

SUBJECT TEACHING GUIDE

G559 - Teaching Geometry

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

Academic year 2023-2024

1. IDENTIFYING DATA					
Degree	Double Degree in Teaching in Early Childhood Education and Primary Education			Type and Year	Compulsory. Year 2 Compulsory. Year 2
Faculty	School of Teacher Training				
Discipline	Subject Area: Teaching and Learning of Mathematics Module: Training in Teaching and the Discipline				
Course unit title and code	G559 - Teaching Geometry				
Number of ECTS credits allocated	6	Term	Semester based (2)		
Web					
Language of instruction	Spanish	English Friendly	No	Mode of delivery	Face-to-face

Department	DPTO. MATEMATICAS, ESTADISTICA Y COMPUTACION				
Name of lecturer	STEVEN JOHAN MARIA VAN VAERENBERGH				
E-mail	steven.vanvaerenbergh@unican.es				
Office	Facultad de Ciencias. Planta: + 0. DESPACHO STEVEN VAN VAERENBERGH (0056)				
Other lecturers	CECILIA VALERO REVENGA NEILA EMMA CAMPOS GONZALEZ LARA GONZALEZ DE COS IRENE POLO BLANCO IGNACIO GONZALEZ RUIZ				

3.1 LEARNING OUTCOMES

- Getting to know the learning and teaching processes corresponding to geometry. Analyzing and designing didactic sequences in geometry.

4. OBJECTIVES

To gain basic mathematical competences (geometric, spacial relationships, etc.). To analyze, reason and communicate didactic proposals related to geometry.

6. COURSE ORGANIZATION

CONTENTS

1	Curricular and professional context for teaching geometry in primary education.
2	Teaching and learning of spatial and planar geometries. Didactic and content knowledge.
3	Teaching and learning of transformations and dynamic geometry. Didactic and content knowledge.
4	Teaching and learning of geometric magnitudes and their measurement. Didactic and content knowledge.

7. ASSESSMENT METHODS AND CRITERIA

Description	Type	Final Eval.	Reassessn	%
Activities using Geogebra software	Activity evaluation with Virtual Media	No	No	20,00
Continuous assessment tasks	Work	No	Yes	30,00
Written exam	Written exam	Yes	Yes	50,00
TOTAL				100,00

Observations

ORDINARY CALL

The final grade will be obtained by adding the score of the GeoGebra activities (maximum 2 points), the continuous work score (maximum 3 points), and the written exam score (maximum 5 points). To pass the subject, it will be essential to obtain at least a 4 out of 10 on the written exam.

Article 35 of the Regulation of Evaluation Processes at the University of Cantabria will be applied: 'In case of not achieving the minimum required grade in an evaluation test, the overall grade of the subject will be the lower value between 4.9 and the weighted average of all evaluation tests.'

EXTRAORDINARY CALL

One of the following two options can be chosen:

- Keep the continuous assessment activities score (maximum 3 points) and take a written exam worth 5 points. This exam will not contain questions related to the topics proposed in the continuous assessment activities.
- Waive the score of the continuous assessment activities and take a written exam worth 8 points, which will contain questions related to any of the subject's topics and questions related to the topics proposed in the continuous assessment activities.

In both options, the score of the GeoGebra activities (maximum 2 points) will be maintained.

Observations for part-time students

Students enrolled part-time may choose one of the following two options in the ordinary call:

- Same evaluation method as the ordinary call for students enrolled full-time.
- Single exam worth 10 points that will contain questions related to any of the subject's topics and questions related to the topics proposed in the continuous assessment activities.

It will be understood that part-time enrolled students who submit any of the three GeoGebra practices scheduled during the course participate in continuous assessment, and therefore choose option a) for the ordinary call.

In the extraordinary call, part-time enrolled students can choose one of the following two options:

- Keep the continuous assessment activities score and take a written exam worth 5 points. This exam will not contain questions related to the topics proposed in the continuous assessment activities. This option is only available for students who participate in continuous assessment.
- Single exam worth 10 points that will contain questions related to any of the subject's topics and questions related to the topics proposed in the continuous assessment activities.

8. BIBLIOGRAPHY AND TEACHING MATERIALS

BASIC

- Martínez, A. M. y Juan, F. R. (Coord.) (1989). Una metodología activa y lúdica para la enseñanza de la geometría. Madrid: Síntesis.
- Alsina, C., Burgués, C. y Fortuny, J. (1987). Invitación a la didáctica de la geometría. Madrid: Síntesis.
- Castro, E. (2001). Didáctica de la matemática en la Educación Primaria. Síntesis Madrid.
- Godino, J. D. y Ruiz, F. (2003). Geometría y su didáctica para maestros. Departamento de Didáctica de las Matemáticas. Universidad de Granada. ISBN: 84-932510-1-1.(Recuperable en <http://www.ugr.es/local/godino/>).