# ••• Outstanding features

The master's degree is developed through a methodology based on **20-20-20 philosophy**:

- ✓ 20% of practical training (computer science, laboratory and pilot plant)
- ✓ 20% of lectures in English (seminars and complete courses) – 80% Spanish
- ✓ 20% of external teaching staff from Companies and Research Centers

## • • • Access to the master

#### Graduates and Engineers

#### Without additional leveling courses:

- Bachelor in Chemical Engineering

#### Additional courses required:

- Others Engineers
- Graduates in Science
  - (Contact the Master Coordinator)



Department of Chemical and Environmental Engineering The Master's Degree in Chemical Engineering from the University of Oviedo is an **official face-to-face Master's Degree** of 90 ECTS (one year and a half) linked to the **Chemical Engineer profession** 

(BOE 2009-12977)

#### **CONTACT INFORMATION**

Information and registration: International Postgraduate Center Universidad de Oviedo Edificio Histórico, ☎ (+34) 985 10 49 17 Plaza del Riego, Oviedo (ASTURIAS)

### Teaching Center:

Faculty of Chemistry (Campus del Cristo) Julián Clavería 8, Oviedo (ASTURIAS)

Master's Coordinator:

Fernando Díez

(+34) 985 10 35 08
fds@uniovi.es



http://iqtma.quimica.uniovi.es/masteriq/

## First year: 60 ECTS

- Courses: Mon-Fr 15:00-20:00
- Second year: 30 ECTS (1 semester)
  - Internship
  - Master's Thesis



# MASTER'S DEGREE IN CHEMICAL ENGINEERING





University of Oviedo

## Objectives

Acquire advanced skills in the professional field of the **Chemical Engineer**:

- Conceive, design and optimize processes, equipment, facilities and services using safety, quality, economy and environmental sustainability criteria.
- Supervise and manage teams, projects, facilities and companies in a national and international context.
- Research, analyze and develop engineering solutions, integrating multidisciplinary knowledge and new technologies.

## Professional outcomes

Direction and management, production, engineering, maintenance, safety, environment, quality, or research and development (R+D), in sectors such as:

- Chemical and petroleum industry
- Pharmaceutical, biotechnology and food
- Materials, energy and environmental
- Consulting, auditing and administration



## Mandatory courses

### **Module: Process and Product Engineering**

- Advanced transport phenomena
- Advanced separation processes
- Advanced chemical reactor design
- Chemical process simulation and optimization
- Applied chemical engineering computing
- Safety and risk analysis
- Analysis and synthesis of chemical processes
- Experimentation in Chemical Engineering

#### Module: Production and Sustainability Management and Optimization

- Production and plant management
- Integrated management of supplies and wastes
- Strategic direction of research and innovation

## Elective courses

- Pollution prevention and sustainable technologies
- Advanced pollution control technologies
- Polymer processing operations
- Emulsion and suspension technology
- Solids and surface characterization
- Advanced methodologies in chemical analysis

# Internship in Industry

# •• Master's Thesis

## Collaboration with Companies

- 20% of lectures taught by professionals from Companies, Industries and Research Centers
- Internship in Industry (12 ECTS, compulsory) with the possibility of carrying out the Master's Thesis (18 ECTS) in national or foreign companies, industries or research centers (Erasmus agreements in Germany, Finland, Austria, Portugal, Poland).



