

Degree	Type	Year
Teacher Training for Secondary Schools, Vocational Training and Language Centres (Spec. Mathematics)	OB	1

Contact

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Teachers

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Teaching groups languages

You can view this information at the [end](#) of this document.

Prerequisites

There are no prerequisites

Objectives and Contextualisation

At the end of the Master, students have to achieve the following objectives:

1. Acquire the didactic knowledge necessary to start teaching in secondary schools
2. Apply didactic and problem-solving knowledge to the exercise of teaching

3. Integrate the didactic knowledge of mathematics learned in the course
4. Communicate their decisions and conclusions as a mathematics specialist
5. Assess the importance of continuous training when teaching mathematics

Learning Outcomes

1. CA05 (Competence) To create flexible learning situations in diverse and meaningful contexts through the justified use of a range of strategies and methodologies that promote inclusive learning and the development of mathematics-specific competences.
2. CA06 (Competence) To implement activities in the mathematics classroom in the manner in which they were designed and planned, assimilating any unexpected situations generated by the students to achieve and improve on the expected learning outcomes.
3. CA07 (Competence) To apply disciplinary and curricular mathematical content from the perspective of literacy and education for all, exploring ways to integrate such content into the classroom.
4. CA19 (Competence) To apply an equity and gender perspective when designing mathematics activities.
5. KA04 (Knowledge) To recognise the basic aspects of the mathematics curriculum and the personal and didactic knowledge of mathematics required to plan learning situations and action and assessment strategies in the field of mathematics.
6. KA05 (Knowledge) To recognise your own socio-emotional competences and personal strengths and weaknesses with a view to self-managing emotions and managing the working atmosphere in the classroom.
7. SA02 (Skill) To develop strategies for dealing with critical incidents that occur while teaching and which are related to the processes of teaching and learning mathematics.
8. SA03 (Skill) To integrate the various types of assessment into lesson plans, particularly formative assessment and self-assessment, as a tool for checking, regulating and enhancing the processes of teaching and learning mathematics.
9. SA04 (Skill) To take the characteristics of the classroom interaction (teacher-student and between students), formative feedback, student competences and the role of the teacher in activating and regulating learning into account when planning lessons.

Content

- Introducción a la didáctica de las matemáticas: currículum, competencias, aprendizaje y enseñanza

- Recursos, propuestas de enseñanza y conocimiento didáctico en relación a los bloques temáticos del currículum de matemáticas, así como a la conexión entre ellos y a su inclusión en el mundo que nos rodea:

Números e iniciación al álgebra

Geometría y medida

Estadística i probabilidad

Análisis

Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
Type: Directed			

Case studies	12	0.48
Oral presentations	24	0.96
Problem Solving	36	1.44
Type: Supervised		
Analysis of didactic situations	30	1.2
Type: Autonomous		
personal study	60	2.4
Readings	36	1.44
Realization of proposals of didactic activities	42	1.68

The methodology combines presentations by the teacher, solving didactic problems and practical proposals. Readings of articles and texts that are discussed in class are commissioned. In relation to the autonomous activity, the student must carry out the project.

The proposed teaching methodology and assessment may undergo some modification depending on the attendance.

"The proposed methodology involves a face-to-face development of the subject. If it were necessary to move to a virtual environment:

the theoretical part it would be done by videoconference (through teams) and the practical part would be done in person.

If it were necessary to return to a confinement everything would be done through teams and the virtual campus. In any case, the methodology will be adapted to the situation.

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Assessment

Continuous Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Design of mathematical activities	23,75%	15	0.6	CA05, CA06, CA07, CA19, KA04, KA05, SA02, SA03, SA04
Didactic sequence of calculus	17,5%	10	0.4	CA05, CA06, CA07, CA19, KA04, KA05, SA02, SA03, SA04
Interpretation of student productions	17,5%	10	0.4	CA05, CA06, CA07, KA04, KA05, SA04
Practice on the teaching of numbers	17,5%	10	0.4	CA05, CA06, CA07, CA19, KA04, KA05, SA02, SA03, SA04
Use of materials and resources to teach geometry	23,75%	15	0.6	CA05, CA06, CA07, CA19, KA04, KA05, SA02, SA03, SA04

The following will be required to be entitled to the final assessment:

Attendance at a minimum of 80% of class sessions. The delivery of all practices and exercises within the indicated

The mastery of mathematics that make up the curriculum of Compulsory Secondary Education and Baccalaureat

The delivery of all assessment activities and a minimum grade of 5 points out of 10 in each of them.

The return of the works and controls will be made no later than 30 working days after the date of delivery and / o

Specific validations can be made to ensure authority and acquisition of competence in case of suspected acader

Plagiarism is considered a major infraction, if a plagiarism is detected in a job it will be invalidated, it must be repr

For a definition of plagiarism you can consult: http://wuster.uab.es/web_argumenta_obert/unit_20/sot_2_01.html

SINGLE ASSESSMENT

Students who opt for the single assessment must follow the development of the subject, attending class regularly and with the same attendance conditions as continuous assessment students.

They will submit all the assessment activities on a single date at the end of the session and will be required to pass a validation test for each of the activities.

RECUPERATION

Phase V, before writing the TFM, will be the period destined to recover the part of the failed module that is still recoverable, as indicated by the responsible teacher.

Bibliography

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Varis autors (2011). Col.lecció de RBA "el mundo es matemático". Qualsevol llibre pot ser útil

Webs d'interès:

<http://phobos.xtec.cat/creammat/joomla/> (CREAMAT. Centre de Recursos per ensenyar i aprendre matemàtiques. Generalitat de Catalunya. Departament d'Educació)

<http://www.divulgamat.net/> (Divulgamat: Centro Virtual de Divulgación de las matemáticas).

<http://nrich.maths.org/frontpage>

Cada professor indicarà bibliografia complementaria para la parte correspondiente a su docencia

Software

Geogebra will be used as well as other free software determined by the teachers of the module.

Groups and Languages

Please note that this information is provisional until 30 November 2025. You can check it through this [link](#). To consult the language you will need to enter the CODE of the subject.

Name	Group	Language	Semester	Turn
(TEmRD) Teoria (màster RD)	1	Catalan	annual	morning-mixed
(TEmRD) Teoria (màster RD)	2	Catalan	annual	afternoon
(TEmRD) Teoria (màster RD)	3	Catalan	annual	afternoon
(TEmRD) Teoria (màster RD)	4	Catalan	annual	afternoon