

# FAQ: Applied Quantum Technology CDT

## 1. About the CDT

The Centre for Doctoral Training in Applied Quantum Technologies (CDT-AQT) is a collaborative initiative by the University of Strathclyde, the University of Glasgow, and Heriot-Watt University. CDT-AQT focuses on translating quantum physics research into practical applications. Industry sponsors, partner universities, and EPSRC have committed to supporting up to 80 studentships over five cohorts. The CDT-AQT aims to produce graduates with the skills to advance quantum technology in various industries and markets.

## 2. Research Themes and Example Project Areas

The CDT focuses primarily on Applied Quantum Technologies, with three core themes of quantum measurement and sensing, quantum computing and simulation, and quantum communications and networks:

Quantum	Quantum	Quantum	
Measurement &	Computing &	Communications &	
Sensing	Simulation	Networks	

CDT projects cover a wide range of technologies including, but not limited to: single photon detection, ultracold atoms, superconducting circuits, novel semiconductor devices and application areas ranging from quantum imaging and lidar, atomic magnetometry for space weather sensing, quantum networking and satellite QKD, optical to microwave transduction, integrated atomic clocks and development of quantum algorithms targeting real-world applications. Project descriptions for 2025 and proposals for 2026 can be found on our website at <u>www.aqt.ac.uk</u>.

A key goal of the CDT is to also directly engage with partners and companies to co-create projects and research directions that are of specific practical interest, allowing targeted development of novel quantum technologies into new application areas. The benefits of industry engagement are:

- Helping shape the research agenda and align fundamental research to industry needs
- · Raising awareness of organisations in the space with the next generation of quantum researchers
- Allowing companies access to a high calibre pool of industry-aware, quantum specialists
- Providing an opportunity for industry and students to network and determine who might be the right fit for which organisation.

### 3. Program Details:

The Centre for Doctoral Training in Applied Quantum Technologies offers a comprehensive four-year program structured to equip students with a strong foundation and specialised expertise in quantum technologies. As opposed to many CDT models, the CDT-AQT embeds students within their research project from day 1. Alongside their bespoke PhD projects, Year 1 students benefit from a cross-cohort training school and taught courses in Physical Foundations of Quantum Technology and Enabling Technologies.



Year 2 introduces a bespoke modular training program aligned with personal development plans, incorporating topical lecture courses and hands-on QT Discovery Lab modules. In Years 3 and 4, the student has opportunities for industry placements, and further lectures. Cohort events like the Annual CDT Training School foster cross-cohort development, including soft-skills workshops and industry engagement, while the CDT Showcase highlights research projects and industry contributions over two days. Transferable skills training encompasses technical writing, literature research, time management, Responsible Research and Innovation (RR&I), entrepreneurship, and IP management, monitored through annual personal development plans.











#### 3. Industry Collaboration:

Industry partners play a pivotal role in guiding the training program through shaping co-funded projects, student placements, and the Industry Forum, which fosters engagement and information flow with the CDT. The primary route to engagement is through co-funded studentships with projects developed between industrial and academic partners, but there are also opportunities for partners to provide skills training, career advice and open panel discussions. Additionally partners can contribute to the taught syllabus, delivering lectures, and providing insights into specific technologies and market sectors.

Regular interactions will be facilitated through events including the annual CDT Showcase and QT Industry Day, enabling partners to meet with potential academic supervisors and identify relevant project opportunities.

Industrial partners can also join our Industry Forum which will meet alongside these annual events to provide input and steering into the training programme.

#### 4. Funding Structure and Industry Contribution:

The total cost of a four-year CDT studentship for 26/27 is £122,768 ex VAT for domestic students in the first cohort. This includes the stipend, fees, and £3k per year research training support grant that can be used for consumables and travel to support the research. Companies can contribute either 50% or 100% of the cost of a CDT studentship, and this can be spread out throughout the duration of the project corresponding to approximately £15.3k per year for 50% contributions. For international students, there is a surcharge of approx. £25k per year for the fees with a number of fee-waivers available.

#### 5. Intellectual Property and Confidentiality:

- Each studentship will be governed by a bespoke contract between the university and the sponsoring company. Contracts will establish a legal framework that outlines the terms and conditions regarding the ownership, use, and protection of intellectual property generated during the course of the studentship. Legal and intellectual property experts may be consulted to ensure comprehensive and fair contractual agreements that safeguard the interests of all parties involved.
- The case-by-case approach ensures flexibility to accommodate the diverse range of research projects and industry collaborations within the CDT.
- For hosting and supervision of secondments, that do not come under a wider studentship, a separate legal agreement for the purpose of the secondment would be possible.

#### 6. Student Selection Process:

- Project proposals will be developed collaboratively with industry partners and academic supervisors, with proposal submissions due to open in late Summer 2025.
- Selection of PhD students will follow a thorough and competitive process designed to ensure excellence and alignment with program objectives.
- Positions are open to applicants with an integrated Masters (or equivalent) degree in physics or QTrelated disciplines (mathematics, engineering, computer science) at a 2.1 or higher, or a BSc with firstclass honours.
- Successful candidates will receive offers at their chosen supervisor's host university, following the respective admissions procedure.

#### 7. How to Get Involved:

Our current cohort begin their PhDs in October 2025, the next cohort will begin in October 2026.

if you are keen to partner with us then please contact the CDT team <u>partners@aqt.ac.uk</u> to discuss tailored opportunities for involvement and to explore how your organisation can play a crucial role in shaping the future of applied quantum technologies. We will match you to relevant academic supervisors across the three partner institutions to enable development of project proposals relevant to your interests. We will also keep you informed of future CDT events, opportunities to engage with the training programme and connect you to our industry forum.







