Master's Degree in
Quantum Technologies

Quantum Technologies

925 3852 7130

qtep.csic.es/master-quantum-tech

qt.master@csic.es

Master's Degree in
Quantum Technologies

Management team

https://qtep.csic.es/master-quantum-tech

Contact: qt.master@csic.es

María José Calderón
ICMM CSIC

Diego Frustaglia
U. Sevilla

David Zueco
INMA CSIC-Unizar

Master's Degree in
Quantum Technologies

Inter-university official degree

UIMP

CSIC
Consejo Superior de Investigaciones Científicas

Universidad de La Laguna

Universidad Politécnica de Cartagena
Fechos Allend Mar

Universidad Politécnica de Madrid
Politécnica

Vniversitas Studiorvm Mvrciana
Anno MCCLXXII

Alexander PP VI Valentinvs Ferdinandvs Dei Gra Rex Aragonvm

1542
Universidad Zaragoza

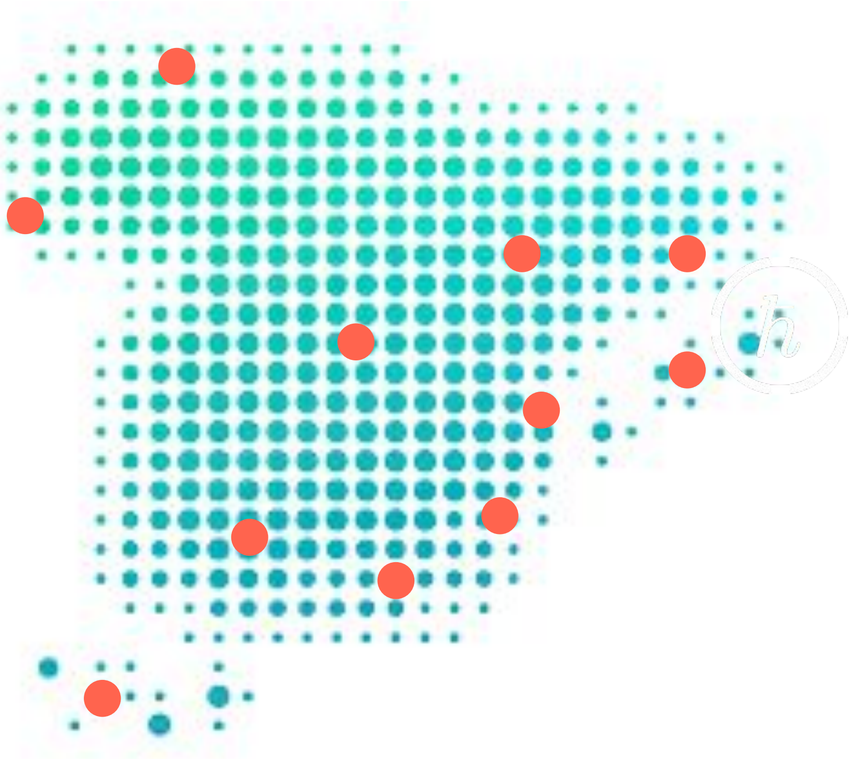
Universitas Granatensis
1531

Universidad de Sevilla

Universidade Vigo

Master program

- 60 ECTS (18 TFM, 12+3+3 compulsory + 24 elective)
- 29 € / ECTS (60x29=1740)
- Language: English (international students)
- **Lecturers**: Q-tech researchers across Spain.
- Primarily **online**, except
  - **labs** in “Quantum Technologies Laboratory” elective subject
  - **Workshop**, 1 week, late June-early July.
- **Master thesis online/onsite**



Compulsory subjects

$$60 = 12 + 3 + 3 + 18 + 24$$

- Fundamentals of quantum technologies (3 ECTS). First three weeks.
- Advanced Quantum Mechanics (6 ECTS)
- Theory of Quantum Information (6 ECTS)
- Workshop on Quantum Technologies (3 ECTS). One week.
- Master Thesis project dissertation (18 ECTS)

Elective subjects (choose 24 ECTS)

Quantum computing (6 ECTS)

Machine learning and quantum computers (3 ECTS)

Quantum cryptography and communication (6 ECTS)

Quantum sensors (6 ECTS)

Open quantum systems and quantum thermodynamics (6 ECTS)

Quantum control (3 ECTS)

Implementation of quantum technologies (3 ECTS)

Superconducting quantum circuits (3 ECTS)

Quantum nanophotonics (3 ECTS)

Quantum technologies with photons and atoms (3 ECTS)

Semiconductor and hybrid qubits (3 ECTS)

Micro/nano fabrication for quantum technologies (3 ECTS)

Quantum technologies laboratory (6 ECTS)

Timetable

First semester: October-early February
Second semester: late February-early June

Masterclasses (pre-recorded/synchronous and recorded): 5 hours/ECTS.

Practical lectures (synchronous participation evaluated): 2.5-3 hours/ECTS
Recorded so that students can review them later.

Tutorships: 5 (10) for 3 (6) ECTS subjects. Not recorded.

Synchronous lectures after 2pm (CET)

Workshop (July)

QTYR 2023

QTYR 2024

QTYR 2025

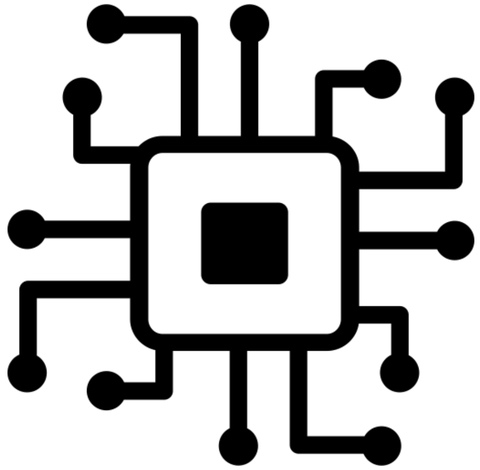
Co-organized with:

PYSQT

PHD AND YOUNG
SCIENTISTS QUANTUM
TECHNOLOGIES NETWORK

This year in Valencia !

Career opportunities



Academia (PhD)

Carlos: Quantum Technologies @ Navantia (Valencia)

Álvaro: Quantum Algorithms @ Inspiration-Q (Madrid)

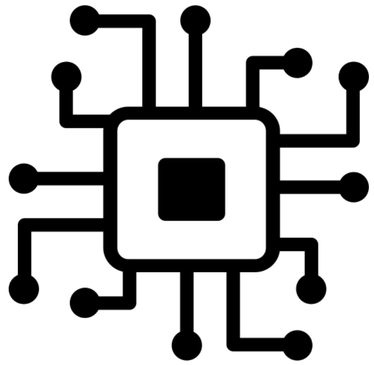
Teresa: Data Scientist @ QuantumBlack McKinsey (Madrid)

Industry (w/ or w/o PhD) in Spain

inspiration Q
QUANTUM NOW

Diego
Porras

Juan José
García-Ripoll



g2-Zero
PLUG & PLAY QUANTUM DEVICES

José
Llorens

DAS Photonics

MULTIVERSE
COMPUTING

REPSOL

CUCO
COMPUTACIÓN CUÁNTICA
EN INDUSTRIAS ESTRATÉGICAS

BBVA

QILIMANJARO
QUANTUM TECH

gmv
INNOVATING SOLUTIONS

qdynamics

Verónica
Fernández-Mármol

Admissions procedure

Apply before May 29th . WEB DE LA UIMP (opens March 9th)

Admissions decision: June 15th.

Final admissions decision: June 20th (to account for errors).

Conditional admission: finish your degree and submit your paperwork before the end of October.

Extraordinary admission: apply July 14th-September 11th.

Admissions criteria

1. Academic record, 3.5 points. The maximum score will be assigned to the candidate with the highest average grade
2. Suitability of the candidate's knowledge (courses taken, other degrees), 3 points.
3. Research experience (Bachelor's Thesis, stays and collaborations in research centers or companies in the sector), 2 points.
4. Motivation and letters of recommendation, 1 point. Recommendation letters can be sent to qt.master@csic.es.
5. English proficiency level - B2 Level, 0.5 points.

QUESTIONS? preinscripcion.posgrado@uimp.es

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Admission open until May 29th, 2025

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