

63235 - Disciplinary Content of Biology

Syllabus Information

Academic year: 2023/24

Subject: 63235 - Disciplinary Content of Biology

Faculty / School: 107 - Facultad de Educación

Degree: 584 - Master's Degree in Teaching Compulsory Secondary Education

590 - University Master's Degree in Teaching, specializing in Geography and History

591 - Master's Degree in Teaching, specializing in Philosophy

592 - Master's Degree in Teaching, specializing in Business and Economics

593 - Master's Degree in Teaching, specializing in Mathematics

594 - Master's Degree in Teaching, specializing in Technology and Computer Science

595 - Master's Degree in Teaching, specializing in Biology and Geology

596 - Master's Degree in Teaching, specialization in Physics and Chemistry

597 - Master's Degree in Teaching, specializing in Spanish Language and Literature. Latin and Greek

598 - Master's Degree in Teaching, specialization in Foreign Language: French

599 - Master's Degree in Foreign Language Teaching: English

600 - University Master's Degree in Teaching, specializing in Music and Dance

601 - University Master's Degree in Teaching, specializing in Industrial and Construction Processes

602 - University Master's Degree in Teaching, specializing in Administration, Marketing, Tourism, Services to the Community and FOL

603 - Master's Degree in Teaching, specializing in Sanitary, Chemical, Environmental and Health Processes Agri-food

ECTS: 6.0

Year: 1

Semester: Second semester

Subject type: Optional

Module:

1. General information

This subject aims to review the contents of Biology that comprise the different subjects that can be taught from the specialty of Biology, both in ESO and Bachillerato. It has been conceived by selecting those aspects of greatest interest in the field of Biology, fundamental aspects that can and should complement the training in Biology of graduates of other specialties.

The objective of this subject is to facilitate the student's learning and understanding of the most important concepts and theories of Biology, so that the student acquires a complete training and a level that will allow them to apply these concepts, adapting it in each situation to the theoretical and practical design of each of the subjects that they will have to develop in their professional future.

These approaches and objectives are aligned with the Sustainable Development Goals (SDGs) of the 2030 Agenda of United Nations (<https://www.un.org/sustainabledevelopment/es/>), specifically, the learning activities planned in this subject will contribute to the achievement of Goal 1: End poverty; Goal 2: Zero Hunger; Goal 3: Health and wellness; Goal 4: Quality Education; Goal 5: Gender equality; Goal 6: Clean water and sanitation; Goal 7: Affordable and Clean Energy; Goal 10: Reducing Inequalities; Goal 11: Sustainable cities and communities; Goal 12: Responsible Production and Consumption; Goal 13: Climate action; Goal 15: Life of terrestrial ecosystems.

2. Learning results

1. Describe and analyse biology content and apply it in a problem-solving context.
2. Value the importance of biology from a phenomenological, cultural and epistemological point of view.
3. Analyse and prioritize the different biology contents according to their formative value.

3. Syllabus

The program offered to the student to help him/her achieve the expected results comprises the following topics:

1. Introduction
2. The molecular basis of life
3. The cell and cell metabolism
4. The cellular and chemical basis of heredity
5. History and mechanisms of evolution.
6. Biology of microorganisms.
7. Plant biology.
8. Animal biology.
9. Ecology: Population Biology.
10. Health and disease.

4. Academic activities

1. Master classes. Face-to-face and participatory. Acquisition of basic knowledge of Biology.
2. Case study classes. They will be developed through laboratory practices, biology and ecology videos and the study and resolution of practical cases. The methodology used will be: practical laboratory work, problem-based learning, individual work and preparation and writing of reports.
3. Tutored seminars: will consist of the study of a current Biology topic with relevance in society. The methodology used will be: problem-based learning, handling of the bibliography, individual work, questionnaires, preparation and writing of reports.

5. Assessment system

Continuous Assessment

1. Global written test. The written test may consist of short questions and/or essay questions on a topic and/or multiple-choice questions. 2. The grade will be from 0 to 10 and will contribute 40% to the final grade.
2. Seminars. Oral presentation of a Biology topic. Its grade will be from 0 to 10 and will contribute 40% to the final grade of the subject.
3. Practical dossier: laboratory practices and case studies. The grade will be from 0 to 10 and will contribute 30% to the final grade.

To pass the subject, the student must achieve a minimum grade of 4.5/10 in each of the computable sections and 5 /10 in the overall grade, and have attended at least 80% of the classroom hours of the subject.

Global test and second call

Students who have not passed the continuous assessment or have not passed the subject by this method. In this case the final grade will be constituted by:

- An overall written test that will constitute 70% of the final grade.
- Oral presentation of a seminar. 20% of the final grade
- A written report of the seminar. 10% of the final grade.

Fifth and sixth calls

They coincide in format and criteria with the global evaluation of the first call.

Finally, it must be taken into account that the Regulations of the Norms of Coexistence of the University of Zaragoza will be applicable to the irregularities committed in the evaluation tests by means of academic fraud, as well as the application of article 30 of the Regulations of the Norms of Evaluation of Learning in relation to irregular practices other than academic fraud.