

# PROGRAMME INFORMATION



## UNIVERSITY MASTER'S DEGREE IN INDUSTRIAL ENGINEERING

CÓDIGO 280601

UNED

ETS de  
Ingenieros  
Industriales

**UNIVERSITY MASTER'S DEGREE  
IN INDUSTRIAL ENGINEERING**

**CÓDIGO 280601**

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## University Master's Degree in Industrial Engineering

### INFORMATION IDENTIFYING THE QUALIFICATION

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#### 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 Ingeniería Industrial por la Universidad Nacional de Educación a Distancia.

#### Status

National validity.

Approved by Accord of the Council of Ministers on May 23rd, 2014.

#### 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

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#### 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 120 ECTS and 2 years full time.

#### Access requirements

Bachelor's Degree in Mechanical, Electrical, Industrial Electronics, Automation, Industrial Technologies, Chemical or Textile Engineering.

## INFORMATION ON THE CONTENTS

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### Mode of study

Distance learning full time.

### Programme requirements

The programme of studies is composed of 55 compulsory ECTS, 50 elective ECTS and 15 Master's Dissertation ETCS.

### Subjects

- Project Direction
- Industrial Heating and Cooling
- Architecture and Construction of Industrial Plants
- Structures Ampliation
- Industrial Chemistry and Environment
- Project and Control of Manufacturing Systems
- Chemical Processes Engineering and Risk Prevention
- Thermal Engineering
- Fluids Engineering
- Fundamentals of Nuclear Science And Technology
- Structures Design and Industrial Constructions
- Mathematical Supplements for Industrial Engineering
- Electric Technology
- Electric Machines and Installations
- Reciprocating Internal Combustion Engines
- Organization and Management of Complex Industrial Projects
- Real Time Processing and Control
- Integrated and Sustainable Production
- Safety and Industrial Risks
- Perception Systems
- High Voltage Technology
- Technology of Thermoelectric Power Plants
- Technology and Application of Radiation Sources and Accelerators
- Nuclear Energy Technologies
- Management Technologies of Radioactive Wastes
- Industrial Urbanism
- Electric Vehicles and Electrical Traction
- Industrial Application of Optimized Adaptative Control

- Optimized Adaptive Control
- Machine Engineering and Transport
- Vehicle Engineering
- Thermal Machines and Heat Engines
- Thermal Turbomachinery
- Computational Methods in Fluids Engineering
- Solid Deformable Mechanics
- Engineering and Advanced Management of Maintenance
- Industrial Transport Engineering
- Productive Systems Engineering
- Organization and Logistic Engineering
- Distributed Generation and Smart Grids
- Industrial Ergonomy
- Machine Design and Diagnostics
- Direction of Companies Resources
- Dynamic Control of Structures
- Advanced Concepts in Thermodynamics and Thermal Technology
- Ampliation of Manufacturing Processes and Technologies
- PIC Microcontrollers
- Master's Thesis. Nuclear Engineering
- Master's Thesis. Industrial Building
- Master's Thesis. Electronics and Automation
- Master's Thesis. Electrical Engineering
- Master's Thesis. Mechanical Engineering
- Master's Thesis. Industrial Production
- Master's Thesis. Industrial Projects
- Master's Thesis. Energetic Techniques

### 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: "suspense"; 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)

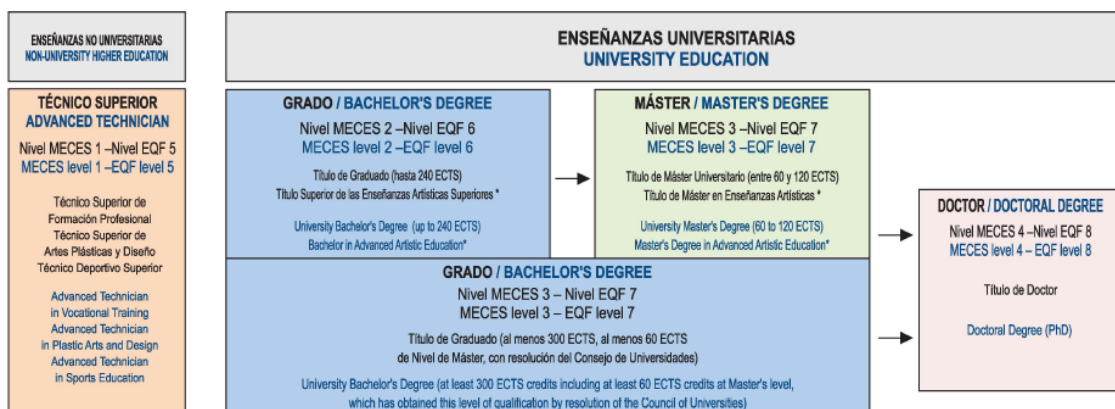
This degree qualifies for the practice of the profession of Industrial Engineer, regulated by the Order CIN / 311/2009 of February 9, BOE of February 18, 2009. Competences: to train professionals in Engineering with the appropriate skills to work as an Industrial Engineer, and to provide a solid academic training that will enable the holder to carry out a professional activity and to pursue research to obtain a PhD. Skills (summary): to acquire, understand and develop the ability to apply the academic training to the field of Industrial Engineering.

The main learning outcomes and competencies acquired are the holder will acquire advanced skills in the different subjects covered by the Master's degree programme and will show a full understanding of them. The holder will be able to apply these skills to new environments, solve problems, evaluate and choose the appropriate foundations, technology and methodologies, communicate the results in a clear way to all kinds of audiences, and take the responsibility for his/her career development.

## 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