

# MASTER'S DEGREE RESERVOIR GEOLOGY AND GEOPHYSICS

UB-UAB

## REGULATIONS FOR THE MASTER'S DEGREE FINAL PROJECT (25 ECTS credits)

### 1. General characteristics

The Final Project is an original piece of individual work through which students are expected to integrate the desired learning outcomes and demonstrate the necessary competences for successful completion of the master's degree. Therefore, the primary aim is to provide a means for students to show that they are able to:

- apply the knowledge and skills acquired during their training to solve problems in new or unfamiliar working environments in broader (or multidisciplinary) contexts related to the geological and/or geophysical characterization of reservoirs;
- develop learning abilities through which to organize and manage their time effectively, work independently and as part of a group, identify and structure relevant knowledge, and manage information systematically;
- present conclusions and share knowledge in a clear and well argued manner.

The above competences are developed through a research project that will demonstrate the students' capacity to analyse a problem related to the master's degree content and to make a significant contribution to the field in the form of original research or an analytical solution that adds to existing knowledge available in the literature. This contribution must be of sufficient quality to be published, in whole or in part, in an indexed journal in the field. The Final Project can be either of the following types:

- An experimental study, consisting of the definition of a research problem, study design, acquisition of experimental data and discussion of results.
- An analytical study of experimental data from previous research, literature reviews, public data, etc.

Both types of projects can be carried out at the institutions responsible for teaching the master's degree or at any other public research centre or company involved in the geological and geophysical exploration, characterization and monitoring of basins and/or sedimentary reservoir systems.

## 2. Organization

The organization, coordination and preparation of the course plan for the Final Project will be overseen by a member of the teaching staff (who must be a PhD holder) appointed by the Coordinating Committee of the Master's Degree Reservoir Geology and Geophysics. This coordinator is also responsible for:

- appointing the examination panels responsible for assessing the research projects carried out by each student;
- ensuring that each student is assigned a research topic and a project tutor;
- publishing lists of research topics and project tutors via the appropriate channels.

### *2.1 Examination panel*

There will be an examination panel for the geology pathway and a panel for the geophysics pathway. Each panel will comprise three PhD holders from the Autonomous University of Barcelona (UAB), the University of Barcelona (UB) or any other research centre involved in the teaching of the master's degree (for example, the Jaume Almera Institute of Earth Sciences). The Academic Committee will also appoint three substitute examiners for each panel.

The examination panels are responsible for evaluating the suitability and viability of the research projects proposed in the first oral presentation and for assessing the results and conclusions described during the second (final) public defence and in the written project report. They will also be required to verify that each student has demonstrated the competences defined in the course plan for the subject.

To complete their assessment of the suitability and quality of each research project, the examination panels may commission a confidential evaluation report from an external specialist of their choice. This report will be forwarded for reference to the academic coordinator.

Members of the examination panels cannot participate in the assessment and grading of the projects they tutor. In such cases, the assessment and grading will be taken over by rest of the members of the panel.

Each student will be assessed by the panel responsible for corresponding pathway, as determined by the subjects taken during the first semester and the chosen research topic.

## 2.2 Project tutor

The Final Project must be completed under the guidance of a tutor, who should ideally be a PhD holder affiliated to a public higher education institution or public research centre or institute. If the tutor appointed is not a PhD holder or does not form part of the master's degree teaching staff, a co-tutor will be appointed from this teaching staff. The tutor's functions and responsibilities are listed in the document "*Functions of the Final Project Tutor*".

The research topic and project tutor must be assigned during the first semester of the academic year. During this period, the student must find a tutor (and, if necessary, a co-tutor) who will assist with the planning and design of the project. All professors participating in the teaching activities of the Master are required to offer at least one Project topic, which will be gathered in a list available to students to help their choice. Students who are unable to find tutor should consult the subject coordinator, who will be able to assign them a research topic and tutor if necessary.

At the end of the first semester the coordinator will publish a list of approved projects, indicating the student's name and the tutor and co-tutor (if applicable) appointed.

## 3. Assessment

Assessment of master's degree final projects consists of a written project report and two oral presentations in public sessions:

- The first presentation is given at the beginning of the spring semester (early February) and is used to present the project justification, objectives and methodology. The examination panel will assess the viability of the research presented and its compatibility with the general learning objectives of the subject.
- The second presentation is the public defence of the research project and is used to present and explain the principal data and conclusions.

The overall assessment may also take into account the short report written by the academic tutor(s) and, if applicable, an external specialist's report.

### 3.1 Project report and tutor's report

The report must be written in English using the standard format of a scientific research article, with an approximate length of 15-25 pages. Text must be presented in Arial (minimum 10 pt.) with 1.5 line spacing. The document must contain the following sections:

1. Title page, displaying the project title, student's name, tutor's name and master's degree.

2. Summary or abstract, with a maximum length of 300 words. This abstract should be delivered to the coordinator of the subject as a separate file in pdf format and will be published in the official master's degree website. If convenient, the abstract pdf file can be supported by a representative figure.
3. Introduction and objectives, outlining the project justification, aims and/or working hypothesis.
4. Methodology, according to the type of final project chosen.
5. Principal results, which should include figures, graphs, tables, etc.
6. Discussion of results, relating them to the initial objectives and/or hypothesis.
7. Conclusions.
8. Acknowledgements (if applicable).
9. Bibliography.
10. If necessary, an annex containing the project data in digital format (CD-rom).

Before the public defence, the academic tutor will produce a confidential written report (a template is available) containing a qualitative assessment of the development of the work and the competences acquired by the student during the execution of the research project. This report is submitted in a sealed envelope and should give details of any data protection agreements and/or technology and knowledge transfer agreements that apply to the content of the project.

Four copies of the written report must be submitted, which will be deposited together with the tutor's report at the Secretary's Office of the Department of Geology at the UAB. These copies must be submitted towards the end of June, between one and two weeks before the scheduled date of the oral presentation. Documents submitted after the deadline cannot be accepted, unless evidence of exceptional circumstances can be provided.

### *3.2 First oral presentation*

The presidents of the examination panels for each pathway will consult the coordinator and agree a date for the first oral presentation, which should be at the beginning of the second semester, between 1 and 8 February.

During the first presentation session, each student will be given 10 minutes in which to summarize the project objectives, methodology and justification. Following each presentation, the examination panel will ask a series of questions designed to verify the suitability and viability of the proposed research project and may indicate recommended or required changes and amendments that the student should implement during the project execution phase. The first oral presentation may be given in English, Catalan or Spanish, although preference should be given to English where possible.

The oral presentation should include supporting visual materials (for example, a PowerPoint presentation) in English. A paper copy of the supporting materials must be submitted to each of the examiners at the beginning of the session.

Once all of the research projects have been presented, the examination panel will award each student a descriptive grade of “Pass” or “Fail”.

Students who are awarded the grade “Fail” will be given 15 days to design a new research project and submit a written proposal to the examination panel. The panel will evaluate the new proposal by the end of February.

Students who receive the grade “Fail” for the new project proposal will not be permitted to carry out their research projects and cannot pass the subject.

### *3.3 Second oral presentation (public defence of the research project)*

The date of the second oral presentation will also be set by the president of the corresponding examination panel, with the approval of the coordinator, and must fall within the official examination period of 29 June-6 July.

Each student must submit the following documents to the examination panel before the presentation date:

- Four copies of the project report (one for each panel member and the fourth for the University archives).
- The confidential report written by the project tutor.
- Three paper copies of the oral presentation.

IMPORTANT: Paper copies of all presentations must be submitted prior to the first project defence. No changes will be permitted once the presentations have been submitted.

All final projects must be presented and defended in public sessions, unless the project content is subject to restrictions deriving from data protection agreements and/or knowledge and technology transfer agreements. In these cases, subject to approval by the examination panel, the project tutor(s) and the student, the presentation and defence can be carried out in a closed session. The panel members must treat the content of these projects with the strictest confidentiality and will be required to sign an agreement to this effect, covering the period during which the information remains protected.

For the public defence, each student will be given a maximum of 20 minutes in which to present the content and principal results of the research project and to justify any changes made since the initial proposal was approved. This presentation must be given in English. To complete the evaluation of the research project, the examination panel will then have up to 10 minutes to ask any questions it deems necessary and to discuss the work presented.

Oral presentations will be given in alphabetical order of students' surnames, starting from a letter chosen at random. Changes to this order will only be made in the event of unforeseen circumstances and must be approved by the president of the examination panel.

## **4. Grading**

Once all of the projects have been presented, the panel will award an overall numeric grade to each student, on a 0-10 scale. Students who do not meet the general requirements for the oral presentation or written report, as laid down in this document, will be awarded a grade of 3.5. In all other cases, the grade awarded will be based on the examination panel's assessment of the written report and the oral presentation and the tutor's report. For the purposes of calculating the grade, the assessed components will be weighted as follows: written report, 50%; oral presentation, 50%. The panel may also take into account the tutor's report, the weight of which will not exceed 10%. Students must obtain a grade of 5 or higher to pass the subject.

### *4.1 Re-assessment*

Once the final grades have been published a repeat assessment period is opened, during which students who a) have failed to pass and b) have completed all assessed work and have not received a mark of 0 for any single component. Repeat assessment will be carried out 10-15 days after the publication of the final grades, and will require students to complete the following steps:

- Submit an amended version of the original written report, incorporating the changes and corrections required by the examination panel following the second oral presentation.
- And, if the examination panel considers necessary, repeat the oral presentation.