Why study this Master at UAM?

Enrollment in NucPhys is centralized in the Universidad de Sevilla as the Coordinator. UAM offers the course "Many-Body Theories in Nuclear Physics" and is welcome to host students for developing his/her Master's Thesis in Theoretical Nuclear Physics under the supervision of outstanding scientists in this field.

1968 2018
Cincuenta Aniversario

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

excelencia Campus Internacional UAM CSIC+

UAM Universidad Autónoma de Madrid

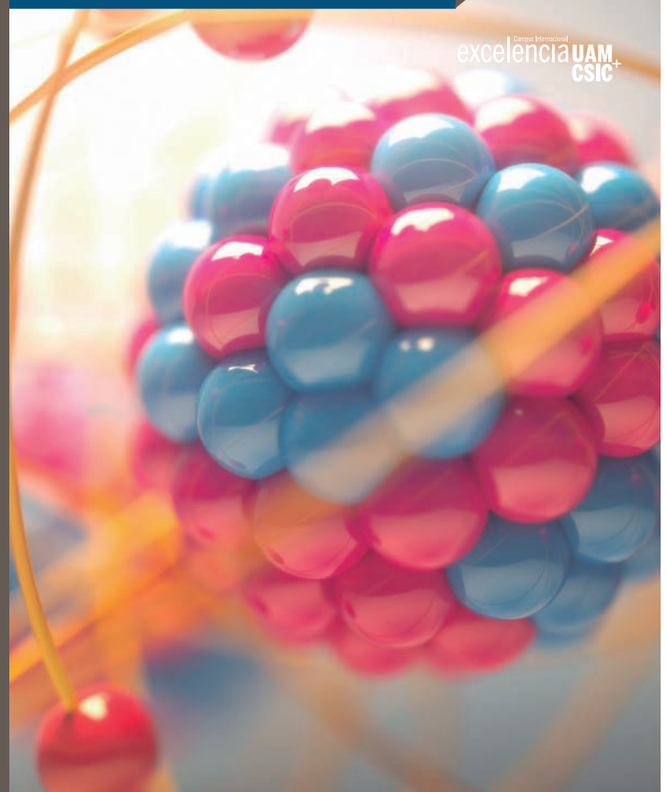
Universidad Complutense de Madrid
Universitat de Barcelona
Universidad de Salamanca
Universidad de Sevilla
Université de Caen Basse-Normandie
Università degli Studi di Catania
Università degli Studi di Padova

Sciences

ERASMUS MUNDUS MASTER'S DEGREE IN NUCLEAR PHYSICS

M

UAM Universidad Autónoma de Madrid



Overview

Degree: Erasmus Mundus Master's Degree [1] in Nuclear Physics

Specialization:
- Experimental/large accelerators
- Theoretical
- Applied/small accelerators

Academic discipline: Sciences

Number of ECTS credits: 120

Public fees: The fees set by the Coordinator University [2]

Character: Research-oriented.

Modality: Classroom teaching

Language of instruction: English

Place: Faculty of Sciences

Web of the Master: http://master.us.es/nuphysjmd

Contact: informacion.master.fisicanuclear@uam.es

Number of ECTS by type of subject:

Type of subject	ECTS
Compulsory	6
Optional	72
Internships	12
Master Thesis	30
Total	120

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

[2] Admission and enrolment procedures will be at University of Seville. Fees will be set by that university.

Description and Objectives

NucPhys is a 2-years Erasmus+ Master Course and it is offered by a consortium of 8 partner universities in Spain, France and Italy, with the participation of 20 research institutions/ companies as associated partners in Europe. Nuclear Physics is a broad matter of relevance from both the fundamental knowledge of Nature and the multiple applications to different fields of strategic economical relevance. Consequently, in this Master, fundamental theory and experiments as well as applications will be presented.

The main objective of the Master programme is to provide top-ranked students with an excellent background in Nuclear Physics so as to educate experts and foster their future career in this field.

At the same time, NucPhys students carry out their master studies in at least 3 countries, in a stimulating and scientifically excellent international environment.

NucPhys has a double educational approach. First, to train well-prepared specialists to enter the industry in any of the fields mentioned above. Second, to train students able to develop research programmes and make their PhD in the field of Nuclear Physics.

The official language of the course is English, but students are given the possibility to learn the languages of the host countries by attending language courses at the partner universities.

Quality of the Practices

Part of the Master's Degree course is devoted to Research Internships (12 ECTS) carried out both in companies or in research institutions.

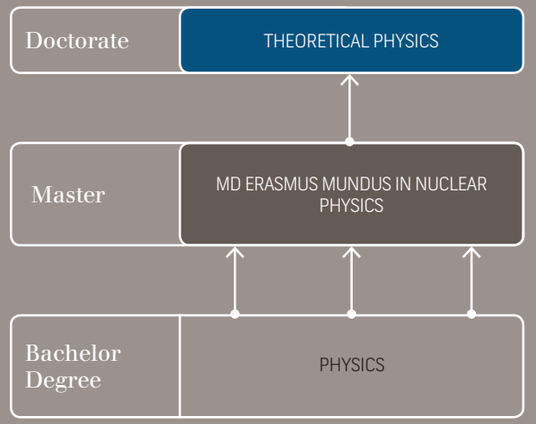
- AAA Advanced Accelerator Applications (Ibérica) S.L (Barcelona, Spain)
- ARCHADE: Advanced Resource Center for HADrontherapy in Europe (Caen, France)
- CAEN: Costruzioni Apparecchiature Elettroniche Nucleari S.p.A.: CAEN Sys (Systems and Spectroscopy Solutions)
- CAEN: Costruzioni Apparecchiature Elettroniche Nucleari S.p.A.: CAEN (tools for discovery) Electronic Instrumentation
- CETIR : Image Diagnostic Company (Barcelona, Spain)

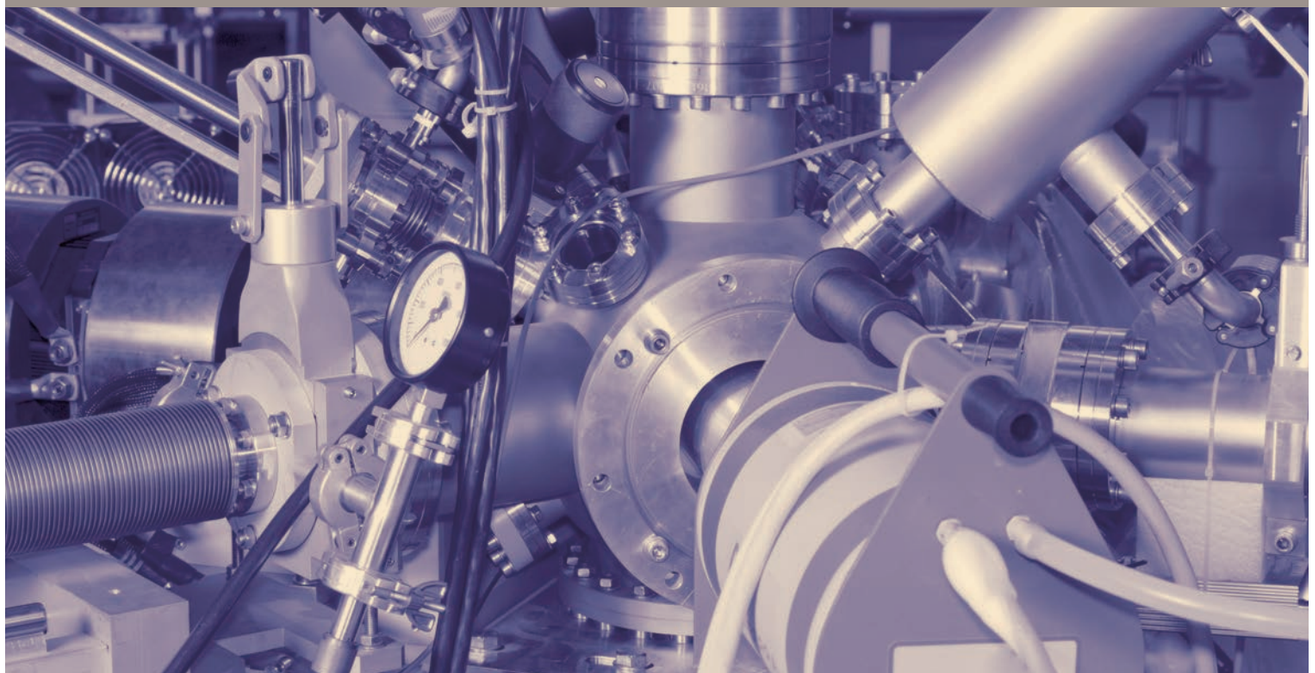
Graduates and Employability

Master's Degree will be particularly useful for:

- Future researchers in the field of Nuclear Physics
- Medical physics
- Radiology
- Environmental radioactivity
- Nuclear techniques for multi-elemental analysis
- Nuclear dating techniques
- Nuclear power plants

Context of these studies at UAM





Admission profile

The Master's Degree is aimed at all graduates in Physics, Chemistry, Engineering, etc.

Much of the Master's programme is based around Quantum Mechanics. Accordingly, the priority qualifications will be Physics and Chemistry..

Research Internships

- Spanish universities (US, UAM, UB, UCM, USAL).
- Italian universities (Padova, Catania).
- Université de Caen (France).
- Spanish research institutes (CSIC, CIEMAT, CNA, CMAM, HVM).
- Italian research institutes (INFN).
- French research institutes (GANIL, CNRS, ENSICAEN).
- CERN (Switzerland).

Featured Activities

Mobility is in the core of NucPhys. The students will have to stay in, at least, three different countries (Spain, France and Italy) during their two-year Master's studies. Three different paths (experiments, theory and applications) are defined to ensure this mobility scheme.