History of Genetics

Code: 103628
ECTS Credits: 3

<table>
<thead>
<tr>
<th>Degree</th>
<th>Type</th>
<th>Year</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>2502442 Medicine</td>
<td>OT</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>2502442 Medicine</td>
<td>OT</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>2502442 Medicine</td>
<td>OT</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>2502442 Medicine</td>
<td>OT</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>2502442 Medicine</td>
<td>OT</td>
<td>6</td>
<td>0</td>
</tr>
</tbody>
</table>

Contact

Name: Carlos Tabenero Holgado
Email: Carlos.Tabenero@uab.cat

Use of Languages

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

Prerequisites

There is no prerequisite.

Objectives and Contextualisation

The subject of History of Genetics is studied in the 2nd course of the Degree in Medicine as an optional subject. The main objectives of the subject are:

To introduce the student to the consideration and experimentation of history as a vehicle for reflection and cultural construction, as a tool for research, documentation and scientific popularization, and as a pedagogical tool in the fields of science and medicine.

Within the specific field of the history of genetics, to give the student the necessary tools to identify and critically analyze the main historiographical trends related to genetics.

To introduce the student to the historical processes of generation, circulation, communication and management of scientific (genetic) knowledge, as well as their intervention in sociocultural transformations throughout history.

To introduce the student to the analysis of the role and situation of genetics and their social relations currently and throughout history.
strategic and economic importance of genetics and genomics in the life sciences, health and society.

And so, to give the student the necessary tools to synthesize, from the historical exploration of genetics, a perspective of the current and future scope of this science.

**Competences**

**Medicine**
- Communicate clearly, orally and in writing, with other professionals and the media.
- Critically assess and use clinical and biomedical information sources to obtain, organise, interpret and present information on science and health.
- Demonstrate basic research skills.
- Demonstrate knowledge of the historical principles underlying health, illness and the medical profession.
- Demonstrate understanding of the importance and the limitations of scientific thought to the study, prevention and management of diseases.
- Demonstrate, in professional activity, a perspective that is critical, creative and research-oriented.
- Use information and communication technologies in professional practice.

**Learning Outcomes**

1. Communicate clearly, orally and in writing, with other professionals and the media.
2. Define the factors determining healthcare transition in today's world.
3. Demonstrate a diachronic vision of healthcare institutions and the healthcare strategies implemented.
4. Demonstrate basic research skills.
5. Demonstrate, in professional activity, a perspective that is critical, creative and research-oriented.
6. Identify changes and continuities in the forms and contents of the medicalisation process.
7. Identify the origins and the institutionalisation of scientific activity, and the epistemological bases of scientific thought in the health sciences.
8. Identify the processes of professionalisation in the field of the health sciences and the tendency towards specialisation.
9. Make correct use of databases and works of reference (bibliographies, encyclopedias, and dictionaries) in the health sciences.
10. Recognise and distinguish the different medical traditions that make up the current health panorama.
11. Recognise health and illness as socially determined constructions that change over time.
12. Recognise the scope and the limitations of scientific thought in the health sciences.
13. Understand medical science as knowledge in construction, subject to constant change, posing new challenges and opportunities.
14. Use information and communication technologies in professional practice.

**Content**

History as a vehicle for reflection / cultural construction, as a tool for scientific research, documentation and popularization of science and medicine.

Within the specific field of the history of genetics, identify and analyze critically the main historiographical currents.

Develop a historical vision of genetics, identifying and characterizing the
communication and management of scientific (genetic) knowledge,

as well as its intervention in sociocultural transformations throughout history.

Analysis of the role and situation of genetics and their social relations cur

of genetics and genomics in the life sciences, health and society.

And so, give the student the necessary tools to synthesize, from the historical advance of genetics, a perspective

Distributive blocks
A. Introduction to the history of genetics within the field of the history of s
B. Inheritance throughout history. Concepts and sociocultural relations (until the eighteenth c
C. The two cultures and the pillars of contemporary biology (nineteenth c
D. From Mendel to the Synthetic Theory of Evolution. Genetics and the h
E. The development of molecular biology: individuals, society and inform.
F. Genetics, genomics, sociobiology: debates and challenges.

Methodology

Directed activities (26.7% = 20 hours): Theoretical classes / discussion sessions with ICT support.
Supervised activities (15% = 11.25 hours): Individual problem solving and
Autonomous activities (53.3% = 40 hours): Individual study, bibliography
Description (directed and supervised activities: theoretical classes and di
Block A. Introduction to the history of genetics within the scope of the his
Bloc B. Inheritance throughout history. Concepts and socio-cultural relati
Bloc C. The two cultures and the pillars of contemporary biology (nineteen
Bloc D. From Mendel to the Synthetic Theory of Evolution. Genetics and
Bloc E. The development of molecular biology: individual, society and infor
Bloc F. Genetics, genomics, sociobiology: debates and challenges: 1 cla
Deliveries: Final written essay in relation to a specific topic integrated in t

via virtual campus or email.

Activities

<table>
<thead>
<tr>
<th>Title</th>
<th>Hours</th>
<th>ECTS</th>
<th>Learning Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type: Directed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>THEORY (TE)</td>
<td>20</td>
<td>0.8</td>
<td>14</td>
</tr>
<tr>
<td>Type: Supervised</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TUTORIALS</td>
<td>11.25</td>
<td>0.45</td>
<td>14</td>
</tr>
<tr>
<td>Type: Autonomous</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Assessment

The evaluation of the subject is continuous in relation to:
- Active participation in class discussions, including the presentation of two small essays that will be assigned during the semester (40% of the final grade).
- The preparation of a brief final written essay (40% of the final grade) and oral defense (20% of the final grade) on a specific topic integrated into the contents and competences of the subject, in which the student must demonstrate its ability to historically situate and analyze critically any subject related to the history of genetics.

For the evaluation to be effective, the students must pass each of the different tests separately. Otherwise, they will be considered as "non-assessable". Students who have not passed the course may be submitted to a resit. To participate in the resit the student must have been previously evaluated of the thematic blocks whose weight equals a minimum of two thirds of the total grade of the subject. In addition, to participate in the resit the student must have obtained at least 3.5 in the total grade of the subject. Students who do not take the theoretical and practical assessment tests will be considered as not evaluated and will exhaust the rights of the registration of the subject.

Assessment Activities

<table>
<thead>
<tr>
<th>Title</th>
<th>Weighting</th>
<th>Hours</th>
<th>ECTS</th>
<th>Learning Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attendance and active participation in classes and seminars</td>
<td>40%</td>
<td>1.5</td>
<td>0.06</td>
<td>1, 2, 4, 3, 5, 6, 7, 8, 11, 10, 12, 9, 14</td>
</tr>
<tr>
<td>Oral presentation of work</td>
<td>20%</td>
<td>0.75</td>
<td>0.03</td>
<td>1, 2, 3, 13, 6, 7, 8, 11, 10, 12, 14</td>
</tr>
<tr>
<td>Written evaluation through reports</td>
<td>40%</td>
<td>1.5</td>
<td>0.06</td>
<td>2, 4, 3, 5, 13, 6, 7, 8, 11, 10, 12, 9, 14</td>
</tr>
</tbody>
</table>
Bibliography

Essential references


Additional references (1)


DARWIN, Charles. The Complete Works of Charles Darwin online <http://darwin-online.org.uk/>


Additional references (2)


