



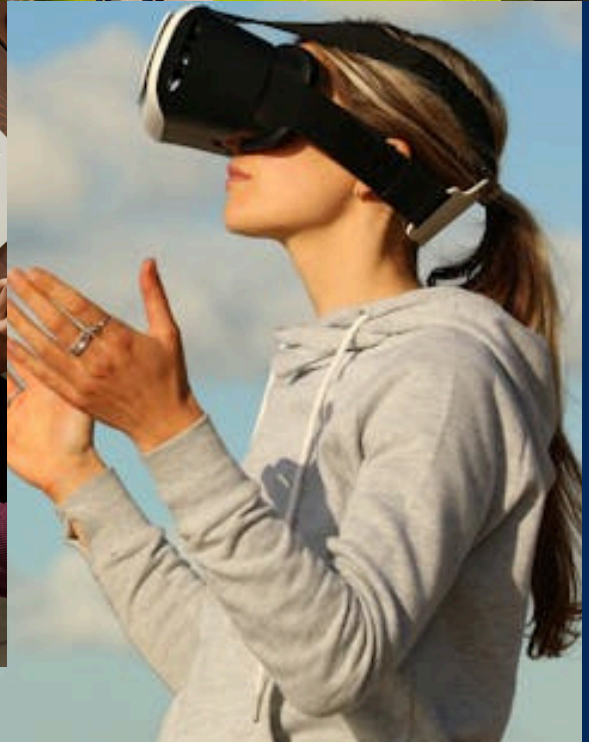
Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

PostGraduate Diploma in Healthcare Innovation

Prospective student information

TCD School of Medicine

NFQ Level 9 (60 ECTS) - 1 year

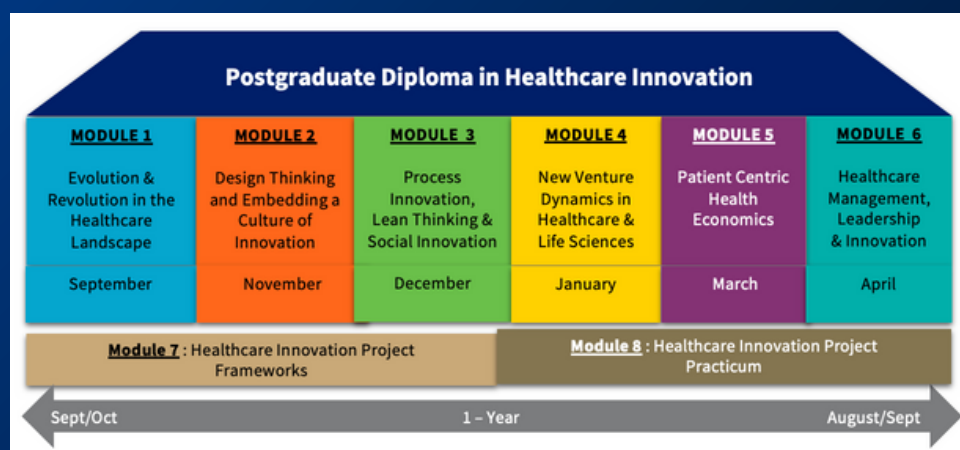


Course overview

This one-year, School of Medicine, Trinity College Dublin postgraduate diploma was established by Prof. Seamas Donnelly and Adjunct Prof. Dan Maher in 2019, becoming Ireland's first graduate programme in Healthcare Innovation. It puts innovation tools directly into the hands of healthcare professionals. This skillset development give them the opportunity to develop innovation from within the healthcare sphere and make a major difference to the development of healthcare in Ireland and beyond.

Healthcare is in a period of accelerated disruptive innovation with rapid discovery and adoption of new approaches to improve patient outcomes. To thrive and lead in a world of increased complexity requires skills in innovative thinking and creative execution.

As part of this course you will gain knowledge and frameworks required to implement innovation and new technologies within healthcare. You will be ready to propose future health solutions, stepping up to the next level in your career development. This programme is for you if you are looking to master an innovative approach to healthcare specifically, solving challenges with new technologies and approaches which will transform current practice.



Course dates

The course begins late September each year, and ends in August. Modules 1-6 run on Friday and Saturday every six weeks, during the months highlighted in the figure. Modules 7 and 8 are self-directed between May and August.

For a full list of dates for the academic year ahead, please contact us at PGDip.HealthcareInnovation@tcd.ie

Frequently asked questions

Who is this course suitable for?

This course typically attracts people working in a variety of positions within healthcare. Students are frequently mid to senior level employees, and many have completed additional educational qualifications in addition to their degrees. Students have backgrounds which include consultants, doctors, business owners, administrators, allied health professionals and industry personnel. A benefit of the course is that it brings individuals from varied backgrounds together to help discuss and consider some of the key issues facing the health service at the moment.

What is the expected workload?

The course is a 60 ECTS course. ECTS stands for European Credit System and helps to standardise expected hours of work and learning within University courses. Each ECTS credit represents 25-30 hours of study, including pre-reading, lectures, and assignments. The 60 ECTS are split across eight modules in a full 12-month period. Modules 1, 2, 5 and 6 are worth 5 ECTS each, while modules 3, 4, 7 and 8 are worth 10 ECTS each.

What do I need to do to apply for this course?

To apply for the course you need to have a 2.1 honours degree in healthcare, business or related subject. If you do not have this qualification, you may need to supply additional information to the University to demonstrate your eligibility for the course. If you do not have a 2.1 honours degree and wish to apply, we advise applying as soon as possible as this Recognition of Prior Learning process can take a number of months to complete.

Applicants whose first language is not English and who have not been educated through the English language must present a relevant qualification.

Applications should be made via the TCD website at <https://my.tcd.ie>. You will be asked to supply a C.V. and cover letter as part of this process.

If English is not my first language, what qualifications do I need to take the course?

You will need to provide evidence of your competence in English, as established through specific qualifications. A full list of accepted course/qualifications is provided on the Trinity College Dublin website through the following link: <https://www.tcd.ie/study/apply/admission-requirements/postgraduate/>

Tests must have been completed within two years of the course start date to be valid.

Who teaches on the course?

Each of our modules is co-ordinated by experts in domains of healthcare, business and engineering within TCD including Prof. Seamas Donnelly, Assistant Prof. Alison Keogh, Adjunct Prof. Dan Maher, Prof. Charles Normand, Prof. Paul Coughlan, Assistant Prof. Bridget Johnston, and Prof. Barry McMahon. We also have a range of high-quality guest lecturers and Adjunct Professors within each module.

Examples of previous guest lecturers include:

- Professor Mark Ferguson - Director General, Science Foundation Ireland (SFI) and Chief Scientific Adviser to the Government of Ireland.
- Dr. Conor Hanley – President and CEO of Foundry Innovation & Research 1, Ltd. (FIRE1)
- Lucy Nugent - Chief Executive Officer, Tallaght University Hospital.
- Fran Hegarty - Chief Healthcare Technology Officer at Children's Health Ireland (CHI).
- Nuala Walsh - Business and behavioural consultant.
- Edwina Fitzmaurice - EY Global Chief Customer Success Officer, New York.
- Sarah Arnot - Partner Heidrick and Struggles, Johannesburg.



What will I learn?

Modules on this course are designed to support you in leading changes within your organisation by taking an idea from start to finish. Modules will introduce students to the latest innovations in the healthcare environment. Students will cover modules in design thinking, process innovation, venture dynamics, healthcare economics, leadership and a self-directed projects. These are split into the following modules:

- Evolution and Revolution in the Healthcare Landscape;
- Design Thinking and Embedding a Culture of Innovation in Healthcare;
- New Venture Dynamics in Healthcare & Life Sciences;
- Process Innovation, Lean Thinking & Quality Centric Perspectives;
- Health Economics - Rethinking Strategy, Objectives & Incentives;
- Healthcare Management, Leadership & Innovation;
- Healthcare Innovation Project: Phase 1 – Frameworks & Research;
- Healthcare Innovation Project: Phase 2 – Practicum.

How does teaching take place on the course?

Modules 1-6 involve face-to-face teaching, while Modules 7 and 8 take place during the summer months and are predominantly self-directed. For Modules 1-6 students are asked to complete a pre-assignment in the two weeks leading to the teaching. Teaching takes place over a weekend, specifically a Friday and Saturday within TCD. Following this, students are then given time to complete a post-module assignment.

Does this course take place online or face-to-face?

Teaching takes place face-to-face within TCD. As teaching is condensed into a full weekend per module, attendance at these modules is mandatory. The remaining course work takes place within the students own time.

Who should I contact if I have specific questions?

If you have any questions about this course, please email our co-ordinators at PGDip.HealthcareInnovation@tcd.ie



Course aims

The aim of this course offering from the TCD School of Medicine is three-fold:

- To gain an in-depth knowledge of the dynamics of embedding an innovative culture within healthcare systems.
- To gain insights into the latest global thinking on creative and practical implementation of new ventures within medicine & healthcare.
- To develop year-on-year a growing cohort of connected, and networked, innovation ambassadors within the National Health Services as alumni of TCD's Postgraduate Diploma in Healthcare Innovation.



Module information

Brief information on each of the included modules is provided below.

Evolution and Revolution in the Healthcare Landscape;

This first module encourages students to delve directly into the complex and rapidly changing world of global healthcare. On successful completion of this module, the student should be able:

- To identify the key role that innovation can play in transforming healthcare services and in delivering “better medicine”.
- To articulate, with clarity, the critical global challenges and major emerging trends in healthcare today.
- To understand the diffusion processes by which innovations are adopted.
- To explore open innovation in a healthcare context.

Design Thinking and Embedding a Culture of Innovation in Healthcare;

Designing thinking combines what is desirable from a human & patient point of view with what is technologically feasible and economically viable. On successful completion of this module students should be able to:

- Embed Creative Thinking and Design principles into problem solving in Healthcare.
- Become familiar with the team dynamics and environment required to innovate solutions to healthcare problems.
- Be familiar with the theory and practice of design thinking and have the confidence to lead a problem to its stages and methods.
- Expand participants mind-set from execution mode to reflective practitioner.



New Venture Dynamics in Healthcare & Life Sciences;

This module focuses participants on the creation, development, growth and funding of new ventures in healthcare & life sciences. On successful completion of this module students should be able:

- To identify the key drivers of value creation in any early-stage health science-enabled new venture.
- To explore and understand the Product Planet Model addressing the total product and the mapping each layer of design to the patient/customer.
- To develop a strategic framework for the screening healthcare opportunities from the perspective of the venture funder.
- To understand the market entry and adoption strategies of innovation-driven new products.
- To develop frameworks & strategies for growth management and risk mitigation in new healthcare ventures.

Process Innovation, Lean Thinking & Quality Centric Perspectives;

The module will focus on understanding health system outcomes from the perspectives of individual patients to full populations served and will explore mechanisms for optimising safety, effectiveness and value of the complex socio-technical systems delivering healthcare. On successful completion of this module students should be able:

- To have a detailed understanding of quality as a pervasive foundation stone helping to drive the adoption of new technologies and new service development.
- To understand the tools & skill-sets characteristics quality driven strategy.
- To explore the role of lean thinking in the context of healthcare and gain experience in using process-flow analysis.
- To have a detailed understanding of product and process innovation from a quality perspective.
- To identify the characteristics of social innovation and a patient centric approach to quality.

Health Economics - Rethinking Strategy, Objectives & Incentives;

This module is designed to help the healthcare practitioner to understand how economic principles can usefully be used to analyse health systems and system developments. On successful completion of this module students should be able:

- To understand the role of economic principles in driving behaviour of users and providers of healthcare, in setting of priorities and in financing access to care.
- To gain comfort with the language, key principles and methods of health economic evaluations and priority setting in healthcare.
- In the context of ageing and changes in patterns of health and diseases, to gain insight into alternative mechanisms for mobilising resources for health care, their consequences for incentives to users and providers of care, and their effect on outcomes and costs.
- To understand how economic incentives may be crafted to encourage individuals towards innovative approaches to “doing good” for healthcare and society, and yet rewarding creators of innovation with “doing well”.

Healthcare Management, Leadership & Innovation;

This module shifts focus to exploring the conditions under which creativity and innovation may be managed within an organisation. On successful completion of this module students should be able:

- Recognise styles of leadership – including their own.
- Understand the key metrics which drive management behaviour.
- Develop and lead creative and innovative teams.
- Redesign organisations capable of innovation.
- Explore blue ocean strategy in the context of the health service.

Healthcare Innovation Project: Phase 1 – Frameworks & Research;

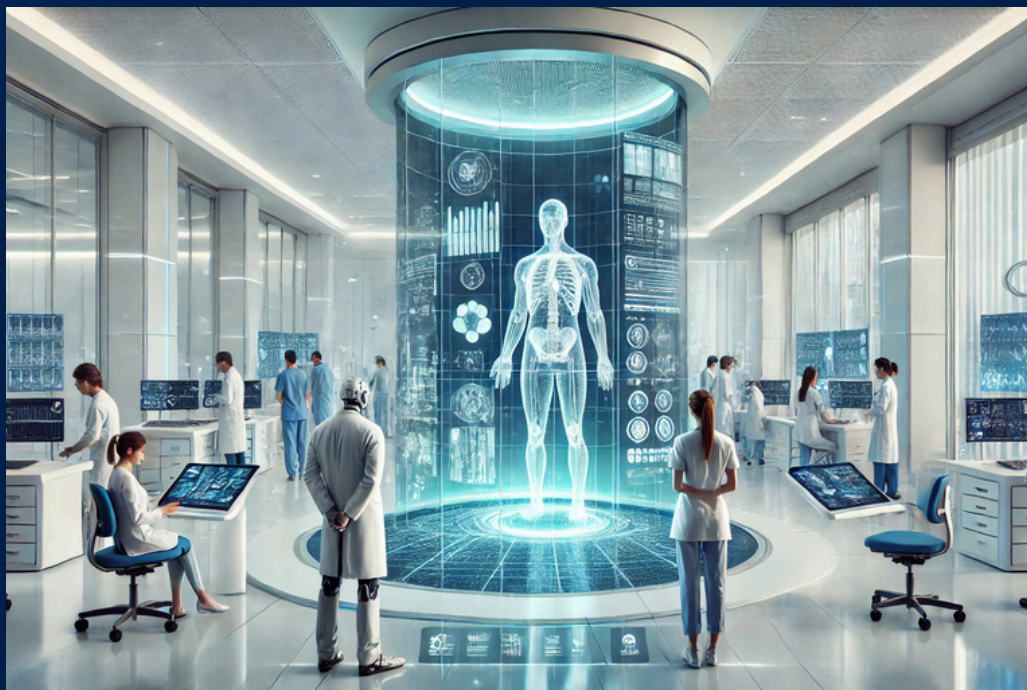
In Module 7 participants will focus on developing and testing a set of frameworks and tool-kits and explore at a high-level evaluation on at least three new innovative ideas. On successful completion of this module, students should be able:

- To design and use frameworks to explore, research & evaluate innovative product or process ideas within a healthcare context.
- To undertake extensive desk research and explore in depth a range of new innovation ideas.
- To present & defend in public forum three new innovation ideas.

Healthcare Innovation Project: Phase 2 – Practicum.

Module 8 is the concluding module for the Postgraduate Diploma, the Practicum where the participant is tasked with exploring in a hands-on, detailed approach a specific healthcare challenge of their choice. On successful completion of this module, students should be able:

- To explore in depth, both with secondary and primary research, a new healthcare innovation idea.
- To gain confidence in engaging across multidisciplinary boundaries creating focus and engendering collaboration in the definition and testing of a new idea.
- To present & defend in a public forum a new innovation idea.



Student ambassadors

This course aims to develop you as a strategic leader; to advance your ability to ideate, design and implement innovative and novel solutions for organisations or as entrepreneurs; develop you as a skilled practitioner, adept at harnessing innovation to thrive in the opportunity of tomorrow's healthcare world; equip you with practical frameworks and the best in international innovation practices in innovation. Our student ambassadors describe what the course helped them to achieve.



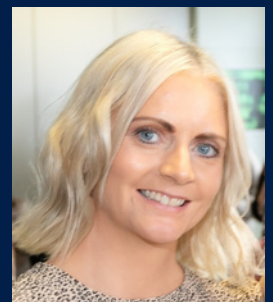
Anne Marie Kiernan - Registered Advanced Nurse Practitioner in Pain Medicine

The demands of the service I work in were far exceeding the abilities of the department. I had looked at utilising emerging technologies and processes but struggled to convince budget holders and stakeholders of the potential impact. I undertook the Postgraduate Diploma to understand how to develop and implement innovation successfully.

Developing knowledge of the methodologies and tools in areas such as design thinking, lean process and pitch development equipped me with the drive to challenge organisational limitations in order to improve operational efficiency. It was the most rewarding and inspiring course I have ever completed. The impact has been significant. In 2021, I led the development of a business case for UL Pain Management Services, aligning with the quadruple aim. This successfully pitched project led to the Pain Excellence Centre opening in December 2021, reducing waiting lists from 49 months to 23 weeks despite a 300% referral increase. I secured funding to explore gamified Augmented Reality (AR), reducing procedural pain by 4 points on a 10-point scale, and €20,000 in Spark Impact funding to assess Virtual Reality (VR)-based guided imagery for 400 chronic pain patients. Additionally, I co-founded and now chair the Mid West's first innovation committee, supporting innovation education, promotion and support across ULHG, Mid West Public Health, Community Health, and UL academics.

Michelle Howard - Clinical Research Lead with HSE Spark

I was working as a Senior Psychologist in HSE (Disability/Primary Care Services) when completing the Postgraduate Diploma. Throughout my career I have sought to develop novel solutions to meet real healthcare needs. I successfully secured funding for two innovative projects through HSE Spark Innovation Programme. As part of the support provided by HSE Spark I attended a number of workshops on Design Thinking and Innovation. I was inspired through my engagement with these workshops to pursue formal post graduate studies in innovation. I thoroughly enjoyed every aspect of the course. It was a true privilege to connect with like-minded professionals from diverse backgrounds, all driven to advance innovation in healthcare. The opportunity to learn about innovation theories and methodologies, their practical applications, and gain inspiration from leaders in the field was invaluable. During the course I took on the role of National HSCP Innovation Fellow with the HSE Spark Innovation Programme. I have since moved into the role of Clinical Research Lead with HSE Spark. The knowledge and skills that I gained throughout the course have been invaluable in enabling me to support others to design and implement innovation solutions to real healthcare needs in their areas. I draw on material covered in the course on a daily basis as I utilise innovation theories and methodologies to drive healthcare innovation.





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MORE INFORMATION



How to apply: <https://www.tcd.ie/medicine/clinical-medicine/postgraduate/pgraddip-in-healthcare-innovation/>

Follow us: X: @PGDipInnovation

More info: <https://t.co/IQsTlid4p5>

Questions?: PGDip.HealthcareInnovation@tcd.ie