

SUBJECT TEACHING GUIDE

G1746 - Development and Teaching of Mathematical Reasoning

Degree in Early Childhood Education First Degree in Nursery Education Teaching

Academic year 2024-2025

1. IDENTIFYING DATA			
Degree	Degree in Early Childhood Education First Degree in Nursery Education Teaching		Type and Year Compulsory. Year 2 Compulsory. Year 2
Faculty	School of Teacher Training		
Discipline	Subject Area: Learning of Natural Sciences, Social Sciences and Mathematics Module: Training in Teaching and the Discipline		
Course unit title and code	G1746 - Development and Teaching of Mathematical Reasoning		
Number of ECTS credits allocated	6	Term	Semester based (2)
Web			
Language of instruction	English	Mode of delivery	Face-to-face

Department	DPTO. MATEMATICAS, ESTADISTICA Y COMPUTACION		
Name of lecturer	JOSE MANUEL DIEGO MANTECON		
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Other lecturers			

3.1 LEARNING OUTCOMES

- To know the genesis and development of mathematical concepts in young children
- To be able to elaborate mathematical activities for preschool education
- To be able to connect and develop specific mathematical content in preschool education

4. OBJECTIVES

- To master the mathematical content of the preschool education curriculum
- To foster students' reflection about their knowledge on mathematics in learning and teaching contexts .
- To gain an initial preparation in the development of mathematical activities for preschool education
- To know the genesis and development of mathematical concepts , especially those that appear in the preschool education curriculum

6. SUBJECT PROGRAM

CONTENTS

1	Introduction to the Teaching of Mathematics in Early Childhood Education.
2	Introduction to logic and logical-mathematical reasoning in children. Analysis and design of teaching proposals.
3	Natural number, numbering systems, and arithmetic operations. Numbers and operations in children. Analysis and design of teaching proposals on this topic
4	General aspects of space and geometry. Space and geometry in the period of 3 to 6-year-old. Analysis and design of teaching proposals on this topic.
5	Instruction to magnitudes and their measurement. The study of magnitudes and their measurement in Early Childhood Education. Analysis and design of teaching proposals on this topic.

7. ASSESSMENT METHODS AND CRITERIA

Description	Type	Final Eval.	Reassessn	%
Midterm Exam (First part of the content)	Written exam	No	Yes	50,00
Final Exam	Written exam	Yes	Yes	50,00
TOTAL				100,00

Observations

The final exam will include part 1 and part 2 of the content. Each part will be independently qualified.
The students obtaining 4 points or more (out of 10) in the exam of part 1 (undertaken in the middle of the term) will not have to necessary examine the part 1 content in the final exam. Students not passing the subject in the regular period (June) can take a new exam in the extraordinary period. This exam will include all the subject content.

Other aspects to take into account:

- SPELLING: the correct spelling and grammar in the assessments are requirements for passing the course.
- PLAGIARISM: Point 54.1 of the Regulation of the evaluation processes at the University of Cantabria is recalled— 'The fraudulent conduct in tests and evaluation activities will directly imply the mark fail (0) in the subject'.

CITATION RULES:

Finally, the School Board approved that the Faculty assume the APA RULES for all academic work as citation criteria .
Although these standards have different editions, we attach the BUC link as an initial reference, hoping that this will be helpful and a reference for its development: <http://web.unican.es/buc/recursos/guias-y-tutoriales/guia?g=28>

Observations for part-time students

The final mark for part time students will be obtained from a single exam (100% of the evaluation).

8. BIBLIOGRAPHY AND TEACHING MATERIALS

BASIC

Yáñez, J. C., Catalán, M. D. L. C. M., Pastells, ... & Muñoz, Y. M. V. (2018). Didáctica de las matemáticas para maestros de Educación Infantil. Ediciones Paraninfo, SA.

Castro, E., & Martínez, E. C. (Eds.). (2016). Enseñanza y aprendizaje de las matemáticas en educación infantil. Pirámide.