

## **Syllabus Information**

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**Academic Year:** 2022/23

**Subject:** 26448 -

**Faculty / School:** 100 - Facultad de Ciencias

**Degree:** 588 - Degree in Geology

**ECTS:** 9.0

**Year:** 4

**Semester:** Annual

**Subject Type:** End of Grade Dissertation

**Module:**

## **1. General information**

### **1.1. Aims of the course**

The Undergraduate Dissertation constitutes an individual, general geological work. The student must demonstrate knowledge, skills and attitudes acquired throughout the Degree. The work must be original and allow the student to recover data and obtain own results. It may involve field, desk and/or laboratory activities. Regardless of the topic all TFG should contain sufficient information about the geological context of the area or problem studied.

These approaches and objectives are aligned with the following Sustainable Development Goals (SDGs) of the United Nations 2030 Agenda (<https://www.un.org/sustainabledevelopment/es/>): all the goals included in the rest of the degree.

### **1.2. Context and importance of this course in the degree**

This subject allows the student to put into practice the knowledge and skills acquired in the Degree, in the study of a problem or real case similar to those that might arise in their professional life. The proposed dissertations are real and it is intended that the results will be valid and usable. It is intended ultimately that the student will feel to be able to properly develop a geological work, concerning a problem posed by the professor.

### **1.3. Recommendations to take this course**

The student is recommended to read in detail the own guidelines of the Undergraduate Dissertation (TFG, or *Trabajo Fin de Grado* in spanish) approved by the Committee on Quality Assurance (CGC, or *Comisión de Garantía de la Calidad* in spanish) of Degree in Geology. These guidelines together with annexes can be downloaded through the Website of the Faculty of Sciences (Degree in Geology).

## **2. Learning goals**

### **2.1. Competences**

When pass the subject, students will be more competent to ...

1. Search the tools to solve a geological problem of laboratory or field.
2. Handle correctly the literature, including publications in English.
3. Synthesise published geological information, so that it can be used appropriately for the resolution of a geological work.
4. Transmit information, both data and geological individual results, to other professionals.
5. Apply the methods and geological techniques for solving a particular work/problem.
6. Present and defend in front an audience, geological work developed individually.

### **2.2. Learning goals**

The student, for passing this subject, must show:

1. Is able to explain, link and use clearly and fluently concepts, models and theories that are part of the Degree in Geology.
2. Is able to analyze and synthesize information obtained in the literature, field work and laboratory on geological issues in a

well structured report and with appropriate contents.

3. Is able to explain and defend in front of a tribunal, and in public, the results of the executed geological work.

### 2.3. Importance of learning goals

Learning outcomes of this subject are essential for future geologists, both whether they will be engaged in professional or research work. Data, observations and conclusions obtained from geological work are meaningless if they are not adequately structured in a report easy to read and understand by other professionals.

## 3. Assessment (1st and 2nd call)

### 3.1. Assessment tasks (description of tasks, marking system and assessment criteria)

The student must demonstrate that it has achieved the intended learning outcomes through the following evaluation activities:

Each TFG will have a director who will tutelary and validate the work process, in accordance with the provisions of the teaching guide for the TFG. The director will give correct indications in the development of TFG, considering that the student is the real responsible in obtaining, processing and interpreting the data. The work must have the approval of the director and, if mandatory, the rapporteur.

#### REPORT OF THE TFG

1. Student must deposit the TFG report in the Secretary of the Faculty of Sciences, using the "Deposit of the TFG in Geology" form.

2. The TFG report shall comply with the following requirements:

- The TFG must have no less than 11-point font size, with 1.15 line spacing, and margins of at least 2.5 cm. The table of contents should go in the beginning of the reports and it will not exceed 25 pages, excluding annexes.

- The main text will consist of the following sections: table of contents, abstract in English (approximately one page), approach, objectives, methodology, geological context, presentation and discussion of the main results, conclusions in English, and references.

- The number of figures, tables and photographs should be proportional to the text in size and quantity; all must be cited in the text and contain brief figure captions.

- In the main text of the report and the bibliography section, references will follow the editorial standards adopted by the CGC of the Degree in Geology in the document associated of its own guidelines. Only references cited in the report must be included in the references section.

- The Annexes may include only those graphs, maps, tables or listings essential necessary for proper understanding and evaluation but, due its format or extension, cannot be included in the main text. The extent of the annexes must not be longer than the report.

- The director of a TFG must ensure, before giving approval for deposit, that the submitted report meets the established standards of editing.

3. When making the deposit of work, the student must provide the Verifier of TFG deposit in the DEPOSITA application and a printed version of the report and its annexes, which will be available to the Tribunal before the day of the defence and returned to the student after the deadline of claims.

4. The deposit of this documentation will be held at the Faculty of Sciences Secretary, at any school day, but in any case 8 school days before the first date of the period during which the student should defend the work.

#### DEFENSE

1. The TFG defense could be made only when the student had pending of overcome a maximum of twelve ECTS of the Degree, provided that there is a reasoned and favorable report of the Director and the approval, if mandatory, of the rapporteur, considering in any case the official regulations approved by the University of Zaragoza.

2. The Faculty Board, published each academic year in the Faculty Sciences website, will contain the periods of defense of the TFGs, which will be at least four: three after the calls for exams of February, June and September and another in December. Registration of TFG gives right to defend work up twice in the same academic year, in any of the periods that the Faculty of Sciences had established.

3. The tribunals are composed of three members and the same number of alternates, and shall be appointed according to the applicable regulations.

4. The CGC will assign TFG to tribunals according to criteria of thematic affinity, but considering that any member of the tribunal (titular or alternate) was THE director or rapporteur works to be assessed.

5. The tribunals shall make public on the bulletin board of the Secretary of the Department of Earth Sciences the call for defense of the TFG, with at least five calendar days before the start of the defense, indicating therein a detailed schedule that must include date (as published in the academic calendar of the Faculty), hour, place, students who are summoned, and the evaluation criteria. The Secretary of the tribunal must provide the place and means necessary for the exhibition and defense in the proposed day and hour.

6. The defense of the work will be done in public, always in school period and in front of the full tribunal. It is recommended that exposition won't be longer than twenty minutes and in no case exceed thirty minutes, including reading of the findings in

English. Then, there will be a discussion with members of the tribunal on its content and presentation.

7. The reading the conclusions in English will be mandatory.

#### Evaluation and Qualification Criteria

1. The tribunal will assess and rate the TFG considering the quality of the report, its exhibition and the subsequent discussion, using the following criteria:

- The scientific quality of the work, up to a maximum of 5 points, assessing, among other things, appropriateness of the methods used to the proposed objectives, clear statement of the findings, and conclusions based correctly on the results.

- The written work (report) will be rated with a maximum of 2 points assessing the adequacy of the report to the rules set out in Article 4 of the current Regulation, the correct use of the literature, the use of appropriate vocabulary and language, and figures to be properly referenced and explained.

- The oral presentation, defense and discussion will be graded up to 3 points, considering the adequacy to the submitted TFG, the dissertation and material presented during the session, the time distribution, and finally, the adequacy between questions raised by the tribunal and student answers.

2. The rating of the TFG is made analogous to that of the subjects included in the degree, indicating the quantitative and qualitative rating. The minutes shall be signed by all members of the tribunal.

3. Before qualifying the TFG, the tribunal may request additional information to the director, the co-directors or the rapporteur.

4. In case of a negative evaluation of the TFG, the tribunal shall issue a report detailing those weaknesses, both methodological and in content, indicating the necessary parts in the work to be corrected, or proposing a new defense of the TFG in a subsequent call.

5. The CGC has approved, as document associated to the own guidelines of the TFG in Geology, a evaluation statement to be used by the members of the tribunal.

## 4. Methodology, learning tasks, syllabus and resources

### 4.1. Methodological overview

The Undergraduate Dissertation enables students to apply and develop skills and competences acquired throughout the Degree. It permits to demonstrate that the student has the appropriated knowledge and skills to work as geologist.

Students are expected to show their competence in planning, writing and defending a piece of research. This process is mainly based on the student's autonomous work but his/her progress will be followed by a supervisor during tutorial sessions throughout the academic year.

The learning process designed for this course is based on: The TFG is governed by the general rules of the University of Zaragoza and the Faculty of Sciences, and own guidelines adopted by the Committee on Quality Assurance of the Degree in Geology (see website of the Faculty of Sciences).

[Directrices propias](#) (Own Guidelines)

[Procedimiento para la elaboración, evaluación y gestión de los trabajos fin de estudios \(TFG ?TFM\) en la FACULTAD DE CIENCIAS](#) (General rules of the Faculty of Sciences)

### 4.2. Learning tasks

Guidelines will be provided for the director to the student during an introduction session.

During the academic year, the student must work autonomously, reviewing literature, searching for information and obtaining his/her own data data, discussing results with the director, writing the dissertation and preparing the oral exposition.

The student could require appointments for tutorials in order to discuss how focus the work, solve the problems that can arise during the development of the work, as well as prepare the final report and the oral presentation.

Note: Teaching and assessment activities will be carried out on site for as long and as much as possible. This scenario could change if safety regulations related to the covid19 crisis recommended online activities.

### 4.3. Syllabus

The approved proposals for the Undergraduate Dissertation for each academic year by the Committee on Quality Assurance of Degree in Geology will be published on the website:

<https://ciencias.unizar.es/trabajo-fin-de-grado-en-geologia>

### 4.4. Course planning and calendar

The dates for submission and defense of the Undergraduate Dissertation will be set by the Faculty of Sciences and

published on its website.

More information:

[https://ciencias.unizar.es/sites/ciencias.unizar.es/files/users/fmlou/pdf/Asuntos\\_academicos/prc\\_001gestion.tfev3\\_.pdf](https://ciencias.unizar.es/sites/ciencias.unizar.es/files/users/fmlou/pdf/Asuntos_academicos/prc_001gestion.tfev3_.pdf)

#### **4.5. Bibliography and recommended resources**

References will be recommended by the director.