# CERTIFICATE IN
# P-TECH
## BEST COLLABORATION PROJECT

**National College of Ireland**

## A New Higher Education Award for Secondary Students

## Background

**P-TECH** (**Pathways in Technology**) was originated by IBM in the USA and focuses on creating a direct path between high school, college, and career. P-TECH demonstrates the power of public-private partnerships in strengthening education and reinvigorating local economies. Since its establishment in New York in 2011, P-TECH has has grown to over 110 schools in six US states and 4 other countries, involving more than 10000 students. More than 500 companies in sectors like technology, finance, medical, manufacturing, and energy, are partners in the. To date, over 150 students have graduated, of which 20 have joined IBM for regular jobs, with more than half choosing to go on to complete bachelors degrees. IBM directly supports nine P-TECH schools and is leading the strategy and technical support of the entire industry network. More information about P-TECH can be found at the link. https://www.ptech.org/

## P-TECH in Ireland

In 2018, the Irish Government announced support for a pilot programme of P-TECH in Ireland, centered in the NEIC, with the aim of tackling educational disadvantage. NCI became the Higher Education partner alongside IBM, Cisco, Virgin Media, Irish Water and Irish Life, and the Department of Education and NEIC, to collaborate with local secondary schools St Joseph's, CBS, Marino College and Larkin Community College. P-TECH is supported by the Department of Education (DOE) and the Department of the Taoiseach, as well as the North East Inner City Programme Implementation Board (NEIC PIB).

NCI worked with industry partners and schools to reimagine the original P-TECH model and to design a whole new curriculum tailored to complement the Irish education system. P-TECH in Ireland is a unique industry, education and community-based collaboration. The Certificate in P-TECH is a new programme which seeks to provide students with a range of skills and experiences that help their development, future learning and future career. The programme, which is made up of two modules, (Skills for Business & Career and Skills for a Digital World) introduces students to new ways to develop knowledge, digital skills and work experience. In addition, the programme highlights the importance of empowering students to develop self-awareness, self-belief, and personal autonomy. It also creates lots of opportunities to learn about collaboration, project working, appreciating other perspectives, problem-solving and how to reflect on learning and experiences.

**National College of Ireland** is based in Dublin's North-East Inner City (NEIC), an area at once synonymous for International Finance and Silicon Docklands, and with a history of high unemployment and poverty. NCI originated as a Workers' College, founded by the Jesuits, and it retains a strong ethos of social justice. The College's mission is to Change Lives Through Education. NCI has a 6,000-strong student body, from undergraduate to doctoral level, in its core areas of computing, business, psychology and education.

**National College of Ireland** | Centre for Education and Lifelong Learning

The **Centre for Education and Lifelong Learning (CELL)** at NCI is at the forefront of education and learning innovation, with research and practitioner expertise in Early Childhood Education, Further Education, Technology Enhanced Learning, Lifelong Learning, Universal Design for Learning and design for 21st Century skills. As well as offering a range of programmes for education and learning professionals, CELL also provides professional support for Teaching Enhancement and Learning Support throughout NCI. CELL runs an annual Festival of Education and Lifelong Learning, allowing the sharing of best practice within the sector.

## Meet the Team

### Dr Leo Casey
Director of CELL

Leo joined National College of Ireland in January 2007 to take up his current position. He is Director of the Centre for Education and Lifelong Learning, which specialises in researching and developing innovative, technology-based, learning approaches for a range of contexts. His own specific research interests are in digital literacy, motivation and addressing low skills in adults..

### Dr Ita Kennelly
P-TECH Programme Director and Curriculum Development

Ita Kennelly is a Lecturer in Education at the National College of Ireland (NCI). Having worked across different sectors (public, voluntary & private) for many years, Ita returned to higher education to complete a master's and doctorate in Education. She has been involved in teaching and supervising students at undergraduate and postgraduate levels and has research interests in academic writing, supporting student wellbeing, reflective practice and student engagement. She is particularly interested in supporting students to achieve their potential in education. In addition to her work on P-TECH, Ita has been working on a number of projects to support students' academic development including a book on academic skills for the Early Childhood Education and Care discipline.

### Stephanie Roe
Education Specialist

Stephanie Roe is an Education Specialist at the Centre for Education and Lifelong Learning in NCI. She has worked on a number of innovative educational projects including the development of technology enhanced learning programmes of the Irish Further Education sector. Stephanie also has a specific interest in work placement learning contexts for teachers and early childhood education.

### Deirdre Tinnelly
Education Specialist

Deirdre is currently the Education Specialist in the Centre for Education and Lifelong Learning in NCI. She has over 10 years' experience teaching across schools in both the UK and Ireland. Whilst working as Assistant Headteacher in the UK, she ran a Training Programme for Newly Qualified Teachers and was the school mentor for student teachers. She has a Postgraduate Certificate in Education, and a Postgraduate Certificate in Leadership. Her early career was as a digital marketer. She is passionate about Education, Lifelong Learning and Self-development.

## Current Industry Partners

IBM Ireland Limited (IBM), Cisco Systems (Cisco), Irish Water (IW), Virgin Media (VM), Irish Life (IL).

## Current Secondary Partners

St Joseph's CBS Fairview, Dublin 3. Marino College, Dublin 3. Larkin Community College, Dublin 1. Pobascoil Rosmini, Dublin 9. O'Connell's Secondary School, Dublin 1.

## Challenge

The challenge was to develop a new curriculum to support students' growth and create links to future education and career possibilities. Part of our solution was to work in close collaboration with industry partners to create the opportunities for students to experience different working and learning environments as part of their learning on the programme. For students' higher education experience, this includes Campus Learning Events where students come to NCI to experience college lectures. Also linked to higher education learning, students use a VLE (Virtual Learning Environment) and work on a reflective ePortfolio. To develop links with the workplace, industry partners offer a work placement in Transition Year (TY) and mentoring opportunities throughout the programme.

Industry partners also participate in the design of project-based assessments so that students experience authentic assessments and build skills that will serve them well in both industry and education.

## Supporting Teachers to Deliver the Certificate in P-TECH

The development of a bespoke qualification for P-TECH teachers was an essential ingredient in the success of this project.

In tandem with the development of the P-TECH for secondary students, CELL developed a new postgraduate programme to prepare teachers for the Certificate in P-TECH curriculum. The level 9 Certificate in Educational Practice for P-TECH provides a supportive context for P-TECH teachers to trial new approaches, implement their teaching and learning and, finally, to undertake reflection on their practice in the classroom as well as their own learning.

The first cohort of 14 teachers from NEIC schools completed the Certificate in Educational Practice for P-TECH in March 2022 and graduated in November 2022. This programme will be run incrementally to support the expansion of the P-TECH school programme. Teachers will be invited to regular CPD events and it is envisaged that a P-TECH Teacher Network will be developed to support ongoing development and connections as the programme expands.



P-Tech Graduates 2022

## QQI Validation of P-TECH on the National Framework of Qualifications

In June 2021, Quality & Qualifications Ireland (QQI) validated NCI's Level 9 award for teacher professional development (Certificate in Educational Practice for P-TECH) which prepares educators.

In September 2021, QQI validated NCI's Level 6, Certificate in P-TECH, intended for delivery in the participating schools.

**QQI AWARD**

## Certificate in P-TECH

Sitting alongside the existing second-level school curriculum in the 3-year senior cycle (Transition Year, 5th Year and 6th Year), the Certificate in P-Tech provides a very different learning experience, including on-campus Higher Education learning events, work experience with industry partners and a focus on personal development.

It consists of two modules:
- Skills for Business & Career and Skills for a Digital World  The Student Handbook issued to P-TECH students and their parents/guardians offers a comprehensive overview.
https://www.ncirl.ie/Portals/0/LT/P-Tech%20Student%20Handbook%20Dec%202021.pdf

## Learning in Action

Student Work Placements: https://www.ncirl.ie/About/Faculties/Centre-for-Education-and-Lifelong-Learning/Education-Innovation-and-Research

Student Work Placements: https://youtu.be/l4cmay9_AaM

Student demo of e-Portfolio: https://youtu.be/L9SHYQueaAk

Student observation: Wisdom from Work Placement  https://youtu.bev6KyxySlVb0

Reflections on Learning: https://www.youtube.com/watch?v=4XEtbss3Rv8

## Impact

Quotes from students

"Before, I had a fixed mindset, and that is not the case anymore"

"It's good to plan ahead and to think about things like help and motivation"

"I learned not to bombard people with information: to keep it short, simple, and understandable"

"I improved my confidence, my time management, and organising skills"

"It helped me learn more about what I want in my future and what I need to do to achieve what I want"

"P-TECH evaluation is more focused on achieving knowledge, not just for getting a good grade"

## Press Coverage

200319 Marino College P-Tech.pdf

191016 Indo Tech that Past pupil power.pdf

STGUG 2021.PDF (page 6)

An Taoiseach Mícheál Martin speaking about P-TECH:
https://www.youtube.com/watch?v=rLf_YlPsCtY



## P-TECH - What Next?

*We have ambitions...*

**We aim to:**

- Continue development in NEIC schools with new links to 2 additional schools.

- Continue to develop the Certificate in P-TECH curriculum. This includes a number of improvements and modifications to existing curriculum to enhance students' experience and learning.

- Add the next phase of study for students in 5th Years. This includes an Impact Project where students work in a team to address a challenge in their local environment and also an individual technical project where students build their individual expertise in a specific technology.

- Enhance the programme's Universal Design for Learning (UDL) and include a wider variety of UDL supports within the Virtual Learning Environment (VLE) and also within teaching resources and assessments.

- Support continued learning and development of P-TECH teachers.