Enterprise-led, demand-driven talent development

Helping Irish based companies boost their competitiveness by providing innovative learning and development programmes
Our primary focus is on upskilling Ireland’s workforce by providing advanced technical and leadership development programmes.
To remain competitive Ireland needs a highly skilled, adaptable and innovative workforce. Our programmes help companies achieve this.
Knowledge and skills are now the global currency of the 21st century.
Introduction

Technology Ireland ICT Skillnet is a network of companies who collaborate to address skills and competency needs within the technology sector. Everything we do is enterprise-led, demand-driven and delivered to drive continuous improvement within enterprises. We believe that high quality, focused education and training unlocks unrealised potential, and improves employee retention, satisfaction and productivity.

Established in 2005 the Technology Ireland ICT Skillnet is the largest network serving the technology sector and to date has trained in excess of 4,000 employees of Irish-based ICT companies, supporting them to sustain leading-edge competitiveness in advanced and emerging technologies. In 2019 the network amalgamated with the Technology Ireland Innovation Forum to provide a new focus and a range of innovation-related services to the shared membership of both groups.

The network is a non-profit body which is co-funded by Skillnet Ireland and by the network’s member companies. Skillnet Ireland is the national agency for workforce development and is funded from the National Training Fund through the Department of Education and Skills.

Technology Ireland ICT Skillnet is a member of the Digital Skills and Job Coalition. This multi-stakeholder partnership was launched on 27th April, 2017 and focuses on tackling the digital skills shortage and on upskilling Ireland to take advantage of the digital economy and society. Representatives from academia, all education sectors, industry, the public service, the not-for-profit sector have come together to ensure that Ireland joins in the European effort to leverage the rewards of digitalisation.

Technology Ireland is the promoting organisation for the ICT Skillnet and is an Association within Ibec, representing the ICT, Digital and Software Technology Sector. The Association is a pro-active membership organisation with member companies located throughout Ireland. It is the largest and most influential business organisation representing Ireland’s tech sector.
So, what do we do?

Our primary focus is on upskilling workers in employment by providing advanced technical and soft skills programmes. Many of our courses are delivered by Universities and are delivered part-time, and mainly online at Bachelor and Masters level.

We also provide a range of short courses (face to face and online) in cutting edge and emerging technologies, delivered by expert private sector training organisations. These are often in subject areas that companies acting alone might find hard to fund or even find.

The network is actively engaged in research and development of new programmes to meet emerging skills needs and has pioneered new initiatives in Cybersecurity, Artificial Intelligence, Cloud Computing, Internet of Things, and Blockchain.

How we work

The network receives an annual grant from Skillnet Ireland which enables us to offer a wide range of courses to companies. These courses are contracted to education and training organisations based on a public tendering process and then offered to companies at a discounted rate.

Only Irish-based enterprises operating in private sector and commercial semi-state organisations can access our training programmes. They are not open to the general public, public sector organisations nor to charitable or not-for-profit bodies.

Our unique offering works as a collaborative process with member companies identifying skills and competencies gaps and usually working together to fill these gaps. The solution results in industry-led programmes which are part-funded by Technology Ireland ICT Skillnet. This flexible cost-effective approach assists companies in driving innovation and in sustaining their competitiveness.
Collaborating to identify skills and competence gaps

Public tendering process undertaken to find suitable delivery partner

Delivery partner appointed e.g. academic institution or private training organisation

Collaborative and consultative process for programme development

New industry-led training programme

Entire process part-funded by Technology Ireland ICT Skillnet resulting in cost-effective, industry-led training programmes

Enterprise-led, demand-driven talent development
Fostering, growing and supporting innovation in technology has been at the heart of the network since its inception. This focus has been strengthened by its amalgamation with the Technology Ireland Innovation Forum. The merger will deliver a more relevant, comprehensive and integrated framework to support organisations on both their talent acquisition and innovation roadmaps.

Innovation creates important effects on business operations and carries both tangible and intangible benefits that can lead to improved productivity and results. Building an innovation friendly ecosystem within enterprises affects the culture, efficiency and relationships of the business. The range of Innovation Programmes offered by the network is designed to enhance that ecosystem both at the enterprise level and nationally.

Within this environment there is a requirement for an innovation broker, one which facilities organisations across a spectrum of maturity from disruptive start-ups, SMEs, to established players looking for the next competitive edge. Coupled with the capability to assist you on your skills delta, we have built the required knowledge and experience to help you to achieve those outcomes. Our collaborative approach facilitates working with academia, leveraging state funding instruments, connecting SMEs with MNCs and delivering insightful and beneficial pathways for organisations to consider as part of their innovation journey.

Undertaking the MSc in Leadership Innovation & Technology was challenging but worthwhile. I emerged with an integrated view of innovation in different operating contexts.
Innovation Seminar Series
In today’s disruptive world, organisations struggle to keep abreast of changing technologies, methodologies and best practices notwithstanding their need to innovate and scale. Our regular innovation seminars provide a forum for interaction, knowledge exchange and networking across the various stakeholders in both the technology and innovation communities. These seminars provide insights on routes into a vibrant innovation ecosystem which can afford organisations new opportunities to grow their bottom-line. Recent topics have included Ethics in AI, Blockchain Implementation, cHiPset High Performance Modelling & Simulation, Agile Transformation, Bridging the Competence Gap and many more.

Innovation Excellence Programme
This Innovation Excellence Programme aims to assist companies to develop an innovation framework which will define the steps of innovation implementation from discovery to commercialisation and thus help companies develop their innovation capability in a structured, sustainable and measurable process.

Digital Transformation
Programmes are offered specifically for SMEs to build their capacity around digital adoption and transformation and to enable them to embrace and effectively implement emerging technologies especially Artificial Intelligence and automation.

ICT Competencies and Professionalism
The European e-Competence Framework (e-CF) provides a reference of 40 competences within the Information and Communication Technology (ICT) workplace, using a common language for competencies, skills, knowledge and proficiency levels that can be understood across Europe. The network has piloted implementation of this framework with Irish companies and plans to further develop this process in collaboration with the Irish Computer Society as part of its strategy to build a strong culture of professionalism in the ICT sector.
If technology is the engine of the modern economy then its driver is software development. Software development is an extended process which involves a wide range of skills and techniques from planning, architecture, systems design, user design, coding, testing, through to operations and commercialisation. Working in Agile teams is now a common feature of the process and mixing development with operations (DevOps) is no longer a novel concept.
Graduate Certificate in Software Engineering

This 9 week intensive full-time course is for those wishing to pursue a career in software engineering. It is delivered by Athlone IT and gives a thorough grounding in the core elements and has been found to be useful even by computer science graduates because of its focus on building competence in applied software engineering skills.

MSc In Applied Software Engineering

This is a full-time course over 9 months that provides a broad based but high-level introduction to all aspects of software development and is delivered in collaboration with LM Ericsson and Athlone Institute of Technology. The programme is aimed at recent graduates or those wishing to convert to a software career. It is followed by a 3 month internship with LM Ericsson at their Athlone Software Campus.

Embarking on a part-time Master’s course is a big time commitment but I’m really enjoying it. I’ve found the lecturers to be very knowledgeable and helpful. The course is teaching me an end-to-end technical DevOps skillset combined with a business focus that I can use immediately in my daily work. There are a lot of technologies to consider for DevOps and the course has helped me realise not only which ones are the most useful for my business but also that DevOps is as much about people as it is about technology.
MSc in Software Solutions Architecture
This two year part-time course is delivered primarily online. It is one of the first of its kind anywhere and commenced in September 2017 at Technological University Dublin (Tallaght Campus). It is a collaboration with the International Association of Software Architects (IASA) and includes mutual recognition and exemptions for the IASA Certification programme.

MSc in DevOps
This highly popular programme was developed by the network with Technological University Dublin (Tallaght Campus). It is delivered primarily online over two-years part-time and includes soft skills training as well as the wide range of technical skills required for this evolving role.

Special Purpose Award (SPA) in DevOps
This 12 week full-time programme held in Letterkenny Institute of Technology leads to a Special Purpose Award in DevOps and is followed by an in-company placement for successful candidates.

Advanced Technical Training Programmes
These are short (2 to 5 days) intensive courses to meet specific gaps in high-end and in-demand software development skills. Courses have been offered in the following subject areas:
- Python Programming
- Agile Project Management
- SCRUM Master

Postgraduate Certificate in Computing in DevOps
The postgraduate certificate (level 9) in Computing in DevOps focuses on the core principles and practices of delivering high quality software to customers and users from its constituent components of software (dev), infrastructure (ops), and the overarching fit with the technology strategy of a company. Learners can progress to the Master of Science in Computing in DevOps following completion of this programme. The programme is delivered in blended mode, but predominately online.
Enterprise-led, demand-driven talent development
The rapid adoption of Cloud Computing has been dramatic both at a personal and business level. In the past five years the industry has experienced hyper-growth and exceeded all predictions of how big it would become. Linked to this is the phenomenal growth in the Internet of Things which now uses Cloud as the connectivity mode of choice for most IoT services. Both have led to strong demand for upskilling across a range of related technical disciplines.
**BSc in Cloud Networking Technologies**

This 18 month part-time mainly online course allows participants to develop a deep knowledge and understanding of Cloud Computing and its roles and uses in the marketplace. This means exploring a host of important technologies that include Virtualisation, Software Defined Networking, Network Infrastructures, Physical & Virtual Storage, Backup and Restore technologies, Network Security and core management development skills. It was developed by the network and is delivered by Technological University Dublin (Blanchardstown Campus).

**MSc in Computing (Internet of Things)**

This Masters programme offered in partnership with our sister network the Technology Ireland Software Skillnet aims to build a broad base of expertise across multiple IOT delivery disciplines including: Embedded Devices and Systems, Real Time Signal Processing and Cloud Connectivity, Secure Communications and Network Security, Data Management and Predictive Analytics, IoT System Deployment and Management, and End-to-End (E2E) IoT System Development. The course is delivered by Dublin City University part-time online over two years.

**Advanced Cloud Training Programmes**

These are short (2-5 days) intensive courses to meet specific gaps in high-end technical skills in areas that augment and support the higher education courses above.

- Red Hat System Administration
- Continuous Integration with Jenkins
- Cloud Service Manager
- Angular JS 2 Development
- Kubernetes and Docker
Data Analytics has grown rapidly as a discipline in the collection, processing and interpretation of large volumes of data and has become more integral to business strategy and operations. At the same time, business intelligence and business analyst functions have grown and adapted as organisations seek deeper and more timely insights to inform their decision making.
MSc in Data Science and Analytics
This totally online Masters programme is designed to upskill students to select, apply and evaluate data science and big data analytics techniques to discover knowledge that can add value to a company. Students gain both an in-depth theoretical understanding and practical hands-on experience, including implementing novel and emerging techniques. Participants are kept abreast of current research and state of the art techniques in data science related topics. The course is delivered online over two-years part-time by Technological University Dublin (Blanchardstown Campus).

Certificate in Business Analysis
This blended learning course aims to provide participants with specialised knowledge in analysing the core business objectives and strategy of an organisation, the ability to analyse the processes, procedures, systems and structures that are in place – and to evaluate their effectiveness and efficiency and develop a comprehensive understanding of the dynamics of change – and how to harness the positive energy needed to bring about successful change. Delivered in collaboration with the Irish Computer Society by the National College of Ireland the course is recognised by the Business Analysts Association of Ireland.

Certificate in Enterprise Analytics
This Hackett Institute online course provides foundational knowledge of analytics and business analysis.

The course uses interactive exercises and relevant case studies to illustrate each lesson and examine the appropriateness of techniques, tools and skills to specific analytics challenges. Participants will be able to deliver organisational goals of greater visibility, reliability, and predictability through better analytics decision-making, techniques, and tools. They will be able to better analyse problems, suggest solutions, and implement decisions; and understand and apply emerging trends in analytics.

Did you know

c.300 billion emails
are sent each day and there are c. 2 trillion google searches every day... that’s a lot of data.

Our programmes will help you focus on the knowledge and skills necessary to select, apply and evaluate data science and big data analytics techniques to gain knowledge and insights for business advantage.

Enterprise-led, demand-driven talent development 17
The success of Global Business or Shared Service organisations depends largely on the knowledge, skills and capabilities of their staff. With the emergence of multi-functional GBS organisations in a knowledge-centric ecosystem, learning and development is imperative to attracting and retaining the best talent and creating and motivating high-performing teams.

We have developed a comprehensive suite of programmes – a GBS Career Skills Pathway - which aims to develop the core knowledge, skills and competencies of the GBS talent pool in Ireland based on internationally recognised best practice. This involved the collaboration of Technological University Dublin (City Campus) and The Hackett Institute, the professional education arm of The Hackett Group, supported and funded by Skillnet Ireland, IDA Ireland, American Chamber of Commerce in Ireland, and member companies. The programme contains a rigorous globally unique set of integrated academic qualifications which are easy for individuals to access and which are based on cutting-edge insights and best practices.

There are four certified courses in the career pathway:

**Course 1**
CPD Diploma in GBS
- Level 8 NFQ
- 20 ECTS Credits
- Entry Level
- 100% online
- 4 Modules
- 6 Months
- Direct Entry

**Course 2**
Postgraduate Certificate in GBS
- Level 9 NFQ
- 30 ECTS Credits
- Manager, Team Leader
- Online + 4 days on campus
- 6 Modules
- 1 Academic Year
- Direct Entry

**Course 3**
Postgraduate Diploma in GBS
- Level 9 NFQ
- 30 ECTS Credits
- Senior Managers
- Online + 4 days on campus
- 6 Modules
- 1 Academic Year

**Course 4**
MSc in GBS
- Level 9 NFQ
- 30 ECTS Credits
- Completion of Programme 2 + 3 and a work-based project
- 6-8 months
Diploma in Global Business Services (CPD)
This is a Level 8 course with 20 ECTS Credits. It is aimed at associates working in Global Business Services operations that are typically performing transactional or knowledge-based work. It represents a first stage of education and professional development.

Postgraduate Certificate in Global Business Services
This is a Level 9 course with 30 ECTS Credits, and will support team leaders and mid-level managers, and associates preparing for a role as a manager.

Postgraduate Diploma in Advanced Global Business Services
This is accredited at Level 9 with 30 ECTS credits, and supports the development of senior managers and executives.

MSc in Global Business Services
Participants who have successfully completed the Postgraduate Diploma in Advanced Global Business Services will be permitted to submit a Major Consulting Project worth 30 ECTS following which they will be eligible for the award of MSc in Global Business Services at Level 9 of the NFQ.

Advanced Technical Training in Global Business Services
- Robotic Process Automation Analyst (Blue Prism)
- Robotic Process Automation Practitioner (Blue Prism)
- RPA Foundations (Online Masterclass – Hackett Institute)

It is forecast that there will be significant demand for skills arising from the creation of new jobs in the economy and replacement demands beyond 2020. We have the capability and expertise to help your organisation handle these demands.
Data centre facilities are a large and fast-expanding part of the Irish economy. Data centre providers have identified that a gap exists between separate skillsets in new engineering technicians, who are required to operate in environments that integrate technology from a multitude of different disciplines, for example electrical and electronic technology; mechanical and thermodynamic science and technology; and computer networks and facilities management.

New entrants to the sector usually do not hold qualifications across this broad range, typically holding either mechanical or electrical qualifications, but rarely both. In response we have worked with Technological University Dublin (Blanchardstown Campus) to develop an integrated talent development pathway from entry to advanced levels across all the core disciplines involved, which will be delivered primarily online:

**With investment in the construction of data centres in Ireland estimated to reach more than €9 billion by 2021, we have invested in the upskilling of our staff to close the skills gap that currently exists.**

- **Special Purpose Award in Data Centre Operations**
  - Level 6 NFQ
  - 3 months part-time
- **BSc in Data Centre Operations & Management**
  - Level 7 NFQ
  - 2 years part-time
- **BSc (Hons) in Data Centre Operations & Management**
  - Level 8 NFQ
  - 2 years part-time
BSc in Data Centre Operations & Management
This programme aims to produce graduates with relevant industry-specific skills to support sustainable data centre processes and practices, with clear professional career progression routes. It is a Level 7 Ordinary degree developed and delivered by the School of Informatics and Engineering at the Technological University Dublin (Blanchardstown Campus) in collaboration with Technology Ireland ICT Skillnet.

Special Purpose Award in Data Centre Operations
This programme has 3 modules and takes place over 10 weeks. It has been designed for those with no former 3rd level education. It covers the operations and management structure of a Data Centre Facility and includes modules on personal and professional development, communication, problem solving and troubleshooting.

Ireland has established itself as the ‘data capital of Europe’, with many of the world’s largest tech companies basing data centres here. Graduates of our Data Centre programmes emerge with industry-specific skills to support sustainable data centre processes and practices.
The Cybersecurity Skills Initiative is a direct response to the most consistent need of companies across all sectors and all sizes – how to adequately protect their business in the face of the escalating cyber threat. Central to this need is the growing shortage of skilled cybersecurity personnel to protect against and respond to security incidents.

Ireland has the highest demand of any country worldwide for cybersecurity jobs, but it also has a worrying talent shortage with an increase of over 40% in Cybersecurity vacancies over the space of 2 years. And this is happening as the threat is increasing. A recent survey of the cybersecurity landscape shows that an overwhelming majority (93%) of respondents believe that the complexity of threats they will face over the next 12 months will increase and nearly half (46%) admit they will either struggle to deal with these threats or that defence against them will be impossible.

The Initiative aims to:
1. Develop awareness of Cybersecurity issues so as to attract people into Cybersecurity.
2. Improve the preparedness of companies and organisations generally to defend against cyber attacks.
3. Enhance the resilience of companies to manage Cybersecurity challenges by building their skills base and reducing the skills shortage in this area.
4. Set standards for skills and competencies in Cybersecurity roles.
5. Promote the appropriate use of automation and artificial intelligence in cyber defence.
Cybersecurity Risk Assessment (CRA)

The CRA is an online Risk Assessment and Management software tool (implemented and facilitated by training and online support) that allows enterprises to regularly check whether their cybersecurity profile is prepared for and resilient to cyber attacks. It is a continuous improvement tool which gives enterprises the opportunity to improve their systems based on an informed analysis of their risk level allowing them to take action to mitigate those risks.

Cybersecurity Aptitude Test (CCAT)

The Commercial Cybersecurity Aptitude Test has been developed by IBM and is focused on the aptitude necessary for success in an entry level security analyst role. Traits measured by CCAT include: Personality (work styles, personality characteristics and behavior); Error Detection (logical reasoning via pseudo-coding logic exercise) and Pattern Matching (ability to accurately and quickly locate mismatches in highly detailed data sets presented graphically). Candidates’ scores are presented in a comprehensive report.

Capture the Flag Events – Become a cyberhacker for a morning

Capture the Flag is a fun and safe environment to learn what hackers do and the tools they use. It also demonstrates how vulnerable computer technology is and helps participants to become more aware and skilled at securing and defending against attacks. This gamification style event works very well for companies to help build awareness of Cybersecurity among their teams. Companies can send teams of 4 to events scheduled by Technology Ireland ICT Skillnet or alternatively can organise an entire event inhouse specifically for their staff.
The introductory courses listed opposite are aimed at SME owners/managers. Introductory courses are suitable for anyone who does not have technical skills but would like to get a good understanding around the fundamentals of keeping their business safe. Those with existing technical skills will benefit greatly from the Intermediate programmes and finally anyone working (with existing educational skills in the area) and looking to upskill could consider the Level 9 MSc programmes.
<table>
<thead>
<tr>
<th>Programme</th>
<th>Level</th>
<th>Equivalent level on NFQ</th>
<th>Certification</th>
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</thead>
<tbody>
<tr>
<td>1. Cybersecurity Awareness Workshops</td>
<td>Introductory</td>
<td></td>
<td></td>
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<tr>
<td>Half-Day</td>
<td>No technical skills required</td>
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<tr>
<td>1/2 Day classroom introduction, followed by 10 weeks Instructor-led,</td>
<td>No technical skills required</td>
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<tr>
<td>Online self-paced learning, then 1/2 Day close off.</td>
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<td>3. Cybersecurity Analyst</td>
<td>Foundation</td>
<td>Level 6</td>
<td>Higher Certificate in Applied Cybersecurity</td>
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<tr>
<td>10 months part-time predominantly online for those wishing to move into</td>
<td>Level</td>
<td></td>
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<tr>
<td>cybersecurity.</td>
<td>6</td>
<td></td>
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<tr>
<td>4. Cybersecurity Special Purpose Awards</td>
<td>Intermediate</td>
<td>Level 7</td>
<td>10 ECTS Credits for each SPA</td>
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<tr>
<td>Network Security, Information Security Management, Penetration Testing,</td>
<td>Level</td>
<td></td>
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<td>Risk Management, Secure Communications, Incident Response</td>
<td>7</td>
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<tr>
<td>12 weeks 100% Online learning – mentored by lecturers.</td>
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<td>5. BSc Cybersecurity</td>
<td>Advanced</td>
<td>Level 7</td>
<td>BSc in Applied Cybersecurity</td>
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<tr>
<td>3 year part-time predominantly online for those wishing to develop</td>
<td>Level</td>
<td></td>
<td></td>
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<tr>
<td>broad based expertise across all major cybersecurity roles.</td>
<td>7</td>
<td></td>
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<tr>
<td>6. MSc Applied Cybersecurity</td>
<td>Advanced</td>
<td>Level 9</td>
<td>MSc in Applied Cybersecurity</td>
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<tr>
<td>2 years part-time, delivered 100% online with a maximum of 3 half days</td>
<td>Level</td>
<td></td>
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<tr>
<td>per semester required on-campus.</td>
<td>9</td>
<td></td>
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<tr>
<td>7. MSc Strategic Management of Cybersecurity</td>
<td>Management</td>
<td>Level 9</td>
<td>MSc in Strategic Management of Cybersecurity</td>
</tr>
<tr>
<td>2 years part-time, delivered online.</td>
<td>Level</td>
<td></td>
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<tr>
<td>(Level 8 honours degree required)</td>
<td>9</td>
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The Road to Excellence

Cybersecurity Skills Initiative (CSI) / continued

Continuous Professional Development

Business
A business issue, not just an IT issue

New Entrants
Attract and retain young people

Cybersecurity Skills Pathway
Building skills, knowledge and expertise

Organic Growth
Broaden the skills base by fostering internal mobility within organisations
The Cybersecurity Skills Initiative (CSI) has five key objectives. These five objectives are collectively described as “The Road to Excellence” for Ireland in the Cybersecurity sphere which is the underlying goal of the entire project.
Artificial Intelligence Skills Pathway

AI is already at the heart of many transformational business and technical applications, typically employing a combination of data analytics and machine learning. At the same time design and development activity for AI systems is growing exponentially, constrained only by a skills demand. To meet this skills challenge, Technology Ireland has developed an AI Skills Pathway which we started implementing in 2018.

Central to the AI skills pathway are three Masters programmes in Artificial Intelligence. The first to be developed was a national MSc in Artificial Intelligence at the University of Limerick (UL) with participation from the Irish Centre for High End Computing (ICHEC). This two year part-time course is delivered primarily online and augmented by an intensive 12 week online Certificate in AI course which is delivered by both UL and ICHEC.

Two further MSc courses in Computing with a major in AI are now also offered - one at Dublin City University and one at NUI Galway. Both courses are supported and part-funded by Technology Ireland ICT Skillnet.

Stage 1
Short Courses
Deep Learning Machine Learning Leadership in AI

Stage 2
Certificate in Artificial Intelligence
Level 8 NFQ 12 week Part-time Online

Stage 3
MSc in Artificial Intelligence
Level 9 NFQ 2 years Part-time Online

Stage 4
PhD in AI and Data Science
Level 10 NFQ 4 years applied research and training
PhD - Centre for Research Training (CRT) in the Foundations of Data Science and AI

The aim is to build a high-value talent pipeline in Ireland in the foundations of data science with an emphasis on training students with the underpinning Applied Mathematics and Statistics skills for areas critical to Irish companies such as Artificial Intelligence, Data Analytics, Cyber Security, Machine Learning, Autonomous Systems, Health and Digital Manufacturing. This is a partnership led by the University of Limerick, UCD, and Maynooth University which will run for 7 years starting in September 2019 with 30 students entering each year for 4 years to complete their PhD.

The programme radically changes how PhD students are trained and supported since they will work full-time and together in cohorts of 30 students (rather than individually) and spend as much time on high level training as on research. Participants will engage in applied research within participating companies. There the training will include key soft skills and business skills training so they emerge as rounded graduates with the ability to explain and promote as well as implement these high level technologies.

Graduates from the CRT will positively impact all aspects of Irish society and will become Ireland’s future leaders, innovators, entrepreneurs and employers. This is a unique opportunity to work with some of the best researchers and innovative companies working in this area.

There are existing skills gaps in data analytics such as advanced analytics, high-performance computing, and the ability to create bespoke algorithmic methods to turn data into knowledge – we have the programmes to help companies bridge these gaps.
Blockchain is an electronic and distributed ledger that can be openly shared among a wide range of different users to create an unchangeable record of their transactions, each one time-stamped and linked to the previous one. Each digital record or transaction in the thread is called a block (hence the name), and it allows either an open or controlled set of users to participate in the electronic ledger. Blockchain can only be updated by consensus between participants in the system, and once new data is entered, it can never be erased.

Technology Ireland ICT Skillnet, in partnership with IDA Ireland and Enterprise Ireland, has been to the fore in building awareness of Blockchain through a series of workshops and has provided core skills development for software engineers in new coding languages and architecture required for blockchain implementation.

Companies are seriously looking to Blockchain technology to process, validate or authenticate transactions or other types of data exchanges in a more secure and scalable way.
Blockchain Awareness Workshops
Targeted at C-Level executive these workshops aim to build awareness of blockchain, demystify and explain the technology, and highlight practical use cases – especially Irish examples – of effective blockchain implementation in a commercial context.

Ethereum Developer Course
This 4-day intensive course (2 days followed by a break, then a further 2 days) is for developers who want to take a comprehensive deep dive into all aspects of the Ethereum blockchain technology platform and its related smart contracts, and applications that interact with it. The Course is delivered by ConsenSys Academy who are developing the global blockchain ecosystem by bridging the Ethereum knowledge gap. The course allows participants to develop the core skills for Smart Contracts and DApps development, including key topics like security, Gas optimisation and testing. Upon completion, participants will be able to code and deploy Smart Contracts, and design the user web interface to use them.

MSc in Computing (Blockchain)
This modular two year part-time Masters degree in applied Blockchain (Distributed Ledger Technologies) is geared towards those who are currently working in the field of Blockchain, are interested in becoming a Blockchain developer and/or building a career as a Blockchain developer. The course was developed by the network in collaboration with Dublin City University and is delivered almost entirely online. It provides a complete overview of the Blockchain development technology process, its recent history and emergence in the Bitcoin sphere and provides deep dive knowledge and skill development in the two best supported and most widely used Blockchain technologies - Ethereum and Hyperledger.

Enterprise-led, demand-driven talent development
Leadership and Management Development

Sprint4Growth Initiative
This initiative is aimed at SMEs. The four workshops help owner-managers of SMEs to shift their focus from day to day firefighting to establishing and influencing the long-term direction of their business, aligning the operation to that direction, and establishing controls to ensure success.

Business Technology Strategy
(1 Day Opening – 1 day Closing plus 4 x 1 hour sessions online)
This course uses content from the successful Technology Strategy module of the MSc in Software Solutions Architecture to focus on how a clear purpose and scope within a company can add value to different parts of the enterprise. It explores the complexity of decision making at the owner-manager level in the firm and encourages participants to understand the role and tensions of various functional activities and challenges working in tandem. Integrating data and activity using the lean and agile framework with an ICT SME will also be a feature of this course.

Human Skills for Technology Managers
(1 Day Opening – 1 day Closing plus 7 x 1 hour sessions online)
This course covers a range of core skills: Communications & Engagement, Leadership and Management, Collaboration and Negotiation, Learning and Talent Development, Managing The Future, Change Management, and Personal Career Development which will include exploration of personal career planning by using some of the concepts and theories in reviewing personal experiences and setting goals for the future; self-awareness; personal development; coaching and mentoring.

Problem Solving Creativity and Critical Thinking
(1 Day Opening – 1 day Closing plus 4 x 1 hour sessions online)
This course aims to consolidate and develop the participants’ entrepreneurial and innovative abilities - both in a group and individually – to solve problems, to be creative and to think critically. Participants develop a systematic approach to solving problems, designing, implementing and evaluating solutions. This includes using a variety of creative problem-solving techniques including design thinking.

Technology Entrepreneurship and Innovation
(1 Day Opening – 1 day Closing plus 5 x 1 hour sessions online)
The management of innovation spans the development of products (goods and services), business models, processes, marketing and organisational methods. This course focuses on the strategic and managerial aspects of innovation including strategic integration and organisational alignment through to commercial execution. The aim is to provide a solid grounding in the key frameworks and best/next practices supporting innovation and commercialisation in the ICT sector. It builds on the participant’s entrepreneurial and innovative abilities.
Postgraduate Cert in IT Leadership & Technology Strategy

This programme is aimed at IT DevOps Professionals (Developers, Operations and Technical Team Leads) interested in developing their leadership, team management, strategic analysis and business skills so that they can develop into leadership resources for the Technology industry. This programme addresses business, technology and strategic choices which are impacting the ICT sector. Topics include; strategy definition/implementation, product roadmaps, investment planning, value stream maps, product development flow, lean and agile development as a strategy, business cases, value metrics, human skills, organisation design, collaboration and negotiation, leadership & management along with managing the future and effective organisations.

Inside Sales Programme

The ‘Inside Sales’ pilot programme aims to build the status of those in this role by providing high-end training with third level accreditation. It is being developed with a group of interested companies in the ITAG Skillnet and piloted both in Galway and Dublin by Technology Ireland ICT Skillnet. The transformation of inside sales continues to grow apace and it is now the dominant sales model for reps in B2B, tech, SaaS, and a variety of B2C settings selling high value items. It routinely involves high-touch transactions using advanced digital modalities.

Accrediting Experienced Employees

This Mentor training programme is aimed at those who wish to support and mentor their colleagues in pursuing second chance education. The programme aims to teach participants how to provide effective support, advice and practical assistance to those colleagues who are looking to gain entry to an academic programme through focusing on prior work experience rather than the minimum educational requirements as outlined by the academic institution.

MSc in Leadership, Innovation and Technology

The programme is highly practice focused and concentrates on the personal and professional development of the participants by honing their analytical, conceptual and critical thinking skills; developing personal, consultancy and research competencies; and building a detailed understanding of the tools, methodologies and frameworks to support advanced management capability. It is delivered mainly online part-time over two years by Technological University Dublin (City Campus).
Want to know more?

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About Technology Ireland
Technology Ireland is the largest and most influential business organisation representing Ireland’s tech sector. With origins dating back to 1968, the association was formed in 2017 by the merger of ICT Ireland and the Irish Software Association.

Technology Ireland is the promoting organisation of Technology Ireland ICT Skillnet and is an Association within Ibec, which represents the ICT, Digital and Software Technology Sector. The Association is a pro-active membership organisation with over 200 member companies located throughout Ireland.

About Skillnet Ireland
Skillnet Ireland are the national agency for workforce development in Ireland whose primary objective is to increase participation in enterprise training by companies.

Through 65+ Skillnet Learning Networks (one of which is Technology Ireland ICT Skillnet), this national agency allocates funding to groups of companies in the same industry sector (or region) and with similar training needs, so they can deliver subsidised training for their teams. Skillnet Ireland also plays a key role in supporting and enabling Skillnet funded groups to reach their full potential.