# SUBJECT TEACHING GUIDE

## G304 - Mathematics for Primary School Teachers

## Double Degree in Teaching in Early Childhood Education and Primary Education
## Degree in Primary Education Teaching

Academic year 2021-2022

| 1. IDENTIFYING DATA | | | | | |
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| Degree | Double Degree in Teaching in Early Childhood Education and Primary Education | | | Type and Year | Core. Year 1<br>Core. Year 1 |
| Faculty | School of Teacher Training | | | | |
| Discipline | Subject Area: Teaching and Learning of Mathematics<br>Module: Training in Teaching and the Discipline | | | | |
| Course unit title and code | G304 - Mathematics for Primary School Teachers | | | | |
| Number of ECTS credits allocated | 6 | Term | | Semester based (1) | |
| Web | http://moodle.unican.es/course/view.php?id=2406 | | | | |
| Language of instruction | Spanish | English Friendly | No | Mode of delivery | Face-to-face |

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| Department | DPTO. MATEMATICAS, ESTADISTICA Y COMPUTACION |
| Name of lecturer | JOSE MANUEL DIEGO MANTECON |
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| Office | Facultad de Ciencias. Planta: + 0. DESPACHO JOSE MANUEL DIEGO MANTECON (0060) |
| Other lecturers | IRENE POLO BLANCO<br>LIDIA PATIÑO OTERO<br>RAUL FERNANDEZ COBOS<br>IGNACIO GONZALEZ RUIZ<br>JUNCAL GOÑI CERVERA |

| 3.1 LEARNING OUTCOMES |
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| - To demonstrate, through problem solving, having acquired the basic mathematical knowledge that the teacher needs, corresponding to the Primary blocks: numerical, geometric, and magnitudes and measures. |
| - To present clearly the analysis and the strategies used to solve a mathematical problem. |

| 4. OBJECTIVES |
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| To acquire basic mathematical skills: numerical, calculation, geometric, visualization, estimation and measurement. |
| To analyze, reason and communicate mathematical proposals. |
| To solve mathematical problems involving mathematical notions specific to primary school , but at the level required for the future teacher. |
| To value the relationship between mathematics and science as one of the pillars of scientific thought. |

| 6. COURSE ORGANIZATION | |
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| CONTENTS | |
| 1 | Similarity:<br>Basic concepts of geometry.<br>Equality of polygons.<br>Proportionality. Similarity of triangles and polygons. Theorems of Altitude and Pythagoras.<br>Magnitudes:<br>Areas of figures constructed in frames or with tangram. Areas of plane and spatial figures.<br>Problem solving. |
| 2 | Divisibility: Euclidean division, greatest common divisor and least common multiple, divisibility criteria. Euclide method.<br>Fractions: Fractions in different contexts, decimal representation of rational and irrational numbers.<br>Problem solving. |
| 3 | Final exam. |

## 7. ASSESSMENT METHODS AND CRITERIA

| Description | Type | Final Eval. | Reassessn | % |
|---|---|---|---|---|
| Continuous assessment test of part 1 (similarity and measurement). At 9th week approximately, during the period of lessons. | Others | No | Yes | 50,00 |
| Final exam. At the end of term, during the exam period. | Written exam | Yes | Yes | 50,00 |
| TOTAL | | | | 100,00 |

Observations

The final exam will include the contents of blocks 1 and 2. Each block will be graded independently. Students who obtain at least a 4 (out of 10) in the continuous assessment test of block 1(during the period of lessons) will not be obliged to take this block in the final exam. Students who do not pass in the ordinary period may take an exam in the extraordinary period on the contents of blocks 1 and 2. Grades greater than or equal to 4 (out of 10) in the blocks are saved for the extraordinary period. Students who wish to raise a grade in any of the blocks may do so, but they will not keep the previous grade.

ASSESSMENT/EVALUATION
Article 35.- If a student does not obtain the grade minimum required to pass an evaluation test, the overall grade for the subject will be the lowest value between 4.9 and the weighted average of all assessment tests.

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The Faculty of Education has approved the following agreements regarding Spelling, plagiarism, and citation rules.

SPELLING
It is understood that university students have assumed linguistic abilities in relation to oral and written expression. Therefore, correct spelling and grammar in the work and exams is an essential condition to pass the course.

FRAUDULENT PERFORMANCE OF TESTS OR EVALUATION ACTIVITIES
Article 32. Penalty. The fraudulent performance of the tests or evaluation activities will directly result in the failure grade '0' in the subject in the corresponding call, thereby invalidating any grade obtained in all the evaluation activities for the extraordinary call. This circumstance will be communicated to the Center.

CITATION RULES
The APA Standards are assumed as a citation criterion for all academic works. Although these standards have different editions, as a starting point, students are referred to the following link of the BUC:
http://web.unican.es/buc/recursos/guias-y-tutoriales/guia?g=28

Observations for part-time students

Article 24. (…) the student may undergo a single evaluation process. The single evaluation will entitle the student to obtain the same grade as the students who undergo continuous evaluation processes. The single assessment may consist of taking an exam or/and the delivery of work, exceptionally being able to establish the obligation to attend and pass certain face-to-face activities (laboratory classes, clinical practices, seminars, etc.

## 8. BIBLIOGRAPHY AND TEACHING MATERIALS

BASIC

Rico, L., & Segovia, I. (2011). Matemáticas para maestros de Educación Primaria. Pirámide. Madrid.

Diaz Godino, J. Monografías Edumat-Maestros. http://www.ugr.es/~jgodino/edumat-maestros/welcome.htm

Colección "Matemáticas: Cultura y Aprendizaje" de la Editorial Síntesis:
- M. Sierra, Divisibilidad, Ed. Síntesis, Madrid, 1989.
- S. Llinares, M.V. Sánchez, Fracciones : la relación parte-todo, Ed. Síntesis, Madrid, 1988.
- R. Luengo (Coordinador), Proporcionalidad geométrica y semejanza / Grupo Beta, Ed. Síntesis, Madrid, 1990.