

PROGRAMME INFORMATION



UNIVERSITY MASTER'S DEGREE IN CHEMICAL SCIENCE AND TECHNOLOGY

CÓDIGO 215101

UNED

Facultad
de Ciencias

**UNIVERSITY MASTER'S DEGREE
IN CHEMICAL SCIENCE AND TECHNOLOGY**

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University Master's Degree in Chemical Science and Technology

INFORMATION IDENTIFYING THE QUALIFICATION

Name and status of awarding institution

Universidad Nacional de Educación a Distancia.

Public university.

Name of qualification and title conferred in original language

Máster Universitario en Ciencia y Tecnología Química por la Universidad Nacional de Educación a Distancia.

Status

National validity.

Approved by Accord of the Council of Ministers on January 22nd, 2010.

Main field(s) of study for the qualification

The study is included in the field of Sciences.

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

Bachelor's Degree in Chemistry and Chemical Engineering and related Experimental Sciences. Degree in Chemistry and Chemical Engineering 240 ECTS.

INFORMATION ON THE CONTENTS

Mode of study

Blended learning full time.

Programme requirements

The programme of studies is composed of 48 elective ECTS, and 12 Master's Dissertation ECTS.

Subjects

Module of Analytical Chemistry

- Chemistry and Analysis of Foods (6 ECTS)
- Analytical Toxicology (12 ECTS)
- Quality in Chemical Laboratories: Management, and Quality Control System (6 ECTS)
- Analytical Processes Applied to the Environmental (12 ECTS)
- Research Project. Module of Analytical Chemistry (12 ECTS)
- Master Thesis in Chemical Science and Technology. Module of Analytical Chemistry (12 ECTS)

Module of Physical Chemistry

- Interactions, Conformations and Organization of Polymers and Biopolymers (6 ECTS)
- Computational Methods in Theoretical Chemistry (6 ECTS)
- Biospectroscopy (6 ECTS)
- Technical Polymers (6 ECTS)
- Infrared and Raman Microscopy (6 ECTS)
- Statistical and Non - Equilibrium Thermodynamics (6 ECTS)
- Research Project. Module of Physical Chemistry (12 ECTS)
- Master Thesis in Chemical Science and Technology. Module of Physical Chemistry (12 ECTS)

Module of Inorganic Chemistry and Chemical Engineering

- Design and Tailor made Material Synthesis by Sol-gel Method (6 ECTS)
- X-Ray Diffraction, Thermal Analysis and Gas Adsorption for Solids Characterization (6 ECTS)
- Environmental Chemical Engineering (6 ECTS)
- Present and Future of Coal in the Environment (6 ECTS)
- Applied Inorganic Solids in Green Chemistry (6 ECTS)

- Surface Chemistry and Fundamentals of Heterogeneous Catalysis (6 ECTS)
- Research Project. Module of Inorganic Chemistry and Chemical Engineering (12 ECTS)
- Master Thesis in Chemical Science and Technology. Module of Inorganic Chemistry and Chemical Engineering (12 ECTS)

Module of Organic Chemistry

- Medicinal Chemistry (6 ECTS)
- Catalysis in Organic Chemistry (6 ECTS)
- High Resolution Nuclear Magnetic Resonance (6 ECTS)
- Sustainable Chemistry: Low Environmental Impact Methods in Organic Synthesis (6 ECTS)
- Supramolecular Chemistry (6 ECTS)
- Resolution of Racemates (6 ECTS)
- Research Project. Module of Organic Chemistry (12 ECTS)
- Master Thesis in Chemical Science and Technology. Module of Organic Chemistry (12 ECTS)

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)

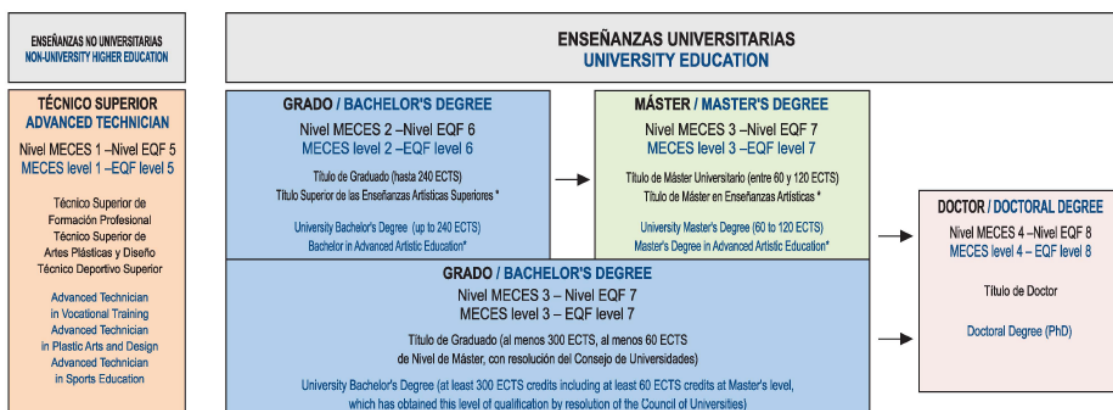
The main aim of this degree is to integrate knowledge in chemistry in order to tackle the complexity of chemical problems; to build up abilities and skills needed in experimental chemistry and to apply theoretical and practical knowledge to chemical analysis; to develop theoretical and practical skills in instrumental techniques; to develop abilities for communicating the acquired knowledge and its outcomes.

This Master will enable students to achieve a specific knowledge and both theoretical and experimental tools to develop new ideas and learn how to solve complex problems in the field of the chemical science and technology. Furthermore, will provide students the methodologies and techniques needed to develop their future professional activity in industry or research centers, in particular, analytical thinking, organization and project planning and management of scientific and technological information.

ADDITIONAL INFORMATION

<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