grade penalty, or more severe sanctions in serious cases.

Single assessment:

The single assessment will consist of writing a final essay in person-at a date, time, and venue to be determined-on a specific topic covered by the course content and competencies. In this essay, the student must demonstrate the ability to place any issue regarding the history of genetics in its historical context and analyze it critically. Teaching staff will provide specific tutorials for students requiring single assessment, covering each of the main course units. The same retake policy applied to continuous assessment will be used.

Bibliography

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

Essential references

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GIORDAN, A. (coord.) *Conceptos de Biología, vols. 1&2*. Madrid, Labor, 1988

JAHN, I., LOTHER, R. y SENGLAUB, K. *Historia de la biología*. Barcelona, Labor, 1990

MORANGE, M. *A history of molecular biology*. Harvard: Harvard University Press; 2000.

Additional references (1)

BOWLER, Peter J. (1995) *Charles Darwin, el hombre y su influencia.* Madrid: Alianza..

DARWIN, Charles (1985) *The Origin of Species*. London: Penguin Classics (1859).

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DOBZHANSKY, T., AYALA, F.J., STEBBINS, G.L., VALENTINE, J.W. (1983) *Evolución*. Barcelona: Omega

GLICK, Thomas (ed.) (1988) *The Comparative Reception of Darwinism*. Chicago : The University of Chicago Press (1ª ed. 1974).

MAYNARD-SMITH, J. y SZATHMÁRY, E. (2001) *Ocho hitos de la evolución*. Barcelona: Tusquets (Metatemas) (1ª ed. 1999).

TEMPLADO, Joaquín (1982) *Historia de las teorías evolucionistas*. Madrid: Alhambra, (1ª ed. 1974)

DE CHADAREVIAN, Soraya. (2002) *Designs for Life: Molecular Biology after World War II*. Cambridge: Cambridge University Press.

FABIAN, A.C. (ed.) (2001) *Evolución: sociedad, ciencia y universo*. Barcelona: Tusquets (Metatemas) (1ª ed. 1998).

JACOB, François (1973) *La lógica de lo viviente: una historia de la herencia*. Barcelona: Laia (1ª ed. 1970).

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KEVLES, Daniel; HOOD, Leroy (eds) (1992) *The code of codes. Scientific and social issues in the Human Genome Project*. Cambridge, MA: Harvard UniversityPress.

MONOD, Jacques (2000) *El Azar y la Necesidad*. Barcelona, Tusquets (Metatemas) (1ª ed. 1970).

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APPLE, Rima D.; APPLE, Michael W. (1993) Screening Science. *Isis* 84(4): 750-754.

CRICHTON, Michael (1991) *Jurassic Park*. Londres: Arrow (1ª ed. 1990).

CRICHTON, Michael (1994) *Parque Jurásico*. Barcelona: Plaza & Janés (1ª ed. 1990).

ELENA, Alberto. (2002) Ciencia, Cine e Historia: de Méliès a 2001. Madrid: Alianza

FONT-AGUSTÍ, Jordi (coord.) (2002) *Entre la Por i l'Esperança: Percepció de la Tecnociència en la Literatura i el Cinema*. Barcelona: Proa.

NIETO GALAN, Agustí (2011) Los públicos de la ciencia. Expertos y profanos a través de la historia. Madrid: Marcial Pons.

SECORD, James (2004) Knowledge in Transit, *Isis* 95, 654-672

SHINN, Terry; WHITLEY, Richard (eds.) (1985) *Expository Science. Forms and Functions of Popularization*. Reidel: Dordrecht., pp. 3-28.

SNOW, Charles P. (1965) *Les dues cultures i la Revolució Científica*. Barcelona: Ediciones 62 (1ª ed. 1959).

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Farber, Paul Lawrence. *The emergence of ornithology as a scientific discipline: 1760-1850*. Cambridge: Cambridge University Press; 1982.

Bowler, Peter J. *Theories of human evolution. A century of debate, 1844-1944*. Baltimore: The Johns Hopkins University Press; 1986.

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Weindling, Paul. *Health, race and German politics between national unifications and Nazism, 1870-1945*. Cambridge: Cambridge University Press; 1989.

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Marouf Arif Hasian, Jr. *The rhetoric of eugenics in Anglo-American thought*. Georgia: The University of Georgia Press; 1996.

Bashford Alison, Levinell Philippa, Eds. *The Oxford handbook of the history of eugenics*. Oxford; New York: Oxford University Press; 2010.

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.

Course groups and languages

The information provided is provisional until November 30. After this date, you will be able to consult the language of each group through this link. To access the information, you will need to enter the course CODE

Type of teaching	Group	Language	Semester	Shift
(TE) Theory	101	Catalan/Spanish	second semester	morning-mixed