

63238 - Design of Learning Activities in Biology and Geology

Syllabus Information

Academic year: 2023/24

Subject: 63238 - Design of Learning Activities in Biology and Geology

Faculty / School: 107 - Facultad de Educación

Degree: 584 - Master's Degree in Teaching Compulsory Secondary Education
595 - Master's Degree in Teaching, specializing in Biology and Geology

ECTS: 8.0

Year: 1

Semester: Second semester

Subject type: Optional

Module:

1. General information

The main objective of this subject is for students to use different classroom methodologies to teach Biology and Geology. Through a series of activities, students deepen their understanding of the teaching of the sciences in order to obtain strategies that allow them to build their own classroom proposals and adapt them to different contents and educational levels.

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 4: Quality Education.

2. Learning results

- To understand the fundamentals of the design of specific activities for the learning of Biology and Geology in ESO and Bachillerato
- To be able to design theoretical and practical activities for learning Biology and Geology.
- To apply innovative techniques for the teaching and learning process of Biology and Geology.
- To identify potential and real difficulties in the application of the didactic proposals (concrete activities).
- To be able to organize the theoretical and practical contents of the subjects according to the specific didactic context.
- To apply the proposals designed during the subject to real situations in the secondary school classroom.
- To design and apply different evaluation techniques according to the programmed and/or developed activities.

3. Syllabus

- Scientific literacy: Analysis of press news in the learning of Biology and Geology.
- Use and construction of dichotomous keys.
- Didactic transposition of the contents of Biology and Geology.
- Modelling and argumentation on Biology and Geology contents.
- Inquiry in life and earth sciences.
- Field trips as a didactic resource in Biology and Geology.
- Scientific language and its impact on the teaching and learning of Biology and Geology.
- Biology and Geology learning difficulties. Analysis of classroom situations and didactic resources.

4. Academic activities

The program offered to the student to help them achieve the expected results comprises the following activities.

- Master classes. 4h. Sessions with teachers in which questions will be explained in large groups.
- Problem solving and case studies: 8h. Sessions divided into two sessions at where the resolution of practical cases will be planned.
- Laboratory practices: 40h. Split sessions of laboratory work in small groups.
- Special practices: 15h. Sessions outside the classroom in which the didactic possibilities will be worked on in relation to the outings to the immediate environment.
- Individual study and assignments: 129h. Work on the part of the student.
- Evaluation test: 4h. Submission, presentation and discussion of papers.

5. Assessment system

1. Portfolio (70% of the final grade): The reports of each one of the programmed activities will be group reports as long as the student has attended. Delivery will be made throughout the term through the ADD according to the calendar established in the digital platform. These reports will be evaluated and graded according to criteria adapted to the typology of each report. In any case, these will be simple reports (approx. 4-5 pages) that will include the results of the activities and/or critical reflection on them.

2. Didactic proposal (30% of the final grade): design and oral presentation of a group didactic proposal on the assigned topic.

In order to pass the subject it is necessary to obtain a minimum grade of 5 out of 10 in each of the parts that make up the global test

In the two calls of the term, the subject will have a global test (official date) that will consist of the delivery of the reports of all the works carried out, by their own means, that have not been delivered along the term

In any case, as part of the evaluation, the teacher may request, at random, the oral defence of the test or assignment submitted in writing, for the verification of the grade.

-Fifth and sixth call. In the same terms as the global test described above.

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.