

## SUBJECT TEACHING GUIDE

### G559 - Teaching Geometry

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

Academic year 2024-2025

1. IDENTIFYING DATA					
Degree	Double Degree in Teaching in Early Childhood Education and Primary Education Degree in Primary Education Teaching			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				
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Other lecturers	CECILIA VALERO REVENGA JUNCAL GOÑI CERVERA ZAIRA ORTIZ LASO AMAYA GARCIA ZULUETA				

### 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. SUBJECT PROGRAM	
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. 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	Activity evaluation with Virtual Media	No	Yes	30,00
Written exam	Written exam	Yes	Yes	50,00
<b>TOTAL</b>				<b>100,00</b>

**Observations**

**ORDINARY CALL**

The final grade will be calculated by adding the score from the GeoGebra activities (up to 2 points), the score from the continuous assessment activities (up to 3 points), and the score from the written exam (up to 5 points). To pass the course, it is essential to obtain at least a 4 out of 10 on the written exam.

'Article 35 - Grading when the minimum required score is not met' from the Regulations of Evaluation Processes at the University of Cantabria will be applied: 'If a student does not achieve the minimum required score to pass an assessment, the overall grade for the course will be the lower value between 4.9 and the weighted average of all assessment scores.'

Students who score below a 5 out of 10 as the total score in continuous assessment activities during the class period may retake these assessments during the final exam. They will be granted additional time for this purpose. In this case, the score from the continuous assessment activities obtained during the class period will not be considered in calculating the final grade.

**EXTRAORDINARY CALL**

One of the following two options may be chosen:

- a) Keep the score from the continuous assessment activities (up to 3 points) and take a written exam worth 5 points.
- b) Forgo the score from the continuous assessment activities and take a written exam worth 8 points, which will include a part corresponding to the written exam and a part for retaking the continuous assessment activities.

In both options, the score from the GeoGebra activities (up to 2 points) will be maintained.

**SPELLING**

Correct spelling (including spelling, accentuation, and punctuation), grammar, and vocabulary in work and exams are essential and mandatory conditions for passing the course.

**PLAGIARISM**

Regarding fraudulent execution (plagiarism) of assessment tasks, grading will adhere to 'Article 32 - Disciplinary Regime' from the Regulations of Evaluation Processes at the University of Cantabria: 'Fraudulent execution of assessments or evaluation activities will result directly in a failing grade '0' for the course in the respective call, thereby invalidating any scores obtained in all evaluation activities for the extraordinary call. This circumstance will be reported to the Center.'

**CITATION STANDARDS:**

The Faculty Board approved that the Faculty adopts the APA citation standards for all academic work . The UC Library provides detailed tutorials and manuals on these standards.

**Observations for part-time students**

Students who enroll on a part-time basis may choose from one of the following two options, both in the ordinary and extraordinary calls:

- a) The same assessment method as students enrolled full-time.
- b) A single exam worth 10 points, comprising a first part that is written (65% of the final grade) and a second part that involves retaking the continuous assessment activities (35% of the grade).

To pass the course, it is essential to obtain at least a 4 out of 10 on the first part (written) of the exam.

It is understood that part-time students who submit any of the GeoGebra practices or continuous assessment activities scheduled during the course are participating in continuous assessment and, therefore, opt for option a) for the ordinary call.

## 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/>).