SFU
DEPARTMENT
OF PHYSICS

Fall 2026

QUANTUM INNOVATION IN BUSINESS

dial
founded by
SFU BEEDIE
SCHOOL OF BUSINESS

WHERE QUANTUM MEETS BUSINESS

Quantum technologies are opening new frontiers in business decision-making: the ability to model complexity, test and optimize scenarios, and secure digital systems in ways today's tools cannot fully support.

The challenge is not that leaders need to become quantum scientists. The challenge is that they need to know enough to ask better questions, spot real opportunities, and prepare their organizations before competitors do.

Quantum Innovation in Business gives business leaders the literacy to see what is coming, ask the right questions, and assess where the hype ends, and where business impact begins.

PROGRAM STRUCTURE

The Quantum Innovation in Business Program is a 6-week program designed to deliver a comprehensive and flexible learning experience. All sessions feature faculty and industry-led content, discussions, case studies, and application-based discussions that introduce an innovative mindset.

ONLINE PEER LEARNING SESSIONS
OCTOBER 22 - NOVEMBER 26, 2026

Title	Date	Time
• Week 1: The Quantum Landscape in Canada	• Thursday, October 22	• 12:00 - 2:00 PM PT
• Week 2: The Physics of Quantum Innovation	• Thursday, October 29	• 12:00 - 1:30 PM PT
• Week 3: Current Technical Limits	• Thursday, November 5	• 12:00 - 1:30 PM PT
• Week 4: Quantum Supply Chain	• Thursday, November 12	• 12:00 - 1:30 PM PT
• Week 5: Pursuing Quantum Opportunities	• Thursday, November 19	• 12:00 - 1:30 PM PT
• Week 6: Your Quantum Innovation Future	• Thursday, November 26	• 12:00 - 2:00 PM PT

**The schedule is being finalized and may be subject to change.*

FLEXIBLE ONLINE LEARNING

6 weeks of on-demand content available through Canvas, allowing you to study at your own pace each week.

TIME COMMITMENT

Recommended 4 to 6 hours per week, making it manageable alongside your professional and personal commitments.

INTERACTIVE LIVE SESSIONS

Opening and Closing 2-hour sessions and weekly 1.5-hour peer learning sessions held via Zoom for collaborative discussions and networking.

CONTINUED ACCESS

Access to all course materials for a limited time after the program concludes, enabling you to revisit and reinforce your learning.

STAY AHEAD OF THE CURVE WITH QUANTUM

YOUR TRANSFORMATIVE JOURNEY

Decode Quantum Without the Jargon

Build a clear, business-first understanding of quantum technologies, and why they matter for innovation, competition, cybersecurity, and future decision-making.

Spot Real Opportunities Before the Market Does

Identify credible quantum use cases across business functions, from optimization and scenario modelling to digital trust, data, and venture opportunities.

Move Beyond Hype toward Strategic Action

Develop the confidence to ask sharper questions, assess risks and readiness, and map where quantum could create practical value.

PROGRAM OBJECTIVES

At the end of the program, you will be able to:

- Understand the quantum landscape and its potential applications in business.
- Separate real opportunities from hype and assess quantum-related claims with confidence.
- Speak with researchers, technical experts, and stakeholders about how quantum technologies could create value for your organization.

You will leave with the literacy, practical judgment, and next-step resources to explore quantum opportunities more confidently and communicate their relevance to clients, colleagues, and decision-makers.

A PROGRAM CERTIFICATE WILL BE AWARDED WITH THE SUCCESSFUL COMPLETION OF THE PROGRAM.

PROGRAM OVERVIEW

LEARN THE LANDSCAPE

- The Quantum Landscape in Canada and Beyond
- Quantum Innovation and the Physics Underneath

QUANTUM LIMITATIONS

- Quantum Aspiration and Current Technical Limits

QUANTUM OPPORTUNITIES

- Quantum Engineering and the Supply Chain
- Quantum Opportunities and How to Pursue Them

ANALYZE CASE STUDIES

- Analyze a broad range of scenarios and apply to your own ideas.

- Your Quantum Innovation Future

According to McKinsey, $2.7 trillion is the potential global economic value from quantum computing by 2035, and 300+ organizations are already collaborating with quantum technology companies to explore business applications. McKinsey also estimates that over 250,000 new quantum professionals will be needed globally by 2030.

SUBMIT YOUR APPLICATION

CUTTING-EDGE CURRICULUM

MODULE 1

THE QUANTUM LANDSCAPE IN CANADA AND BEYOND

- Be aware of the different areas in which quantum technologies are applied, including quantum computing and simulation, quantum communication, and quantum sensing.
- Become familiar with the most relevant or exciting quantum-related companies and their products.
- Know where to find reliable information on quantum business.

MODULE 2

QUANTUM INNOVATION AND THE PHYSICS UNDERNEATH

- Explain how and why quantum computing can be more efficient than classical computing for specific problems, with examples for use cases and applications.
- Explain how quantum physics enables secure communication and provide examples of early applications.
- Explain how quantum physics enables more precise/accurate sensing than established technologies and provide examples.

MODULE 3

QUANTUM ASPIRATION AND CURRENT TECHNICAL LIMITS

- Describe current limitations to quantum computing, quantum communication, and quantum sensing.
- Provide examples for exaggerated claims.
- Explain how to assess a suspicious claim using simple scientific reasoning and basic calculations.

MODULE 4

QUANTUM ENGINEERING AND THE SUPPLY CHAIN

- Identify the components of a full-stack quantum computer and their roles (this module includes interacting with a real quantum computer).
- Identify the technical components required for quantum communication (this module includes interacting with a quantum communication demo).
- Be familiar with bottlenecks and opportunities on the engineering side of quantum technologies.

MODULE 5

QUANTUM OPPORTUNITIES AND HOW TO PURSUE THEM

- Assess the achievability of your original quantum innovation idea.
- Determine what is needed to make it happen, or how to adapt.
- Identify resources to move your project forward, for example by identifying experts, using cloud computing, applying for government funding, or partnering with other companies.

MODULE 6

YOUR QUANTUM INNOVATION FUTURE

- Cultivate a basic lie-detector for quantum news and opportunities.
- Speak and understand enough quantum to talk with researchers.
- Develop the ability to explain opportunities and problems to clients.

UNPARALLELED EXPERTISE

Learn from experienced instructors with broad backgrounds in Physics and Business Strategy, bringing extensive experience in Quantum Technologies and business-decision-making that helps organizations get ahead of the curve.

You'll engage with tailored content and participate in immersive sessions through a mix of interactive live sessions and self-paced learning modules, all aimed to help you gain insight into the latest quantum advancements and their applications in business.

DR. DARIA AHRENSMEIER

Lecturer,
Quantum Education
SFU Department of Physics,

Daria obtained her PhD in theoretical particle physics from the University of Bielefeld, Germany, and specializes in physics/quantum education. She has co-created 10+ professional skills workshops for the NSERC CREATE in Quantum Computing. She is the founding Chair of the Division of Quantum Information for the Canadian Association of Physicists and the Special Advisor, Quantum, to the VPRI at SFU.

DR. ANDREW GEMINO

Professor, MIS,
Innovation and Entrepreneurship
SFU Beedie School of Business

Andrew is an award-winning teacher who has twice received the Canada Trust Distinguished Teacher award from the Beedie School of Business, SFU's Teaching Excellence Award, UBC's MBA Teaching Excellence Award, along with 16 years on the Beedie Teaching Honor Roll. Andrew's academic research focuses on digital transformation, project management, business solutions design and business analytics.

DR. THOMAS JENNEWEIN

Professor, Quantum
Communication Technology,
SFU Department of Physics

Thomas is a professor and Canada Excellence Research Chair in Global Quantum Internet Systems in the Department of Physics at Simon Fraser University. His research vision is to build scalable quantum communication technology for long range and satellite quantum networks. He also co-founded three quantum-tech startups, to develop and sell satellite based secure communication, sensing and research instrumentation.

DR. DANIEL B. HIGGINBOTTOM

Assistant Professor,
Quantum Technology,
SFU Department of Physics

Daniel Higginbottom is an Assistant Professor at SFU and Director of Academic Research at the quantum technology company Photonic Inc. He is a leader in the emerging field of silicon colour centre photonic devices, as the pioneer to generate silicon T centres in photonic wafers and integrate them with photonic devices. His passion is inventing photonic quantum technologies that can be deployed to solve critical real-world problems.

ABOUT SFU DIAL

Simon Fraser University's DIAL Initiative offers future-ready educational programs that help professionals and organizations build the skills, confidence, and leadership capacity to navigate what's next.

Through cross-industry peer learning, application-based practice, and SFU's academic excellence, DIAL empowers learners to turn emerging ideas into meaningful transformation. Today, DIAL has a growing community of 1,200+ alumni advancing innovation across sectors.

#1

COMPREHENSIVE UNIVERSITY IN CANADA
14 out of the last 15 years (as of 2023), according to Maclean's Magazine

1%

OF BUSINESS SCHOOLS
worldwide have AACSB and EQUIS accreditation

AACSB ACCREDITED

EQUIS ACCREDITED

dial

founded by
SFU BEEDIE
SCHOOL OF BUSINESS

DIGITAL INNOVATION AND LEADERSHIP (DIAL)

Simon Fraser University
Beedie School of Business
Executive Education

555 West Hastings Street
Vancouver, BC Canada
V6B 4N6

Tel: 778-782-3193
Email: dialteam@sfu.ca

https://sfudial.ca

AACSB ACCREDITED
EQUIS ACCREDITED
PRME Principles for Responsible Management Education

Simon Fraser University respectfully acknowledges the xʷməθkʷəy̓əm (Musqueam), Sḵwx̱wú7mesh Úxwumixw (Squamish), səl̓ilw̓ətaʔɬ (Tsleil-Waututh), q̓íc̓əy̓ (Katzie), kʷikʷəƛ̓əm (Kwikwetlem), Qayqayt, Kwantlen, Semiahmoo and Tsawwassen peoples on whose unceded traditional territories our three campuses reside.