

PROGRAMME INFORMATION



UNIVERSITY MASTER'S DEGREE IN SYSTEMS AND CONTROL ENGINEERING

CÓDIGO 310401



**UNIVERSITY MASTER'S DEGREE
IN SYSTEMS AND CONTROL ENGINEERING**

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University Master's Degree in Systems and Control Engineering

INFORMATION IDENTIFYING THE QUALIFICATION

Name and status of awarding institution

Universidad Complutense de Madrid y Universidad Nacional de Educación a Distancia.

Public universities.

Name of qualification and title conferred in original language

Máster Universitario en Ingeniería de Sistemas y de Control por la Universidad Complutense de Madrid y la Universidad Nacional de Educación a Distancia.

Status

National validity.

Approved by Accord of the Council of Ministers on July 1st, 2011.

Main field(s) of study for the qualification

The study is included in the field of Engineering and Architecture.

Language(s) of instruction/examination

The degree is taught in Spanish.

INFORMATION ON THE LEVEL OF THE QUALIFICATION

Level of qualification

Level 3 (Master) in the Spanish Framework of Higher Education (MECES) is equivalent to level 7 of European Qualification Framework (EQF).

Official length of programme

The official length of programme is 60 ECTS and 1 year full time.

Access requirements

Engineering or Bachelor's Degree in Computer Sciences or scientific-technological degrees related to Systems, Automation, Electronics, Communications or Computer Engineering. Doctorate on Automatic Control or Computer Sciences

INFORMATION ON THE CONTENTS

Mode of study

Blended learning full time.

Programme requirements

The programme of studies is composed of 42 elective ECTS, 6 virtual practices ECTS and 12 Master's Dissertation ECTS.

Subjects

- Intelligent Systems
- Mathematical Programming
- Heuristic Optimization and Applications
- Communications and Industrial Networks
- Embedded Systems
- Signal Processing
- Computer Vision
- Sensors and Actuators
- Industrial Robotics
- Autonomous Robots
- Industrial Automation
- Dynamic System Modeling
- System Identification
- Multivariable Control
- Intelligent Control
- Hybrid Control
- Non-Linear Control
- Bio-Systems
- Evolutionary Dynamics
- Labs on Instrumentation and Control (External Practices)
- Labs on Computation and Robotics
- Data Mining
- Systems Simulation
- Master's Degree Final Project

Grading scheme

In the Spanish university system, modules/courses are graded on a scale of 0 to 10 points with the following qualitative equivalence:

0-4.9: "suspenso"; 5-6.9: "aprobado"; 7-8.9: "notable"; 9-10: "sobresaliente". A special mention, "Matrícula de Honor" may be granted to up to 5% of the students in a group provided they have got a "sobresaliente". To pass a module/course it is necessary to get at least 5 points.

In cases of recognition of ECTS, professional experience, cultural or sports activities, or student representation no grading will be recorded but, where appropriate, the word "Apto".

INFORMATION ON THE FUNCTION OF THE QUALIFICATION

Access to further study

This qualification gives access to Doctoral studies, provided that the student has completed a minimum of 300 ECTS in the overall teachings of Bachelor and Master.

Stated objectives associated with the qualification and professional status (if applicable)

The main objective of this Master is to train specialists in the fields of control and systems engineering, capable of addressing the design, implementation, operation and maintenance of automatic monitoring, control, manipulation and management of production processes where high performance of dynamic behaviour, energy saving, pollution reduction or efficiency and safety are required.

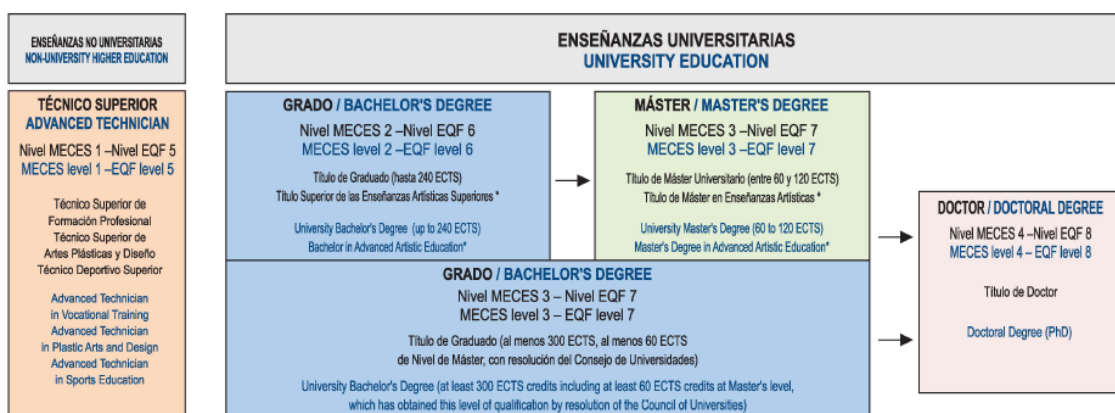
The training obtained after completing the Master provides sufficient knowledge and skills to cope in different scientific and technological fields such as, for example, electronics, mechanics, electrical, computers, power, communications networks, automotive, manufacturing and logistics systems, mechatronics, robotics and components, transportation systems, chemical processes, biological and medical applications, environmental systems, and applications to biosystems and bioprocesses.

ADDITIONAL INFORMATION

<https://www.ucm.es>

<https://www.uned.es>

INFORMATION ON THE NATIONAL HIGHER EDUCATION SYSTEM



* Las enseñanzas Artísticas Superiores son Enseñanzas no Universitarias dentro del Sistema Educativo español de Enseñanza Superior
 * Advanced Artistic Education is non-university education within the Spanish Higher Education System