Academic Year/course: 2024/25

26626 - Didactics: Arithmetic II

Syllabus Information

Academic year: 2024/25
Subject: 26626 - Didactics: Arithmetic II
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
　　　　　299 - Degree in Primary School Education
　　　　　300 - Degree in Primary School Education
ECTS: 6.0
Year: 3
Semester: First semester
Subject type: Compulsory
Module:

1. General information

The main goal of the subject is the mathematical and didactic training of future teachers of Primary Education in relation to the positive rational number.

This subject is part of the *Teaching and Learning of Mathematics*, together with the subjects *Didactics of Arithmetic I* and *Didactics of Geometry*. These subjects are responsible for the mathematical didactic-formation of the future Primary Education teachers, together with their relationship with school practices.

It is not necessary to have mathematical knowledge different from that acquired in compulsory secondary education to successfully complete the subject . However, it is essential to have a willingness to rework and reflect on the mathematical concepts from a teaching perspective and to bring the subject up to date through continued work.

2. Learning results

1. -Reconstructs the arithmetic contents referred to the positive rational number and the measurement of continuous magnitudes of primary education, adapting them to the professional needs of the teacher of that educational stage.

2. -State and solve arithmetic problems suitable to introduce the systems of representation of the positive rational number (fraction, decimal expression, percentage and scale) and to justify the relations and operations between positive rational numbers.

3. -Uses mathematical language accurately.

4. -Describes and evaluates the successive states of knowledge and learning difficulties of primary school students during the process of acquiring arithmetic contents related to rational number.

5. -Analyzes and designs situations or didactic resources for the teaching and learning of positive rational number in primary education.

3. Syllabus

Didactics of linear magnitudes and their measurement. Rational number didactics: meanings (measurement, distribution, ratio, probability,...), models, representations and operations. Measurement and rational number in the primary education curriculum . Situations and didactic resources in the teaching of rational number in primary education. These contents are articulated in thematic units, so that in each of them mathematical and didacticaspects are worked together.

4. Academic activities

Theoretical classes of explanation of theoretical contents that present a more interactive and participative character than the master class . In some sessions, students will be asked to solve problems of mathematical and/or didactic content, or other tasks such as the analysis of teaching proposals or case studies, etc.

Practical classes. Team resolution, in a divided group, of tasks of a mathematical and/or didactic nature that may include problem situations, questions or case studies and involve the manipulation of didactic materials. To address these tasks will require building new concepts, and revising and deepening those already known.

Special practice. Carrying out a team work (6 members approximately). Tutorials will be held with each team on the dates indicated by the faculty, to detail the tasks to be performed, monitor their progress and evaluate the participation of each team member in the work. The follow-up and final defense sessions of the special internship will be indicated at the beginning of the year. In the Faculty of Education the schedule and calendar of the control sessions and evaluation will be conveniently announced, being one in one of the central weeks and in one of the finals, respectively. In the Faculty of Human Sciences and Education, the follow-up will take place in the weekly session assigned for this purpose. In the Faculty of Social and Human Sciences, it will take place in the timetable of the subject dedicated to the practical classes and will be distributed in 2 sessions that will take place during one of the intermediate weeks and one of the final weeks of the term, respectively.

Individual jobs. Throughout each topic there will be articles on the subject to be commented, sheets of problems or case studies to be solved in class sessions or outside class hours.

5. Assessment system

A. Participation in practical classes (*3 points*). Through the delivery of team scripts, direct observation. At the discretion of the faculty of each Center, completion of an individual questionnaire that will account for up to 50% of the grade for the internship and/or resolution of individual work, which may include individual reflection on the practical session. Assessment criteria:

- Correct resolution and argumentation of the proposed tasks (group and individual).
- Active participation and positive and respectful attitude towards teachers and other classmates.
- Proper functioning of each team member.
- If applicable, correct resolution of the individual questionnaire related to the work done in the session.

B. Special team practice (*2 points*). Through the delivery of a final team dossier and the presence of each member to the face-to-face tutoring sessions and the final defense session. Assessment criteria:

- Correctness, adequacy, depth, reflection and complete realization in the answers to the proposed activities with respect to the contents of the program of the subject.
- Final presentation: adequate presentation and structure, clarity of the expository discourse, correct use of the language in which the subject is taught and correct use of quotations, references and sources consulted for the completion of the work, with plagiarism being penalized.
- Proper functioning of each group member in the monitoring and defense sessions.

C. Final individual examination(*Grade C1: 5 points. Note C2: 10 points*). Evaluation criteria:

- Clarity, correctness and adequate reasoning in the resolution of the questions. The evaluation of each question will also take into account the validity of the procedure and the argumentation made.
- Use of the contents worked on (concepts, procedures, techniques...) during the subject.
- Use of adequate technical vocabulary and correct use of the language in which the subject is taught.

Grading criteria and requirements for passing the subject:

- If C2 is greater than or equal to 5, Rating1 = A + B + C1 and *Final rating* = maximum (C2, Rating1)
- If C2 is less than 5, *Final rating=C2.*

In order to pass, the *final rating* must be equal to or higher than 5.

Global test: Students who have not completed or passed activities A and/or B may take the test referred to in activity C. Their final grade will be in the range of 0 to 10 points and they will pass the course when they obtain ascore greater than or equal to 5 in this activity.

Second call for applications: Students who have not passed the course in the first exam may sit for the global test on the dates set by the centers for the second exam of the course, subject to the same D criteria.

The grades obtained from A and B, if any, will be kept for the second round.

Test fifth and sixth summons: The fifth and sixth convocation will be evaluated by a tribunal with the same activities, criteria and requirements as the first and second call of the current academic year, respectively.

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

6. Sustainable Development Goals

4 - Quality Education
5 - Gender Equality
10 - Reduction of Inequalities