

63236 - Disciplinary Content of Geology

Syllabus Information

Academic year: 2023/24

Subject: 63236 - Disciplinary Content of Geology

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

The main objective is to provide geological contents and adequate tools to future secondary school teachers without previous geological training. In this way, it is intended that the future teacher assimilates the basic principles of Geology and uses them as a fundamental tool to understand texts necessary to teach and propose geological works to their students.

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 SDG 4 (Quality Education) and SDG 13 (Climate Action) SDG 214 (life underwater) and SDG 15 (life of terrestrial ecosystems).

2. Learning results

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

3. Syllabus

- Fundamentals of Geology. The work of the geologist.
- Minerals. Identification on hand sample
- Types of Rocks. The geological cycle. How to recognize rocks.
- Plate tectonics: The theory that explains terrestrial dynamics. Internal structure of the Earth.

- Major geologic events in the Earth's history.
 - Fossils. Taphonomy and Paleoecology. Recognition of the most common
 - Major evolutionary milestones in the history of life on Earth.
 - Quaternary Geology. Climate and geomorphology. Processes that shape the terrestrial landscape
- Field practices. The Cultural Park of the Martín River.

4. Academic activities

The theory will be taught as theoretical-practical classes of a participative nature. These classes will be supported by presentations on computer complemented with short videos. There will be practices in the identification of rocks, minerals and fossils.

A visit to the Natural Science Museum of the UZ and a one-day field practice.

A seminar with the design of a geology practicum for high school students is proposed. We will encourage students to use tutoring hours through conventional tutoring, or more specific work-related tutoring. The theory classes will be posted on the digital ring.

Master Class (1A): 22,5h

Evaluation tests (8): 6h

Laboratory practices (3A): 32h

Special practices in facilities (field practices): 5h

Study: 84,5h

5. Assessment system

The student must demonstrate achievement of the intended learning results through the following assessment activities:

- Final written test on the knowledge imparted in the theory and practical classes. This test will consist of multiple choice questions and/or questions requiring short answers. Also included in the same exercise will be the evaluation of the practical part, which includes the identification of rocks, minerals, fossils, from real specimens. This test will account for 50% of the grade.
- Preparation of a report, presentation and public defence of a paper with a proposal for a practice in the real field for high school students. The report will be individual. The work will be presented and defended by each student in seminar-type sessions with the participation of all students. The time available will be 15 minutes. The best papers chosen by the students will receive a 10% increase in the grade obtained. This work will account for 50% of the grade.

Global test and second call

Article 158 p) of the Statutes of the University of Zaragoza states: "The evaluation system for each subject, as general rule, will be based on more than one test; however, students may request the completion of a single test for the passing of the subject they are taking."

The first call will be the written test for all students who will take a global test including the face-to-face and non-face-to-face students. The non-face-to-face students must also submit personal work as part of this global test.

In the second and the rest of the call, students will have to pass the same tests as in the first call, which will be carried out in a single exercise and will consist of:

- A written test on the basic knowledge of the subject according to the syllabus
- The presentation and defence of a practical work previously elaborated on one of the proposed works. They will follow the same criteria as for face-to-face students.

Fifth and sixth calls

They will be evaluated in the same way as the previous ones.

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.