

PROFESSORS PARTICIPATING IN THE COURSES

Alamínos Prats, Jerónimo	Lupiáñez Gómez, José Luis
Álamo Antúnez, Nieves	Marano Calzonlari, Miguel
Amo Artero, Enrique de	Martín González, Cándido
Aranda Pino, Gonzalo	Martín Serrano, Francisco
Arias López, Margarita	Martínez Finkelshtein, Andrei
Asensio del Aguila, María J.	Martínez López, Antonio
Bruzón Gallego, María Santos	Medina Reus, Elena Blanca
Bueso Montero, José Luis	Mena Jurado, Juan Francisco
Calderón Martín, Antonio	Merino González, Luis
Campos Rodríguez, Juan	Moreno Balcázar, Juan José
Castellón Serrano, Alberto	Muriel Patino, Concepción
Castro López, Ildelfonso	Navarro Pascual, Juan Carlos
Cruz Rambaud, Salvador	Ortegón Gallego, Francisco
Cuadra Díaz, Juan	Oyonarte Alcalá, Luis
Díaz Carrillo, Manuel	Pardo Espino, Enrique
Díaz Ramos, Antonio	Pasadas Fernández, Miguel
El Kaoutit Zerri, Laiachi	Pérez Fernández, Francisco J.
Escoriza López, José	Pérez Muñoz, Joaquín
Flores Dorado, José Luis	Ramírez González, Victoriano
Gálvez López, José Antonio	Ramírez Labrador, José
Gandarias Nuñez, María Luz	Redondo Neble, MaríaVictoria
García García, Ignacio	Rico Romero, Luis
García Hernández, Josefa	Roca Rodríguez, Francisco
García Olmedo, Francisco	Rodríguez Galván, José Rafael
García Rojas, Juan Ramón	Rodríguez Garzón, Antonio
Girela Álvarez, Daniel	Rodríguez Palacios, Ángel
Gómez Guzmán, Pedro	Rodríguez Torreblanca, Carmelo
Gómez Lozano, Miguel Ángel	Román Román, Patricia
Gómez Molleda, M. Ángeles	Romero Sarabia, Alfonso
Gómez Ruiz, Francisco	Ros Mulero, Antonio
Gómez Torrecillas, José	Sánchez Ortega, Juana
González Carmona, Andrés	Santos Aláez, Evangelina
González Enríquez, Cristobal	Siles Molina, Mercedes
Gutiérrez López, Manuel	Torre Rodríguez, Alberto
Jara Martínez, Pascual	Torrecillas Jover, Blas
López Jiménez, Bartolomé	Torres Ruiz, Francisco de Asís
Kaidi Ihachmi, El Amin	Turiel Sandin, Francisco Javier
Lobillo Borrero, Francisco J.	Urbano Pérez-Aranda, Francisco
López Fernandez, Francisco J.	Velasco Collado, María Victoria
López Ramos, Juan Antonio	Viruel Arbáizar, Antonio
Lorente Domínguez, María	

PARTICIPATING TUTORS AND GUEST PROFESSORS

(See complete list in the Master's page)

PRE-REGISTRATION PERIOD:

PHASE 1

- Applications: May 1-31.
- Registration: From June 29 to July; September 19-22..

PHASE 2

- Applications: July 1-28.
- Registration: September 19-22 and from September 29 to October 4.

PHASE 3

- Applications: From September 26 to October 2.
- Registration: October 19-21, October 26-28.

Complete information at:

http://www.juntadeandalucia.es/innovacioncienciayempresa/sguit/mo_calendario.php

CONTACT INFORMATION:

ALMERÍA

<http://cms.ual.es/UAL/universidad/serviciosgeneral/es/tercerciclo/index.htm>

CÁDIZ

<http://www.uca.es/posgrado/masteres-oficiales>

GRANADA

<http://escuelaposgrado.ugr.es/>

JAÉN

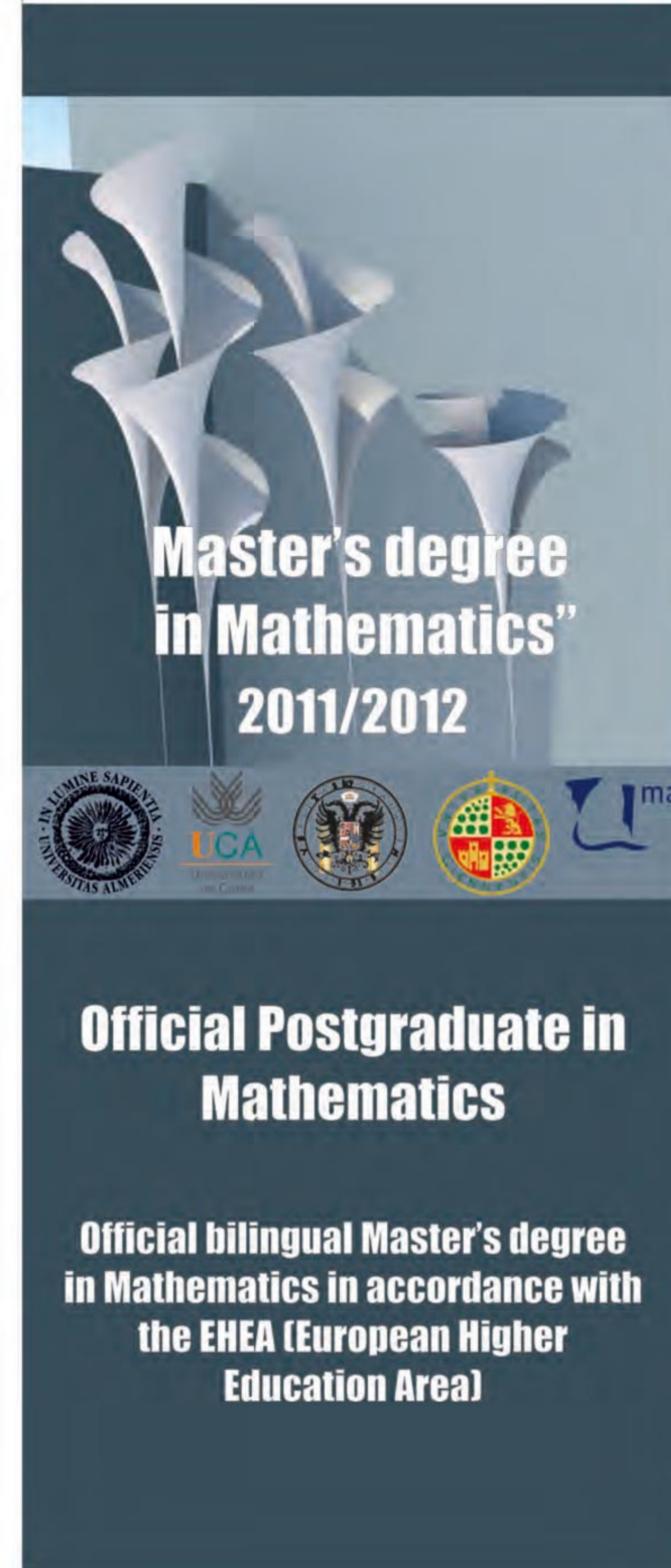
<http://viceees.ujaen.es/postgrado>

MÁLAGA

<http://www.pop.uma.es/>

Coordinator: Antonio Martínez López
Department of Geometry and Topology

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Phone: 958 24 32 79



The banner features a background of stylized white flowers on a dark blue background. The text 'Master's degree in Mathematics' is written in a large, white, serif font, with '2011/2012' below it in a smaller, white, sans-serif font. At the bottom, the text 'Official Postgraduate in Mathematics' is written in a large, white, sans-serif font, followed by 'Official bilingual Master's degree in Mathematics in accordance with the EHEA (European Higher Education Area)' in a smaller, white, sans-serif font. Logos for the University of Almería (UAL), University of Cádiz (UCA), University of Granada (UGR), University of Jaén (UJA), and University of Málaga (UMA) are displayed in a row at the bottom.

CREDITS:

- Number of ECTS in the degree 60.
- Minimum number of ECTS per academic year 30.

TEACHING:

- Classroom and online learning:
Some of the courses are blended. The programme includes the use of the Online Campus as a means for: innovation, individual attention for students, and grates ease in taking the courses.
- Classroom activity:
- La enseñanza presencial se realizará en horario que facilite la asistencia de los alumnos.

ADMISSION:

The Master's programme is open to:

- Bachelors in Mathematics
- Bachelors in Physics and other Sciences
- Engineers, Technical Engineers and Holders of equivalent degrees

For more information see:

<http://www.juntadeandalucia.es/innovacioncienciayempresa/sguit>

Maximum of 50 students

REGISTRATION FEES:

Public fees set by the autonomous Government of Andalusia.

COURSEWORK PERIOD OF THE DOCTORATE IN MATHEMATICS:

- Doctorate in Mathematics may be completed within this Post-Graduate programme, for which the student must have completed and passed the 60 ECTS credits of the Master in Mathematics or equivalent, subject to approval by the Academic Commission.

SCHOLARSHIPS AND GRANTS:

- There are travel scholarships and grants for both students and professors.
See the Master's page.

EXPERT CERTIFICATE:

- Completion of at least 24 credits of Modules I and IIb(1) shall fulfill the requirements for the "Andalusian Expert Certificate in New Technologies in Information and Communications for Teaching Mathematics".

BILINGUAL MASTER'S DEGREE:

- Students in the Master's programme may opt to complete at least 50% of their ECTS credits in English and thereby obtain recognition of that accomplishment on their Master of Mathematics certificate.

MATHEMATICS

SPECIFIC AIMS/COMPETENCIES.

A post-graduate has two core areas and three specialisations.

1. Foundations and Applications:

The goal is to train Mathematics professionals with a dual specialisation:

I) Teaching Mathematics with high skills in the use of Information Technology and Communications (ITC).

II) Incorporation to the sphere of mathematics applications in business.

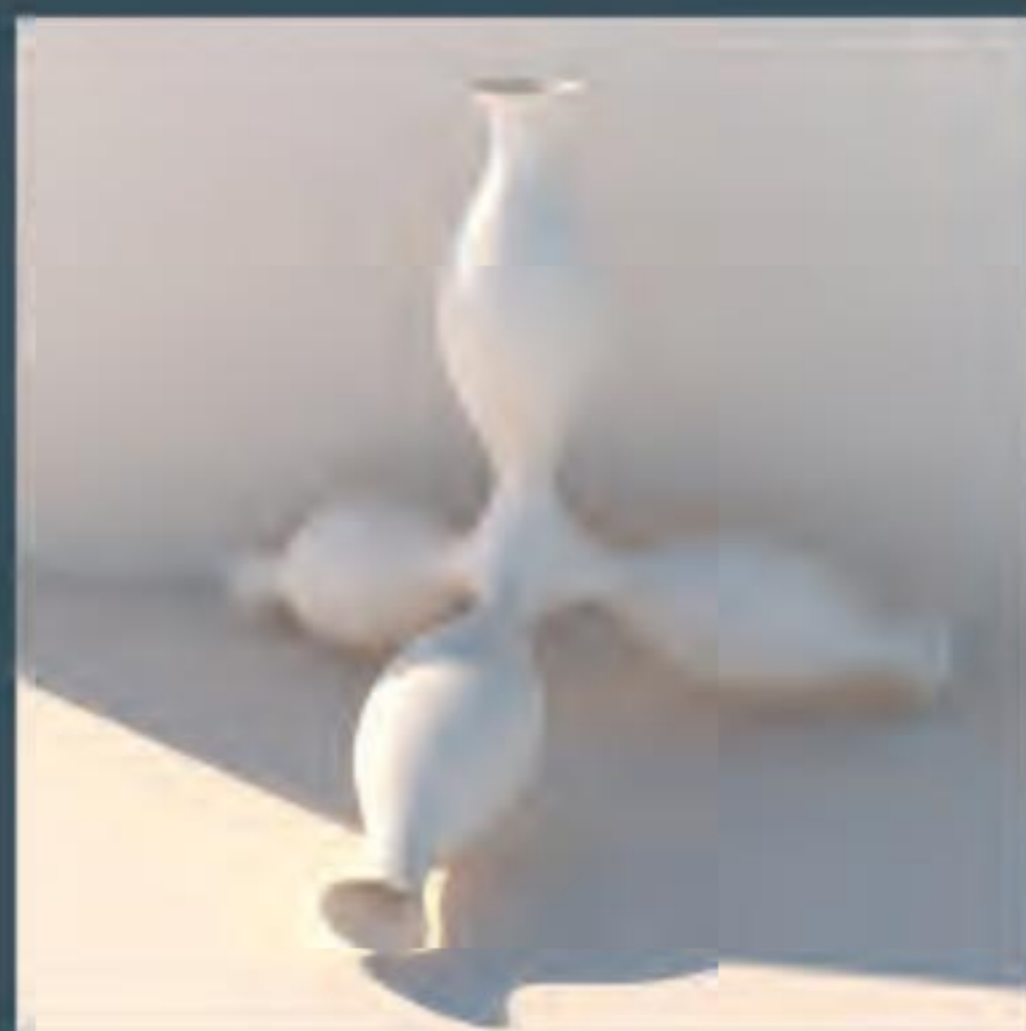
2. Advanced Techniques:

The aim is train students in the study and development of mathematical methods, theories, and new techniques.

III) Specialisation on research.

Common goals of the different specialisations are:

- To promote keeping up to date in science and the interconnection among the various fields of Mathematics.
- Demonstrate current mathematical techniques and their applications.
- To train students in the study and development of mathematical methods, theories, and new techniques.



STRUCTURE

- The structure is based in Modules and subjects letting a flexible organization to get efficiently the objectives.

- The subjects are non compulsory and they are bunched in four modules:

I. Mathematics and Reality

IIa: Advances Techniques

IIb(1): Mathematics and New Technologies

IIb(2): Applied Mathematics

The fifth module is the Practicum.

- In order to obtain the Master's degree the student must successfully complete 40 credits from courses in Modules I, IIa, IIb(1) and IIb(2) (in the different options) and 20 credits from the module Practicum.

Master Mathematics (60 ECTS)

Research Teaching Applications

40 ECTS Modules I y IIa
20 ECTS Practicum and Master's Thesis
40 ECTS Modules I y IIb(1)
20 ECTS Practicum and Master's Thesis
40 ECTS Modules I y IIb(2)
20 ECTS Practicum and Master's Thesis

MODULE I: MATHEMATICS AND REALITY

-Shapes and Curvature
Blended course al (UGR/UCA) 8 ECTS

-Mathematical Models and Algorithms
Blended course (UCA) 8 ECTS

MODULE IIa: Advanced Techniques

- Advanced Algebra
Face-to-face course (UAL) 8 ECTS

-Advanced Functional Analysis
Face-to-face course (UAL) 8 ECTS

-Advanced Mathematical Analysis
Face-to-face course (UMA) 8 ECTS

-Advanced Differential Geometry
Face-to-face course (UGR) 8 ECTS

-Geometry, Topology and Physics
Face-to-face course (UMA) 8 ECTS

-Mathematical Models in Physics
Face-to-face course (UGR) 8 ECTS

-Representation Theory.
Face-to-face course (UMA) 8 ECTS

MODULE IIb(1): Mathematics and New Technologies

-Scientific update in Mathematics
Blended course (UAL/UCA/UGR/UMA) 6 ECTS

-The development of mathematical thinking
Blended course (UCA) 6 ECTS

- Dynamic mathematics
Blended course (UMA) 6 ECTS

-Formation in Mathematics
Enseñanza semipresencial (UGR) 6 ECTS

-Learning and Teaching in Mathematics
Blended course I (UGR) 12 ECTS

-Software in Mathematics
Blended course (UAL/UCA/UGR/UMA) 8 ECTS

MODULE IIb(2): Applied Mathematics

- Partial Differential Equations and Numerical Methods
Blended course (UCA) 8 ECTS

- Mathematics applied to sciences and business
Blended course (UCA) 8 ECTS

- Applied Mathematics in Computer Sciences
Blended course (UGR) 8 ECTS

- Modeling and Stochastic Processes
Blended course (UAL) 8 ECTS

- Approximation Theories
Blended course (UJA) 8 ECTS

PRACTICUM AND MASTER'S THESIS

Students must successfully complete 20 credits involving a Master's thesis and some of the following activities, according to suggestions by the Academic Commission:

- Work studies in the educational system (public and private).
- Work studies in businesses.
- Supervised research work.
- Complementary seminars in:
 - * Computational Algebra.
 - * Geometric Analysis.
 - * Non-commutative Algebra.
 - * Algebraic Topology.
 - * Financial Mathematics.
 - * Electoral Mathematics.
 - * Submanifolds Theory.
 - * Geometry and Physics.
 - * Functional Analysis.
 - * History of Mathematics.
 - * Selected topics in Associative Algebra.
 - * Theory of Bifurcations and Dynamic Systems.

Notable specialists from each of these fields will participate.