

## SUBJECT TEACHING GUIDE

M1112 - Mathematics in the Secondary Education Curriculum

Master's Degree in Secondary Education Teacher Training

Academic year 2021-2022

1. IDENTIFYING DATA					
Degree	Master's Degree in Secondary Education Teacher Training			Type and Year	Optional. Year 1
Faculty	School of Teacher Training				
Discipline	Subject Area: Complements for Disciplinary Training Specific Module in the Speciality of Mathematics				
Course unit title and code	M1112 - Mathematics in the Secondary Education Curriculum				
Number of ECTS credits allocated	4,5	Term	Semester based (2)		
Web					
Language of instruction	Spanish	English Friendly	Yes	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	MARIA CLAUDIA LAZARO DEL POZO				

### 3.1 LEARNING OUTCOMES

- To improve knowledge, to acquire skills and to develop aptitudes and attitudes regarding the general and specific competencies of the subject.

#### 4. OBJECTIVES

##### Knowledge

- 
- To know the recent history of mathematics curricula in our country and its influence in the current curriculum .
  - To know some aspects regarding the notion of mathematical competency and its role in the current curriculum .
  - To know the goals and objectives of mathematics curriculum .
  - To know some issues on the role of ICTs in the curriculum .
  - To know in details the development of the current mathematics curriculum .

##### Skills

- 
- To integrate the ICTs in the presentation of the different items of the curriculum .
  - To integrate the idea of mathematical competency in the development of the different curriculum items .
  - To be able to plan the development of the different units of the curriculum .

#### 6. COURSE ORGANIZATION

##### CONTENTS

1	Introduction to the mathematics curriculum. History, goals, competencies, methods.
2	Detailed development of the mathematics curriculum

#### 7. ASSESSMENT METHODS AND CRITERIA

Description	Type	Final Eval.	Reassessn	%
A collection of diverse tasks, proposed by the professor, to be developed in the classroom or at home, some of them by each student individually, some of them performed by an appointed, small group of students.	Work	No	Yes	100,00
<b>TOTAL</b>				<b>100,00</b>

##### Observations

##### ORTHOGRAPHY:

It is understood that university students have assumed language skills in relation to oral and written expression. Therefore, spelling correction (spelling, accentuation and punctuation), grammatical and lexical correction is essential and mandatory in the works and exams carried out as an essential condition to pass the subject.

##### PLAGIARISM:

Regarding the fraudulent performance (plagiarism) of the evaluation tests, the qualification will comply with the provisions of article 54.1 of the Regulation of the evaluation processes at the University of Cantabria: 'The fraudulent performance of the tests or activities and evaluation will directly suppose the qualification of failure '0' in the subject '.

##### CITATION RULES:

Finally, the Board of the Center approved that the Faculty assumes the APA STANDARDS as citation criteria for all academic works. Although these standards have different editions, as an initial reference we attach the BUC link, hoping that this will be of help and reference for their development: <http://web.unican.es/buc/recursos/guias-y-tutoriales/guia?g=28>

##### Observations for part-time students

Specific evaluation protocol

## 8. BIBLIOGRAPHY AND TEACHING MATERIALS

### BASIC

Sierra, M. González Astudillo, M.T. y López, C. (2007) Evolución histórica de la enseñanza de las Matemáticas a través de contenidos y edades, en "Estudio de Evaluación de las Matemáticas en Castilla y León". JCYL.

Sierra, M. González Astudillo, M.T. (2005) La Matemáticas en la enseñanza primaria y secundaria en España en el primer tercio el siglo XX: un análisis a través de los Planes de estudio. (Ponencia CIBEM)

Rico, L., Lupiañez, J.L. (2008): COMPETENCIAS MATEMATICAS DESDE UNA PERSPECTIVA CURRICULAR. Alianza Editorial.

Recio, T. (2008): Competencia Obligatoria. La Gaceta de la RSME. Vol. 11, Núm. 3, Págs. 559-571

Recio, T (2007). La Ciencia Invisible. Uno: Revista de didáctica de las matemáticas, ISSN 1133-9853, Nº. 46.

Recio, T (2006): PISA y la evaluación de las matemáticas. Revista de Educación. Nº 1, pags. 263-273

Cockcroft, W. H. (1985): Las Matemáticas Sí Cuentan. Estudios de Educación. Ministerio de Educación y Ciencia. Madrid.

OECD (2005): Marcos teóricos de PISA 2003. Ministerio de Educación y Ciencia-INECSE. Madrid.

Ausejo, E. (2013). La introducción de la «matemática moderna» en la enseñanza no universitaria en España (1953–1970). La Gaceta de la RSME, Vol. 16 (2013), Núm. 4, Págs. 727–747.

Decreto 57/2007, de 10 de mayo, por el que se establece el currículo de la Educación Secundaria Obligatoria en la Comunidad Autónoma de Cantabria. BOC - Número 101. Viernes, 25 de mayo de 2007. Página 7495

Decreto 74/2008, de 31 de julio por el que se establece el Currículo del Bachillerato en la Comunidad Autónoma de Cantabria. BOC - Número 156. Martes, 12 de agosto de 2008. Página 10943

Decreto 38/2015, de 22 de mayo, que establece el currículo de la Educación Secundaria Obligatoria y del Bachillerato en la Comunidad Autónoma de Cantabria. VIERNES, 5 DE JUNIO DE 2015 - BOC EXTRAORDINARIO NÚM. 39. Página 2711-3784

Gutierrez Ocerín, L.; Martínez Rosales, E. y Nebreda, T. (2008). Las competencias básicas en el área de Matemáticas. Cuadernos de Educación de Cantabria. 5. Gobierno de Cantabria. Consejería de Educación.

OECD (2005): Marcos teóricos de PISA 2003. Ministerio de Educación y Ciencia-INECSE. Madrid

Real Decreto 1105/2014, de 26 de diciembre, por el que se establece el currículo básico de la Educación Secundaria Obligatoria y del Bachillerato (2015).

Rico, L., Díez, A., Castro, E., Lupiañez, J.L. (2011) Currículo de matemáticas para la educación obligatoria en España durante el periodo 1945-2010. Educatio Siglo XXI, Vol. 29 nº 2, pp. 139-172

Tebar, F. (2012). Las matemáticas en la Educación Secundaria. De la Constitución a la LOE. Suma 69, marzo 2012. pp. 63-73.