Master’s Degree in APPLIED TELECOMMUNICATIONS AND ENGINEERING MANAGEMENT (MASTEAM)

Fostering innovation and entrepreneurship on Information and Communications Technologies

MASTEAM is an official international master programme for training professionals aiming at managing complex multidisciplinary projects, creating new technologies, new applications for existing technologies and telecommunication consulting. It offers a wide range of optional courses and prepares graduates for research or professional practice as engineers in cutting-edge Information and Communication Technologies (ICT) topics such as Smart cities, Internet of Things, 5G networks, Sensor Networks, or Big data. Management, service-oriented and entrepreneurship-related topics are also covered. The master is aligned with the needs of the ICT industry, has double degree and external mobility agreements with top-level universities in Europe, Canada, Mexico and China, and internship and Master Thesis agreements with more than 100 companies of the Telecom sector.

Prospective students
# Graduates in Telecommunications Engineering, Computer Science or Computer Networks.
# Graduates in other fields (such as Industrial Engineering and Applied Sciences) who are seeking to change their professional career.
# ICT professionals who want to update their knowledge.

Career prospects
# Design, develop and manage telecommunication projects, create or innovate on products, systems and processes.
# Work for telecommunication operators and ICT companies.
# ICT consulting on sectors that are being transformed by ICTs (automotive, audiovisual media, food, logistics, energy, and finance industries, to name a few cases)
# Carry out advanced research in R&D division of a company. Graduates holding an official bachelor’s degree (240 ECTS) and this master’s degree may seek admission to PhD programmes in Telecommunications or other ICT-related fields.

Content and programme structure
MASTEAM comprises 60 ECTS credits distributed in 2 semesters (one year full-time or two years part-time), of which 15 credits are compulsory, 33 are optional, and 12 are for the Master Thesis.

Content and programme structure:

**FIRST SEMESTER**
- **COMPULSORY COURSES:**
  - Optimization for Applied Engineering Design
  - Network Engineering
  - Next Generation Wireless Communications and Internet of Things (IoT)
  - Sensors and Interfaces
  - ICT-based entrepreneurship

- **OPTIONAL COURSES:**
  - Optical Networks for Cloud-based Services
  - Internet of Things and Ubiquitous IP
  - 5G Mobile Network Planning
  - Applied Image Processing
  - Low-power Systems with Energy Harvesting
  - Augmented Reality & Smart Objects

**SECOND SEMESTER**
- **OPTIONAL COURSES:**
  - Service Engineering
  - Body Sensor Nodes
  - Creativity and Engineering
  - Big Data & Data Mining
  - Network Security - Authentication & Authorization
  - Software Defined Radio
  - Project on ICT-based Business Models

Master Thesis