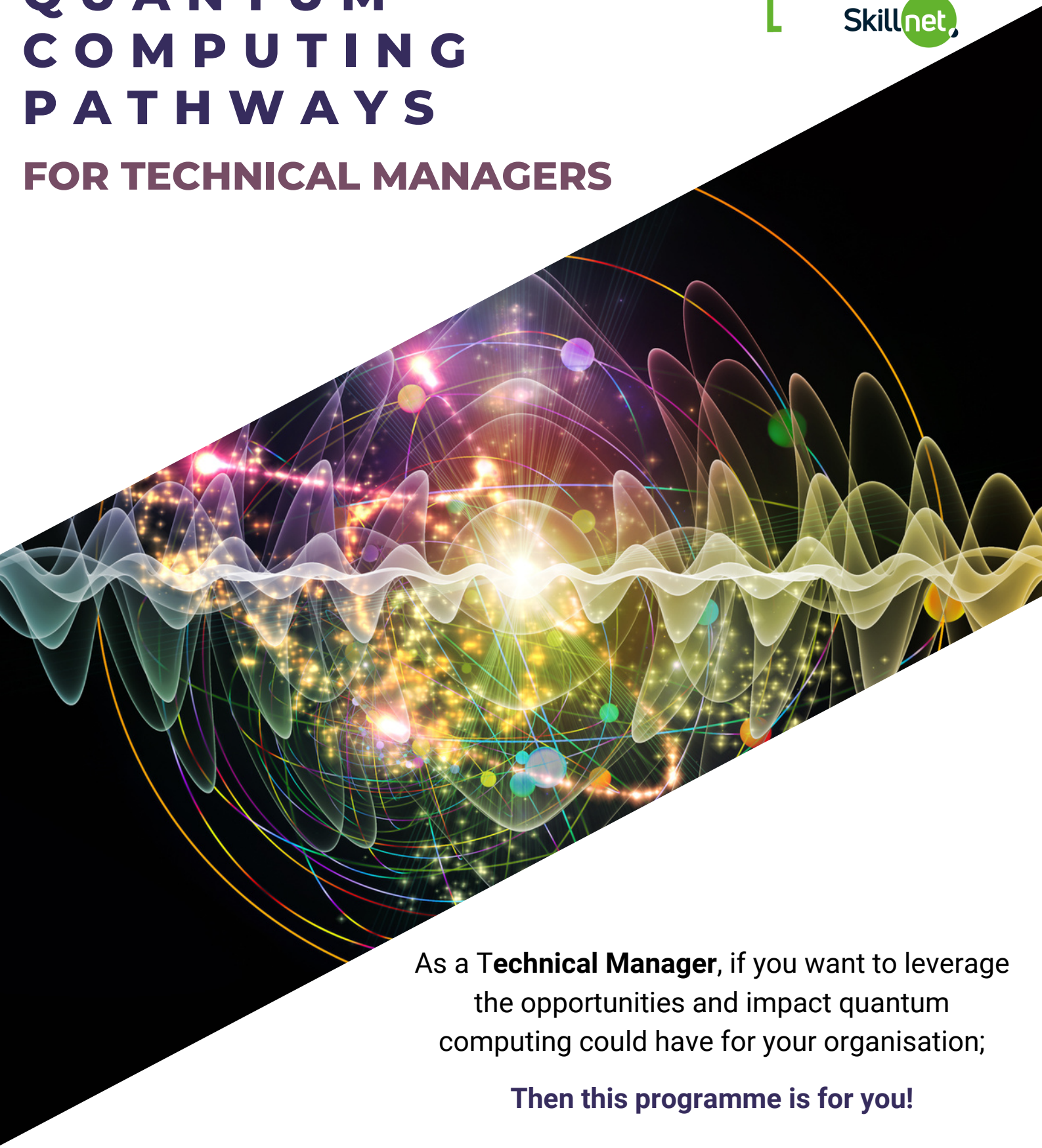
Technology Ireland ICT Skillnet

QUANTUM COMPUTING PATHWAYS

FOR TECHNICAL MANAGERS



As a T**echnical Manager**, if you want to leverage the opportunities and impact quantum computing could have for your organisation;

Then this programme is for you!

Quantum Programming Ireland

Ollscoil na Gaillimhe University of Galway

ICHEC Irish Centre for High-end Computing

> Quantum computing is anticipated by many to have a big impact on innovation and businesses at a global level. Though the scale of this impact is still evolving, its potential has been described as “tectonic”.
>
> **- Forbes**

INDUSTRY LED

These pathways were designed by an industry advisory board composed of both Irish indigenious and global organisations across financial services, engineering, aerospace, electronic devices, pharmaceuticals, quantum technologies, IT solutions, services and consulting. This ensures recognition and relevance across sectors and disciplines.

LEARNING OUTCOMES

The Quantum Programming Certification Pathways for Technical Managers will introduce practical skills including a landscape of quantum computing systems, algorithms, tools, and applications. Technical Managers will be equipped to assess quantum technology’s evolution, define use-cases, and create a roadmap for the necessary skills development and technical activities for your organisation.

WHY STUDY THIS COURSE?

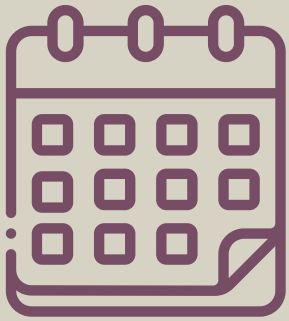
Quantum computing is widely regarded as the next rapidly emerging paradigm in computing. It is expected to impact multiple sectors – public and private – including financial services, engineering and manufacturing, ICT, material sciences, pharmaceuticals, logistics and transport, environmental security, research organisations, public agencies, and Governments.

Provides both a business perspective and technical introduction to the principles, methods and tools in quantum computing for enterprises to seize the opportunity, innovate and reap the early-adopter advantage of this disruptive technology. To realise this ambition, it is crucial to develop a skilled workforce capable of developing hybrid classical-quantum computing applications and solutions, and attract talent to Ireland and its industry.

DELIVERY

Delivered via a blended learning format to facilitate learning anywhere, anytime.

This course presents the capabilities of quantum computing and its potential impact in the short- and medium-terms and beyond. It will ensure that you are informed of the latest trends and technologies in quantum computing to equip you to take advantage of the opportunities that quantum computing represents.



7th November 2022

7
sessions

Full Cost €2,000
Subsided Cost €1,499

7 sessions
Blended Learning
(Combination of recorded and video conference)

COURSE DESIGN

The course will be delivered through 7 sessions, with each session composed of:

- A 60-minute recorded lecture
- A 60-minute live tutorial by VC
- A 90-minute supported exercise
- followed by self-study of recommended material.

Each session will take place over a two week period. The blended learning format offers Technical Managers an opportunity to interact with training providers and peers.

MODULES

- **Demystifying quantum computing**
- **Integrating high-performance and quantum computing**
- **From bits to qubits**
- **Realising quantum computing systems**
- **Accessing quantum computing systems**
- **Software and tools for quantum programming**
- **Landscape of quantum algorithms**

COURSE CODE

Scan for further details

CERTIFIED BY

ICHEC
Irish Centre for High-end Computing

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Skillnet IRELAND

An Roinn Breisoideachais agus Ardoideachais, Taighde, Nuálaíochta agus Eolaíochta
Department of Further and Higher Education, Research, Innovation and Science

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