

WHY STUDY THIS MASTER AT UAM?

The calendar and teaching distribution are very innovative. The Master will be given by specialists of the seven Universities involved in the Title. All the students together will be concentrated in one of the seven universities (in a rotatory way) and the teaching will be intensive in few periods during the academic course. The professors will move to this university for giving the classes. Thus for example the schedule of the current Academic Year is indicated below:

INTRODUCTION MODULE

- This course will be given in the student's enrolment university, in November.
- The timetable will be 2 hours per day.

BASIC & ADVANCED MODULES

- The Basic & Advanced Modules (M2-M10) will be given during two three weeks intensive courses, every year in a different university.
- The timetable will be 4 hours during the morning and 2 hours during the afternoon from Monday to Friday and Saturday morning. These classes will be complemented with 8 hours per week in seminars and practical classes with the students.
- The subject M10: "Current topics in molecular nanoscience and nanotechnology" will be organized as a summer school (European School on Molecular Nanoscience- ESMoNa).
- Invited professors and researchers and Master and PhD students from the different European universities and research institutions will take part in it. The School objective is to be a debate forum for the different groups working in the molecular nanoscience and molecular materials fields.

MASTER DISSERTATION MODULE

- During the rest of the year, students will carry their research activity at his home university. At the end of the year (from late July to mid September) students will defend their master dissertation.



Cincuenta
Aniversario
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More information at:

Centro de Estudios de Posgrado

Campus de Cantoblanco
C/ Francisco Tomás y Valiente, 2
28049 Madrid

Tel: +34 91 497 4110 / 4057 / 5087
e-mail: posgrado.oficial@uam.es

www.uam.es/posgrado

Campus Internacional
excelencia UAM
CSIC

UAM Universidad Autónoma
de Madrid

VNIVERSITAT
DE VALÈNCIA

Universitat d'Alacant
Universidad de Alicante

UCLM Universidad de
Castilla-La Mancha

Universidad de Valadolid

UNIVERSITAS
Miguel
Hernández

ULL Universidad
de La Laguna

Sciences

Master's Degree in MOLECULAR NANOSCIENCE AND NANOTECHNOLOGY

UAM Universidad Autónoma
de Madrid

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OVERVIEW

Degree: Master's Degree¹ in Molecular Nanoscience and Nanotechnology

Academic discipline: Sciences

Number of ECTS credits: 60

Public fees: The minimum set by the Community of Madrid²

Character: Research-oriented

Modality: Classroom teaching

Language of instruction: English

Place: Faculty of Sciences

Web of the Master: www.uam.es/munanociencia

Contact: informacion.master.nanociencia@uam.es

Number of ECTS by type of subject:

Type of subject:	ECTS
Compulsory	45
Master Thesis	15
Total	60

¹ According to Spanish regulation this Master qualifies Level 7 in the European Qualifications Framework (EQF), which gives access to PhD studies.

² As a guideline, the price per ECTS for the 2016-17 academic course was 46€ for EU member students, and 68€ for non-EU and non-resident students.



DESCRIPTION AND OBJECTIVES

The master, which is given in English, is organized by Universitat de València (UVEG), Universidad Autónoma de Madrid (UAM), Universitat d'Alacant (UA), Universidad de Valladolid (UVa), Universidad La Laguna (ULL), Universidad de Castilla-La Mancha (UCLM) and Universidad Miguel Hernández de Elche.

The objective of this Master is to prepare students in the Nanoscience and Nanotechnology fields in order to be able to carry out a professional career in this area or a research activity leading to a doctoral thesis. This Master encompasses several disciplines: chemistry, physics, engineering, materials science, biochemistry, pharmacy and medicine.

The syllabus of the Master is somewhere in between the Nanoscience/Nanotechnology fields and the molecular systems. Therefore, it explores scientific areas of increasing interest such as Molecular Electronics, Molecular Magnetism, Supramolecular Chemistry, Surfaces Chemistry or Molecular Materials Science.

The interuniversity master has two basic goals:

- To lay down a national excellence standard in Molecular Science to empower students to research in this area or for them to gain useful knowledge and skills to be able to develop a career in high technology companies.
- To create a multidisciplinary and competitive scientific community in Spain to research in these subjects. In this respect, the master is a suitable framework for the promotion of mobility and interaction between students from different scientific areas and contacts with other universities, research centres and companies operating in this area.

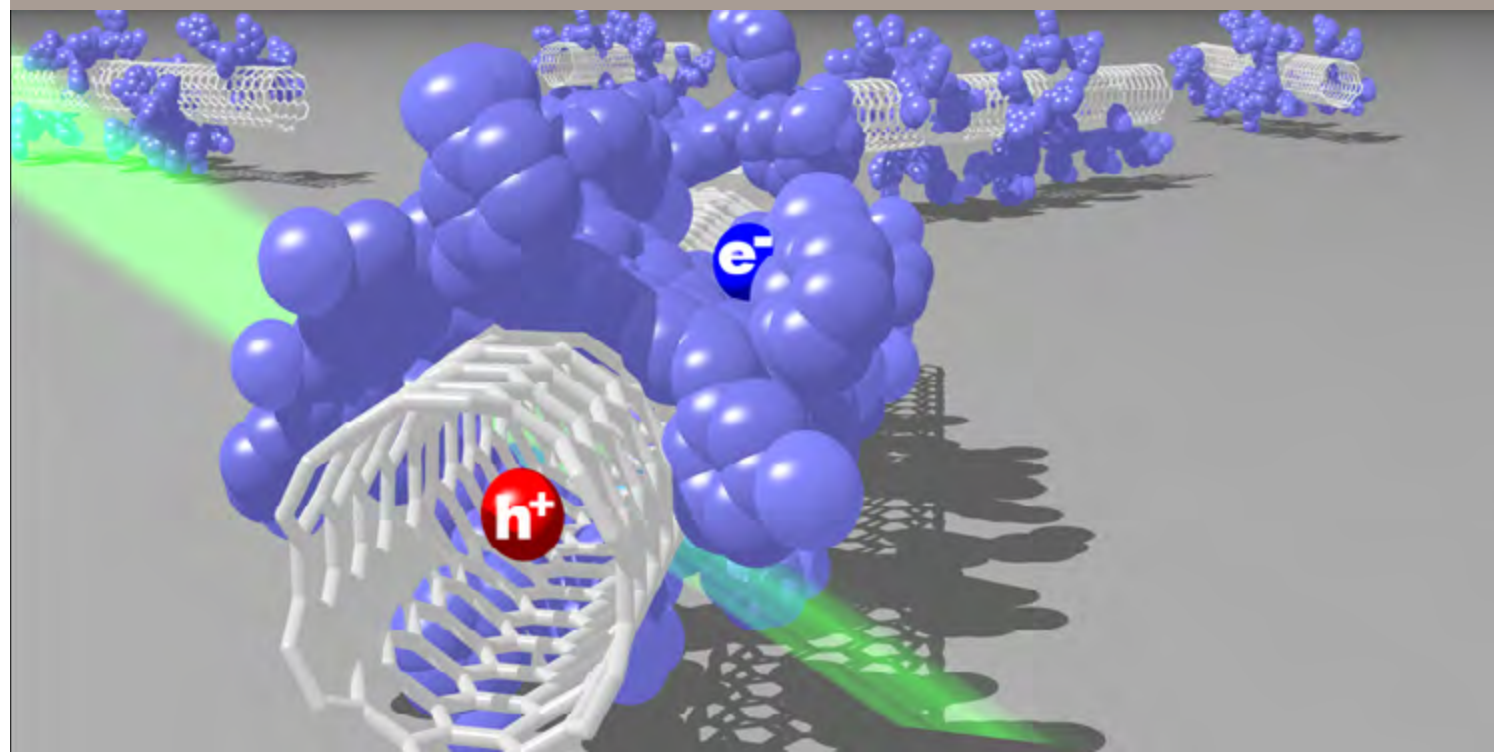
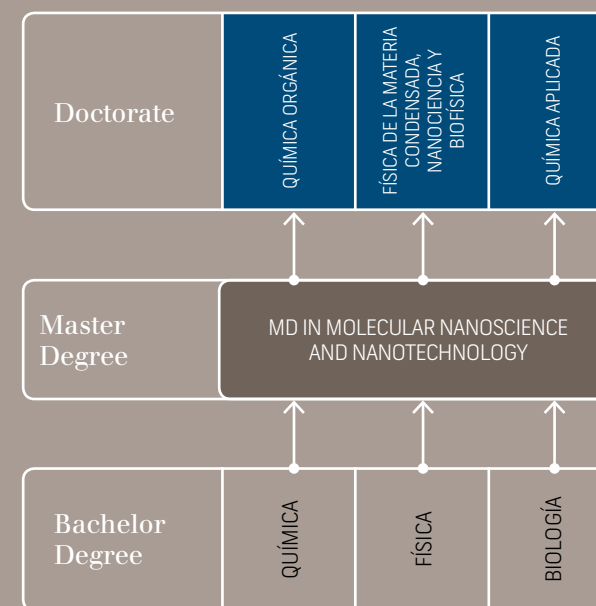
ADMISSION PROFILE

This Master encompasses several disciplines and admits students of different specialities, namely: chemistry, physics, engineering, materials science, biochemistry, biotechnology, pharmacy and medicine.

On completion of the course, students will be trained, on a multidisciplinary basis, in chemical aspects related with nanoscience (nanoscience bottom-up approach for the design of functional molecules and supramolecular structures; intermolecular interactions; molecular self-assembly and self-organisation) and in physical ones (nanomanufacturing top-down approach, physical manipulation techniques, organisation and characterisation of nanomaterials).

They will also learn to address scientific problems from the perspective of Materials Science. Lastly, they will have an overview of the impact of nanoscience on other scientific and technological areas.

CONTEXT OF THESE STUDIES AT UAM



GRADUATES AND EMPLOYABILITY

The title is addressed to different specialities, namely: chemistry, physics, engineering, materials science, biochemistry, biotechnology, pharmacy and medicine.

They are not data about employability. Most of the recent students are doing research work in different laboratories, and many of them are developing a Ph.D.

RESEARCH INTERNSHIPS

The master dissertation module will be carried out at any University, Research Center or Company agreed between the Master Coordinator, the student and a given research center.

It is not foreseen any stay abroad during the Master, but the research group in which the student is developing his/her master dissertation module can organize a stay abroad for the student if it is considered convenient by both the Tutor and Coordinator of the Master.

FEATURED ACTIVITIES

This course is integrated in the European School on Molecular Nanoscience (ESMoIna). This school (one week in May) intends to provide a suitable framework to show and extensively discuss the state-of-the-art in the molecular nanoscience and nanotechnology. All the students will attend and present talks.