Universidad Zaragoza

Academic Year/course: 2023/24

63247 - Master's Dissertation (Physics and Chemistry)

Syllabus Information

Academic year: 2023/24
Subject: 63247 - Master's Dissertation (Physics and Chemistry)
Faculty / School: 107 - Facultad de Educación
Degree: 584 - Master's Degree in Teaching Compulsory Secondary Education
596 - Master's Degree in Teaching, specialization in Physics and Chemistry
ECTS: 6.0
Year: 1
Semester: Annual
Subject type: Master Final Project
Module:

1. General information

Based on the specific competences of the degree, the objective of the Master's Final Project (MFP) subject is that students exercise their capacity for reflection and synthesis on their own training process, which includes not only theoretical training, but also its practical application through the professional experience of the Practicum in the context of Biology and Geology and similar subjects, for which the specialty learnt in this master qualifies the student.

These approaches and objectives are aligned with the following Sustainable Development Goals (SDGs) of the United Nations Agenda 2030 (https://www.un.org/sustainabledevelopment/es/), in such a way that the acquisition of the learning results of the subject provides training and competence to contribute to some extent to their achievement. Specifically, the learning activities foreseen in this subject will contribute to the achievement of SDG 4: Quality Education.

2. Learning results

Students must demonstrate that they are able to make a critical reflection on the learning processes and teaching practice based on the experience and training acquired throughout the Master, synthesized in a report or a work of innovation or research to be presented and defended before a board of examiners. This work must include original contributions applying the knowledge, skills, abilities, aptitudes and attitudes acquired throughout the master's studies. The students must work autonomously and responsibly, critically evaluate their own work and present it, both orally and in writing, with order, clarity, argumentative rigor and linguistic correctness. This subject is the one that confers sense to the whole design of the master's degree. Students must have developed competencies to integrate into the teaching profession , promote and tutor the learning process, plan, design, organize and develop the program and learning activities and their evaluation, as well as innovate and research on their own teaching processes with the objective of continuous improvement of their teaching performance.

3. Syllabus

No specific content is defined for this subject.

4. Academic activities

The MFP, which will be carried out individually, may be directed by one or co-directed by a maximum of three teachers of the master. 140 hours of student work are foreseen for the preparation of the report and 10 hours more for the preparation of the presentation and defence of the work. The task of directing the TFM will involve continuous monitoring, with regular meetings of the work done for the preparation of the written report (5 hours) and for those related to the presentation and oral defence before the MFP board (5 hours). The task of directing the MFP will consist of: 1) providing students with general guidelines on the nature and requirements of the type of work to be done, including structure and contents 2) holding periodic meetings on the student's work to guide them in the preparation of the written report and in the presentation and oral defence of the MFP, and 3) to validate and authorize the work to be evaluated by the board of examiners.

TYPES OF MFP

1. MFP Modality A

Modality A will consist of an original and integrative report. A critical analysis will be made reflecting the integration of the different knowledge and practices of their training process in the specialty of Physics and Chemistry. It may content the following:

1) Introduction. Personal and MFP presentation.

2) Didactic reflection of two activities developed throughout the Master and their application in the Practicum.

3) Didactic proposal or teaching innovation project, related to the activities of the previous section, including justification of the theoretical framework of the didactic methodology, activities and evaluation of the proposal itself.

4) Conclusions, consequences and implications

5) Bibliographic references

6) Annexes

2. - MFP modality B: work of initiation to research related to lines of innovation or research previously offered by the teachers. See information at:http://educacion.unizar.es/master-profesorado-secundaria/modalidad-b-tfm. Interested students are suggested to contact the coordination of the Physics and Chemistry specialty of the master's degree.

The TFM will have a maximum length of 30-40 (Times New Roman 12, 1.2 to 1.5 spacing, regular margin) plus annexes, justified margins and paginated on both sides in A4. The bibliographic references will be cited according to a standardized system. It is recommended to follow the current APA system. The organization and development of the activities of the MFP, including instructions for its deposit and delivery, can be consulted on:

https://educacion.unizar.es/master-profesorado-secundaria/tfm-master-profesorado

5. Assessment system

As a minimum requirement to pass the subject, the student must have fulfilled each and every one of the following requirements, without which, the director will not authorize the student to deposit their MFP

- To have followed all the tutor's instructions regarding the writing of the report.

- The director has not made any complaints to the specialty coordinator about any lack of respect and negative attitude towards the faculty by the student.

- That the student has attended all tutorials scheduled by the tutor.

- Submit a report that is correctly written and contains a minimum number of citations from DDCCEE to justify the work, indicated by the tutor (a minimum of 10 citations is recommended)

- It will not be approved if the final considerations are not a reflection of the training process, but only a criticism of the master's degree without foundation.

- The tutor must have made the necessary corrections to the work to meet the submission requirements (at least two revisions are recommended)

- The MFP report must be sent at least one week in advance for final correction before the deposit.

If the above premises are met and the deposit is authorized, the three-member board will evaluate the following, according to the applicable guidelines of the University of Zaragoza:

A. Skills to synthesize and integrate the acquired learning and to contribute own ideas (70%)

Background and references: Extent of the bibliographic review and adequacy of the sources used and synthesis of the most relevant works.

Training and professional maturity: Knowledge and understanding of current trends in the educational field of Physics and Chemistry; precision and rigor in the use of concepts and contents related to the teaching of the subjects of the specialty; originality and quality of the proposals and contributions; positive and constructive attitude towards the teaching profession.

Capacity for analysis and reflection: Critical reflection on the implementation in practice of the projects designed and conclusions for professional learning as a teacher; depth of reflection and designed and conclusions for professional learning as a teacher; depth of reflection and analysis and coherence in the reasoning, and in the lines of argument followed in the development of the work.

Written communication skills: Compliance with the established format and the rules for citations and references, general structure and coherent organization of the different sections of the work and adequacy of the general and professional discourse and written expression.

B. Oral communication skills (30 %)

Mastery and understanding of the subject matter.

Clarity, rhythm and organization of the presentation. Use of body language and voice.

Selection of key information. Synthesis capacity

Compliance with established deadlines.

Adequate and pertinent argumentation in response to the questions and comments of the members of the board.

The oral defence will be a maximum of 15 minutes of presentation followed by a maximum of 15 minutes of questions/answers and discussion . The director(s) may be present during the defence and may speak when the student finishes their intervention and before the questions and observations of the board..

It will be graded from 0 to 10, and may be awarded honours in accordance with the regulations of the University of Zaragoza. The grading will be the average between the global values assigned by each member of the board, provided that the differences

between the grades are less than 1.5 between the extreme values. If there are grades with a greater difference, the board must reconsider its assessments until the maximum difference noted above is reached. The guidelines given by the secretary's office for the publication of grades will be followed. The University's evaluation standards regulations of Zaragoza are available on:

http://cud.unizar.es/docs/ReglamentodeNormasdeEvaluaciondelAprendizaje.pdf

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.