

26620 - Didactics: Arithmetic I

Syllabus Information

Academic year: 2023/24

Subject: 26620 - Didactics: Arithmetic I

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: 2

Semester: Second semester

Subject type: Compulsory

Module:

1. General information

The goal of the subject is the mathematical and didactic formation of the future teacher of Primary Education in that refers to the natural number. This goal is aligned with Sustainable Development Goals (SDGs) 4, 5 and 10 of the United Nations 2030 Agenda (<https://www.un.org/sustainabledevelopment/es/>).

To successfully take this subject it is not necessary to have more mathematical knowledge than that taught in compulsory secondary education. However, it is essential to be in a good disposition to rework the mathematical contents of primary education from the perspective of the teacher who teaches them, and to bring the subject up to date through continuous work.

2. Learning results

1. Ability to reconstruct the arithmetic contents related to the natural number of Primary Education, adapting them to the professional needs of the teacher of this educational stage.
2. Ability to solve mathematical problems in which arithmetic contents linked to the natural number are a priority.
3. Ability to describe and evaluate the successive states of knowledge and learning difficulties of primary school students during the process of acquiring arithmetic content related to natural number.
4. Ability to analyze and design situations or didactic resources for the teaching and learning of the natural number in Primary Education. In addition to the ability to use precise mathematical language.

3. Syllabus

The arithmetic of the natural number in the Primary Education curriculum. Didactics of counting and natural number as cardinal and ordinal. Didactics of numbering systems. Didactics of operations with natural numbers. Situations and didactic resources in the teaching of natural number arithmetic.

These contents will work together both mathematical and didactic aspects associated with the phenomena of teaching and learning of the natural number.

4. Academic activities

Theoretical classes, explaining theoretical contents in a more interactive and participative way than the master classes. In some sessions, the resolution of problems of mathematical and/or didactic content will be proposed.

Practical sessions (divided group). It consists of the resolution of problematic situations, cases, etc. *Individual work*. Resolution, by the student, outside of school hours.

Special practice (by teams). Team work, for which control sessions and evaluation sessions will be held, both of which will be graded on the following dates:

In the Faculty of Education of Zaragoza, the first and second sessions will be held on the same days of the week in which there is a theory or practical class, during the seventh and tenth week of classes, respectively, during the timetable indicated for "Seminars, directed work and class recovery". The following week could be used in both cases due to unforeseen calendar situations.

In the Faculty of Human Sciences and Education of Huesca, the follow-up will be carried out in the weekly session assigned for this purpose.

At the Faculty of Social and Human Sciences of Teruel, it will take place in the timetable of the subject dedicated to practical classes and will be distributed in 3 sessions: the first session will be the fifth week of classes, the review session will be the tenth week and the evaluation session will be the twelfth week of classes.

5. Assessment system

Activity 1: *Practical sessions by teams and Activity 2: Individual work.* All sessions (respectively the papers) will have the same evaluation. The maximum qualification is 2 points for activity 1 and 1 point for activity 2.

Activity 3: *Special team practice.* The maximum grade is 1 point.

Activity 4: *Final individual exam* on the mathematical and didactic contents of the subject. This is will be graded out of 6 (grade A) and out of 10 (grade B). If the grade A is greater than or equal to 2.4 (equivalent to 4 out of 10) the grades for activities 1, 2 and 3 will be added together and the total will be compared to the grade B. The final grade will be the higher of the two grades. If the grade A is less than 2.4, the final grade will be the grade B. A final grade of 5 or higher is required to pass.

All registered students, whether or not they have taken the continuous assessment activities, have the right to take the final exam that assesses the learning results defined in this teaching guide in accordance with article 158 of the Statutes of the University of Zaragoza.

Second call for applications. Students who have not passed the subject in the first call may take the final individual exam to be held in the second call, which will be subject to the same evaluation criteria of activity 4. The grades obtained in activities 1, 2 and 3, if any, will be kept for the second call of the subject.

Fifth and sixth call. This evaluation is carried out before a tribunal, and this right cannot be waived.

However, you may choose to do the evaluation activities together with the rest of the group and, afterwards, they will be handed in to the examining board. In either case, the same criteria and evaluation requirements specified as ordinary and general for the subject will be applied.

Assessment criteria

Activity 1: Practical sessions. In each session, each student will receive a grade, which will reach the maximum value if they attend the entire session and, both they and their team, meet the following criteria:

Correct resolution and argumentation of the scripts; active participation, positive and respectful attitude of each team member towards the teacher and their teammates; and mastery, by all members of the team, of the contents of the delivered script, having made contributions of equivalent value. During the practical or afterwards, the completion of a questionnaire and/or an individual script may be requested, which will represent up to 50% of the value of the same, respectively.

Activity 2: Individual work.

Correct resolution of the activities with adequate argumentation.

Activity 3: Special practice.

Complete completion of the work; correctness and adequacy of the answers, using a clear expository discourse; and mastery of the contents by all members of the team, having made contributions of equivalent value contributions.

Plagiarism in the above activities will be penalized, assigning the minimum score of 0 points.

Activity 4: Final individual examination.

Clear and reasoned resolution, explaining what is done, how and why. The assessment will take into account not only the final result, but also the validity of the procedure and the argumentation. As well as the use of the contents (concepts, procedures, techniques, etc.) that have been presented and worked on in the subject, as well as an adequate technical vocabulary.

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