

Master in Quantum Science and Technology, Barcelona



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Participating Institutions





Participating Institutions



Master in Quantum Science and Technology Barcelona



Start date: September 2022

Duration: 1 year, 60 ECTs (24 ECTs Master Thesis)

Place: lectures at the Fac Ciències UAB i Facultat de Física (UB)

Fees*: €1660 (EU), €4.920 (non-EU)

Contact: master.quantum.bcn@ub.edu

* orientative matriculation fee



Outline

- **Education:** Learn cutting-edge experimental and theoretical techniques in emerging quantum sciences and their many technological applications.
- **Bridging with Industry:** Experience direct contact with companies developing new Quantum Technologies across different sectors.
- **Quantum Pillars:** Choose elective subjects in Quantum Computation, Sensing, Simulation, & Communication.
- **Catalonia Quantum Community:** The Master is embedded in the QuantumCAT Community of Universities, Companies and Research Institutes.



Outline

- **Learn from Experts:** 30+ expert professors teach courses covering core concepts of quantum science & technology, and practical tool & techniques.
- **Cutting-Edge Research:** 60+ cutting-edge theoretical and experimental research groups across 3 universities and 4 Research centers.
- **Industry Engagement:** high-tech companies actively participate in teaching, offer internships and seminars & a careers symposium.
- **Career Prospects:** gain access to PhD programs at participating institutes, and advance your future careers in academia or industry.



Syllabus

- **Quantum Core:** advanced quantum mechanics, condensed matter theory, & quantum information theory.
- **Extended Masters Thesis:** in-depth research projects of 6+ months available for Master Thesis
- **Links with industry:** Entrepreneurship & Innovation course, Internships, Seminars, and Annual Career Symposium
- **Elective courses** from one or more of the following tracks:
 - **Quantum Theory:** advanced courses on quantum information, communications and sensing.
 - **Quantum Software:** courses on cutting-edge numerical and computational techniques
 - **Quantum Hardware:** experimental techniques and cutting-edge quantum technologies.
 - **Quantum Optics*:** advanced quantum optics, atom-light interaction, and their applications.

* Offered through [Master in Photonics](#)



Connection to Industry

Students enrolled in the master will have the opportunity to have first hand contact with high-tech local and international companies working on Quantum Technologies through a variety of activities, including **Internships, Topical Seminars,** and an **Annual Career Symposium.**





Funding available

Several fellowships are available for students accepted in the master program:

General Fellowships:

- ICCUB Maria de Maeztu Fellowship covering full registration fees

Fellowships for students doing their Master Thesis at participating institutions:

- ICFO Student Research Fellowships and SPIE@ICFO Chair for Diversity in Photonic Sciences: Maria Yzuel Fellowship Awards
- ICN2 Internships
- Master plus U. Barcelona fellowships

These fellowships are awarded through competitive calls at the corresponding host institution. More information can be found on the links above.

Besides these fellowships, many research groups and companies offer a stipend for students undertaking an Internship or Master Thesis with them.



Eligibility & Admissions

- The Masters program is aimed at graduates in Physics, Physical Engineering or equivalent degrees who want to continue specialization studies in Quantum Science and Technologies.
- Students should have English level B2 or equivalent
- If you are interested in joining the program, [contact us](#) for further details.
- [Registration](#) now open: quantummasterbarcelona.eu

Apply now! Students will be admitted to the master on a rolling basis, with evaluation of new candidates at the end of each month from March to June.

The Master in Quantum
Science & Technology

Quantum Careers Symposium



8 April 2022

La Pedrera (Barcelona) & Online
9:00-17:30 CET
Registration required



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