Universidad Zaragoza

Academic Year/course: 2023/24

26615 - Didactics: Physical and Chemical Media

Syllabus Information

Academic year: 2023/24
Subject: 26615 - Didactics: Physical and Chemical Media
Faculty / School: 107 - Facultad de Educación
202 - Facultad de Ciencias Humanas y de la Educación
301 - Facultad de Ciencias Sociales y Humanas
Degree: 298 - Degree in Primary School Education
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ECTS: 6.0
Year: 2
Semester: First semester
Subject type: Compulsory
Module:

1. General information

This subject constitutes a first contact with a disciplinary didactics in the specific field of experimental sciences and the starting point for the construction of a Didactic Knowledge of Physics and Chemistry Content in Primary Education that facilitates a sustainable professional development . It is an opportunity to improve one's own culture in the scientific dimension, contributing especially to the development of skills and strategies for rigorous thinking.

It is relevant in the preparation of primary education teachers for a professional practice committed to a society more aware of environmental and social challenges, sustainable and resilient. It is aligned with the Sustainable Development Goals (SDGs) of the United Nations Agenda 2030 (https://www.un.org/sustainabledevelopment/es/), with special emphasis on Goal 4. Quality Education.

An open and positive attitude towards experimental sciences will facilitate the students' satisfactory development.

2. Learning results

The student, in order to pass this subject, must demonstrate the following results...

1. Possesses basic knowledge (the minimum required is considered to be that corresponding to Compulsory Education) on the physical-chemical aspects of the environment and its projection in Primary Education.

2. Is able to make reports of the experimental activities performed.

3. Contribute specific arguments or ideas based on scientific and didactic criteria in seminars and current debates proposed by the faculty.

4. Shows communication skills and uses reasoning and tools appropriate to the didactic situations that arise both in the theoretical and practical sessions of the subject.

5. It makes and exposes didactic proposals for a quality scientific literacy, appropriate to the educational level to which they are addressed for their application in Primary Education and that, in addition, collect the various aspects covered in the theoretical and practical sessions.

3. Syllabus

1. The physical-chemical aspects in Nature sciences and their contribution to the educational competences in the curricular framework of Primary Education.

2. Teaching models and characteristics of children's scientific thinking.

3. Relevant physical-chemical contents in the context of school science in Primary Education. Specific difficulties in teaching and learning of the selected contents.

4. Experimental learning activities of a physical-chemical nature, outings and visits in Primary Education.

5. Analysis, planning and design of didactic proposals on physical-chemical aspects of the environment.

6. Introduction of current scientific topics on physicochemical aspects of the environment.

4. Academic activities

The program includes...

- Theoretical presentations given by the faculty and collaborators of the subejct

- Visits and outings outside the center

- Experimental work in the physics and chemistry laboratory

- Small and large group reflection activities

- Preparation of individual reports

- Group elaboration of some of the design and planning tasks

- Presentations of both individual and group works

The calendar of activities, key dates, classroom sessions and presentation of work will be communicated through the Digital Teaching Ring (ADD) at the beginning of the subject period.

The dates of the final exams can always be consulted on the center's website.

5. Assessment system

The student must demonstrate that they have achieved the expected learning outcomes through the following assessment activities.

- Attendance to seminars and theoretical-practical sessions.
- Oral and written presentation of didactic proposals to teachers and classmates.
- Preparation of reports based on the experimental activities.
- Partial tests and final written test of theoretical and practical nature on the different contents covered in the subject.

In those cases inwhich participation and attendance is not approved or the grade obtained is to be improved, there is the option of to present an alternative written work together with the final written test. This work will be duly specified from the beginning of course.

Assessment criteria

The evaluation of the subejct will be based on the following aspects:

- Attendance to seminars and theoretical-practical sessions. Participation and collaboration among peers will be valued in the development of this type of activities.
- Oral and written presentation of didactic proposals to teachers and classmates. The quality didacticquality , the justification of the proposal to the peers and the expository clarity will be valued.
- Preparation of reports based on the experimental activities. For the presentation of these reports, it is mandatory the realization in person of the corresponding experimental activity.

Finally, it must be taken into account that the Regulations of the Coexistence Rules of the University of Zaragoza will be applicable to the irregularities committed in the assessment tests by means of academic fraud, as well as the application of article 30 of the Regulations of Regulations of Learning Assessment in relation to irregular practices other than academic fraud.

Grading criteria and requirements for passing the subject

1. *Contributing to a maximum of 40% of the final grade:*

Attendance to seminars and theoretical-practical sessions and the elaboration of reports based on the experimental activities contribute up to 20% of the final grade.

The oral and written presentation of didactic proposals to teachers and classmates contribute up to a maximum of 20% of the final grade.

Make effective the calculation of the weighted average in the final grade it is necessary to have submitted both papers and obtained at least 4.0 out of 10.0 in this section.

2. *Contributing a maximum of 60% of the final grade: Written tests*

It is necessary to pass (obtain a grade of at least 5.0 out of 10.0) in the final written test (or partial tests) of the subject in order to pass it, regardless of the results obtained in the rest of the evaluable activities (active participation, report of practicals and didactic proposals).

In those cases in which any of the written tests have not been passed and, therefore, the subject has not been passed, the final grade in the corresponding call will coincide with the minimum grade obtained from those below 5.0 if the final written test has been taken or with NP in the case of not having taken the final written test.

The grade for each approved activity or test will be valid throughout the academic year, including the second call. These evaluation criteria are the same for students in the 5th and 6th call.