AMT CE
Ionad Oiliúna Barr Feabhais Ard-Déantúsaíochta
Advanced Manufacturing Training Centre of Excellence

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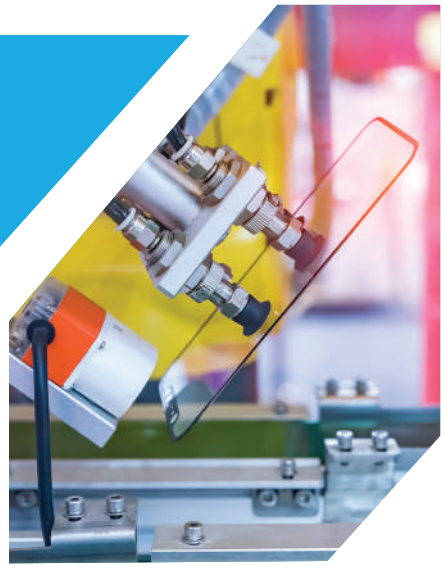
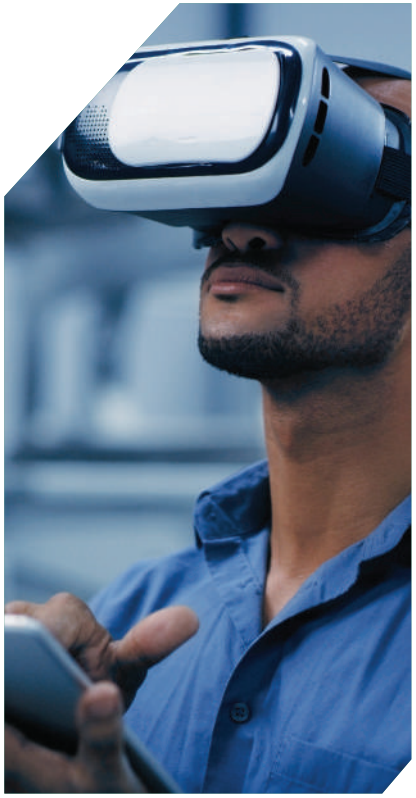
Training Catalogue 2025





lmetb
Bord Oideachais agus Oiliúna Lú agus na Mí
Louth and Meath Education and Training Board

Rialtas na hÉireann
Government of Ireland

Arna chomhchistiú ag an Aontas Eorpach
Co-funded by the European Union

SOLAS
oibríonn an fhoghlaim

Skills to Advance
boost skills - boost business

Enterprise Ireland


AMT
CE
Ionad Oiliúna
Barr Feabhais
Ard-Déantúsaíochta
Advanced
Manufacturing Training
Centre of Excellence
Staff & Visitor
Car Park
Disabled Parking

Contents

Pharma, Med Tech, Bio, Food and Beverage

Operational Optimisation

Sustainability

Apprenticeship Programmes

Traineeship Programmes

Specific Skills

Course Delivery Modes

To meet the diverse needs of companies and learners the AMTCE supports a variety of delivery modes supported by the latest in equipment, software, tools, and eLearning technologies.

Classroom

Course delivery in a physical classroom/training room in the AMTCE or another location.

Blended Delivery

Part course content delivery online and eLearning. Part course content in AMTCE or other locations.

Virtual Classroom

Course content delivery using eLearning and virtual classroom technologies.

Online Self-Directed

Learners on their own initiative engage and complete course content at their own pace within a defined time window.

An Introduction to the AMTCE

The Advanced Manufacturing Training Center of Excellence (AMTCE) in Dundalk, Co Louth, was established in 2021, supported with funding from both Enterprise Ireland and SOLAS, to address the existing and emerging skills and training needs of the Irish manufacturing sector.

The centre, located in the Xerox Technology Park, is a world-class advanced and sustainable manufacturing training facility, that has and will provide the current and future workforce with the skills and knowledge needed to excel in Ireland's advanced and sustainable manufacturing industry. The AMTCE has identified an urgent need to accelerate the provision of these skills, and to equip Ireland's workforce with the tools to succeed in this demanding and dynamic sector.

The AMTCE aims to address this need head-on. Our vision is to have an internationally recognised state-of-the-art facility that serves as a hub for excellence in advanced and sustainable manufacturing training and innovation.

AMTCE training is practically orientated, with hands on experience with state-of-the-art equipment, delivered by leading industry trainers using flexible delivery modes in response to identified industry needs.

If you are interested in accelerating in your career, or want to invest in the skills of your workforce, please reach out to us. The AMTCE team would be delighted to hear from you and to support you on your journey of learning through the AMTCE.

Martin G OBrien
Chief Executive AMTCE

Industry

Employers

AMTCE training courses cover the skills and practices which will allow you to enhance your existing operations and to provide your business with a skills-based platform to adopt and successful utilise Industry 4.0 technologies and practices. The AMTCE provides:

- Training that suits your organisation's requirements
- Bespoke design and delivery of courses to address the latest industry technology trends
- Enablement of employee mindset change empowering them to embrace, drive, plan and execute the technology changes required to maintain business competitiveness

Learners

AMTCE trainings provide learners with the essential skills and knowledge required to deliver impact and value to companies wishing to utilise the latest technologies and practices in their operations.

The AMTCE courses deliver:

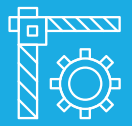
- Quality assured training delivered by leading industry practitioners and experts
- Funding supports under SOLAS Skills to Advance program which can provide up to 100% funding for eligible employees
- Hands-on experiential learning

AMTCE Training Facilities

Advance Metrology and Practices

Additive Manufacturing

Industrial IoT



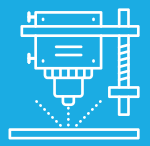
Advanced Construction Technologies

Smart Factory

Industrial Systems and Control

Optimisation of Manufacturing Operations

Data/ML/AI in Manufacturing



Subtractive Manufacturing

AR / VR Technologies

Robotics, Collaborative Robotics and Robotic Processes

Techniques, Operations and Processes for Food and Pharma

Management/ Organisational Behaviours /Processes for Industry 4.0

Welding

Cyber Security

Skills to Advance Training

The AMTCE delivers training funded under the **SOLAS Skills to Advance** policy. This is an education and training funding policy that supports people in current employment to develop and enhance their skills. Skills to Advance supports employees with upskilling and reskilling training opportunities, that enables progression in their current roles and the ability to adapt to the changing dynamics of the job market, whilst also offering support to employers with upskilling opportunities to develop their workforce.

SOLAS
learning works

Skills to Advance
boost skills - boost business

Information for Employers

Skills to Advance supports employers to identify skills needs in their business and to respond to the changing nature of jobs and skills. With heavily subsidised upskilling and reskilling opportunities, businesses are supported to thrive and grow, enhancing company competitiveness in a fast-changing business sector, and driving effective regional and sectoral development. We work closely with enterprises to identify the regional and sectoral, current and future skills required to target emerging opportunities, to move with the changing industrial landscape and to invest and futureproof their workforce, by providing heavily subsidised upskilling and reskilling training programmes for their employees.

We can support Irish SMEs to help identify skill gaps, and to develop and deliver training tailored to the specific needs of a business.

Information for Employees

Employees can directly access training under this policy. The Skills to Advance initiative is designed to support employees in all parts of the workforce to access training with up to 100% funding, prioritising participation from employees that are currently in lower skilled jobs, and those at risk of economic displacement having a job that may become obsolete due to changes in technology, automation, digitalisation, outsourcing, changes in work practices, or as a result of structural change.

For more information please visit:

www.solas.ie/programmes/skills-to-advance

Robotics and Collaborative Robotics

- Robotics Micro-Qualification
- Robotics
- Cobotics

Classroom based, blended and on-line trainings are scheduled through the year. For more information or to register for trainings please go to www.amtce.ie/courses

Code	Course Title	Delivery Mode	Duration
AMC21025	**Introduction to Robotics - Intermediate Level**	**Classroom**	**3 days**
Course Aim	The participants on this course will obtain the necessary knowledge required to perform robotic start up and calibration procedures and create structured robot programs via the robot teach pendant. Topics covered include, start-up procedures, teaching coordinate systems, robot programming, using I/O, and an introduction to subprogram calls, control functions, and continuous (approximation) statements.		

AMC21026	**Introduction to Robotics - Advanced Level**	**Classroom**	**5 days**
Course Aim	The aim of this course is to provide the learner with knowledge of how to operate and program an industrial robot. Learners will perform commissioning procedures and create, modify and execute their own robot control programs.		
Learner Profile	Learners should have completed the Intermediate 3-day Robotics or have proven experience with robotics operation, as this course builds on what was previously taught in the KUKA Intermediate 3-day Robotics course.		

AMC22191	**Subtractive Manufacturing Using CNC Robotics**	**Classroom**	**2 days**
Course Aim	This two day course introduces learners to subtractive manufacturing using a 6-axis industrial robot and a 7th axis rotary table. This course covers the steps required to prepare a part for milling, machining, trimming, and finishing on a Robotic CNC cell. This includes 3D toolpath generation within Autodesk PowerMill software, editing links and leads, collision and axis limits avoidance, converting the toolpaths into robotic programs, and simulating programs before transferring and executing on a robot cell.		
Learner Profile	■ Individuals with prior CAD software (i.e., Inventor, Fusion 360, Solidworks) wishing to learn how to convert CAD data into robot tool paths. ■ Individuals or companies who are interested in learning more about industrial robotics and their use in subtractive machining processes such as milling, machining, and trimming. ■ Individuals looking for an introduction to subtractive manufacturing processes. ■ Individuals looking to learn how to use 3D CAM solution software (Powermill) ■ CNC operators looking to upskill. ■ Learners from previous AMTCE (or equivalent) robotic training looking to upskill. ■ Learners with previous CAD/CAM training		

Code	Course Title	Delivery Mode	Duration
AMC22190	**Systems Integration and Robot Vision Systems**	**Classroom**	**5 days**
Course Aim	This course will expand on the application knowledge fields of robot operation and programming to include theoretical contents from the fields of robot safety, cell design and configuration, vision systems, as well as fundamental legal aspects that need to be observed when commissioning. The participants in this course acquire additional knowledge needed to perform more advanced robotic programming tasks such as relative and absolute motion programming, programming functions, use of structures, geometric operations and creating workspaces. Cell configuration and programming tasks will be performed using an offline development environment. Participants will be introduced to creating new Robot projects, communication with a PLC, mapping inputs and outputs on the ready2_educate cell, and offline programming. Additionally, programming with simulation-based technology to create and test programs offline will be explored. Set up and programming of a “Robot Vision” system will be explored. The acquisition and processing of 2D images are used to calculate base corrections. The resulting base correction will be used to correct the position of the robot tool relative to the position of a component and to perform camera guided motions. (Pick parts based on the image results). By the end of the course the learners will have performed robotic commissioning tasks, set up a vision system, created programs offline using offline development software, created offline programs using Simulation software, and deployed these programs to the ready2_educate cell.		
Learner Profile	■ Successful learners from the 5-day AMTCE Advanced Robotics programme ■ Robot programmers looking to gain experience with integration technology. ■ Individuals / companies looking to train / upskill robot programmers. ■ Advanced programmers looking for an introduction to Simulation and digital twin technology. ■ Advanced programmers looking to gain exposure in cell commissioning and configuration tasks. ■ Advanced programmers looking to gain exposure to Robot Vision.		

AMC22160	**Teach Pendant Operator FANUC**	**Classroom**	**1 day**
Course Aim	This standard basic course covers the tasks and procedures to safely operate a robot fitted with a handling tool. In addition to presentations and demonstrations, this course offers a series of lab exercises for the learner to complete. Lab exercises relate directly to the classroom presentations and are intended to reinforce learnings through hands-on experience. Recommended safety procedures are integrated into all training exercises.		
Learner Profile	Anybody with an interest in robotics. Individuals seeking to get into the field of robotics and automation. Individuals seeking to build a technical understanding of robot operations. Operators with little or no robotics experience.		

Code	Course Title	Delivery Mode	Duration
AMC22110A	**IRC5 Programming and Operation**	**Classroom**	**4 days**
Course Aim	To provide the learner to basic programming skills for an IRC5 Industrial Robot Controller* and to become familiar with the entire robotic system including the mechanical and control systems.		
Learner Profile	This course would be beneficial to programmers, robot operators and maintenance staff wishing to gain robotics programming knowledge and is suitable for beginners.		

AMC22232A	**IRC5 Advanced Programming Stage 1**	**Classroom**	**4.5 days**
Course Aim	To provide the learner with advanced programming skills for an IRC5 Industrial Robot Controller.		
Learner Profile	This course would be beneficial to System Integrators, Programmers and Advanced Robot Operators wishing to extend their robotics programming knowledge.		

AMC22113A	**RobotStudio Offline Programming Stage 1**	**Classroom**	**4.5 days**
Course Aim	This course is aimed at programmers /integrators who require the fundamental knowledge of working with RobotStudio (programming software for ABB robots). It aims to improve efficiency in robotics projects, by eliminating issues in the modelling/simulation environment.		
Learner Profile	Programmers/integrators who require the fundamental knowledge of working with RobotStudio.		

** Please note that Omnicore and IRC5 are not interchangeable software controller systems.*
Training for both systems is undertaken separately, and they are not interrelated.

Code	Course Title	Delivery Mode	Duration
AMC22233A	**OmniCore Programming and Operation**	**Classroom / Robotics training room**	**4 days**
Course Aim	This course is the first step to become a robot programmer (for Omnicore controller software*1) and is also suitable for personnel with a need to modify existing programs. It would be beneficial to programmers, operators and maintenance staff.		
Learner Profile	This course would be beneficial to programmers, robot operators and maintenance staff wishing to gain robotics programming knowledge and is suitable for beginners.		

AAMC22234	**YuMi (Dual Arm IRB 14000) Programming and Operation**	**Classroom / Robotics training room**	**4 days**
Course Aim	To provide the learner with programming skills to safely operate the YuMi Cobot with IRC5 controller.		
Learner Profile	System integrators/programmers who wish to gain knowledge of programming of the YuMi (dual arm IRB 14000) with IRC5 controller.		

AMC21024	**5 Day Advanced Robotic Welding (KUKA)**	**Classroom**	**5 days**
Course Aim	The participants in this course will perform a variety of welding operations with a KUKA robot. They will also develop the understanding of the key principles of Robotic Welding and how to operate a Robotic Welding station through a HMI.		
Learner Profile	Learners should have completed the AMTCE Intermediate Robotics (KUKA) course or have previous experience in Robotics which will be vetted by KUKA instructor prior to enrolment on this course. The AMTCE Employer Engagement Team will coordinate this process.		

** Please note that Omnicore and IRC5 are not interchangeable software controller systems.*
Training for both systems is undertaken separately, and they are not interrelated.

Code	Course Title	Delivery Mode	Duration
AMC22215	**Specific Purpose Certificate in Utilising Robotics in Advanced Manufacturing**	**Classroom / Robotics training room / Online**	**300 hours approx.***
Course Aim	The USING ROBOTICS IN ADVANCED MANUFACTURING (URAM) Special Purpose Award programme comprises of 5 modules. Total of 30 credits. The proposed programme is aimed at participants who wish to learn: ■ How robots work. ■ How to operate a robot. ■ Potential uses of robots. ■ How to specify the type of robot to best suit their own contexts and applications. ■ How to effectively program robots. ■ How to make decisions around the suitable deployment of robotics in advanced manufacturing environments.		
Learner Profile	The programme is intended for the following cohort: ■ Individuals who wish to change career and re-skill for career opportunities within Advanced Manufacturing. ■ Individuals already employed within Advanced Manufacturing at general operative level and who wish to upskill to more advanced automated cell operation. ■ Technicians, engineers, and line managers, employed in advanced manufacturing sectors, who have a requirement to understand how robotics could be successfully utilised in their advanced manufacturing environments. ■ Have robotics already deployed in their manufacturing environment that are not being used to their maximum efficiency. ■ Wish to increase their knowledge and skills in the robotics area to make more informed business decisions, to improve their business' agility, to allow the business to keep up to date with the emerging knowledge in the robotics field and to allow businesses to grow own internal talent in robotics. ■ Need to develop knowledge skills and competencies in areas such as vision and sensor systems in manufacturing operations the industrial internet of things (IIoT), cyber physical systems and automated robotics systems.		

** Includes Module, 1, 2, 3 and 5 -50 hours each and Module 4 – 100 hours*

"The professionalism and level of service offered across all levels within the AMTCE make it a pleasure to interact / engage with.

The existence of the AMTCE was a key factor in AIS Automation Ltd re-locating from Dublin to Dundalk as we see this location becoming a hub of excellence and knowledge within the sphere of automation and the implementation of the "Industry 4.0, Factory of the Future".

A number of our Engineers undertook the advanced robotics training course at the centre which paid huge benefits in terms of customer satisfaction in the world class automation solutions we design and deliver.

The expertise and quality of the trainers gave our guys the best possible outcome.

As AIS Automation Ltd continues to grow, we expect to absorb and employ from the ranks of the highly trained people that emerge from the AMTCE centre."

Paul Donnelly I Managing Director,
AIS Automation, Dundalk, Co. Louth

Code	Course Title	Delivery Mode	Duration
AMC22216	**Certificate in Fundamentals of Robotics**	**Classroom / Robotics Training Room / Online**	**50 hours**
Course Aim	This module will provide an introduction and grounding in the understanding of industrial robotics, industry specific use cases, business case rationale and technical operation for industrial and mobile robotics in advanced manufacturing operations across various business verticals such as Aerospace, Metal Fabrication, Lifesciences, Plastics, Pharma, Electronics and Food and Drink sectors.		
Learner Profile	The programme is intended for the following cohort: ■ Individuals who wish to change career and re-skill for career opportunities within Advanced Manufacturing. ■ Individuals already employed within Advanced Manufacturing at general operative level and who wish to upskill to more advanced automated cell operation. ■ Technicians, engineers, and line managers, employed in advanced manufacturing sectors, who have a requirement to understand how robotics could be successfully utilised in their advanced manufacturing environments. ■ Technicians, engineers, and line managers, employed in advanced manufacturing sector, who may have robotics already deployed in their manufacturing environment that are not being used to their maximum efficiency. ■ Technicians, engineers, and line managers, employed in Advanced Manufacturing sectors who wish to increase their knowledge and skills in the robotics area to make more informed business decisions, to improve their business' agility, to allow the business to keep up to date with the emerging knowledge in the robotics field and to allow businesses to grow own internal talent in robotics. ■ Technicians, engineers, and line managers, employed in advanced manufacturing sectors, who needs to develop knowledge skills and competencies in areas such as vision and sensor systems in manufacturing operations the industrial internet of things (IIoT), cyber physical systems and automated robotics systems.		

Advanced Construction Technologies

- 3D Concrete Printing
- BIM
- Revit
- Civil 3D
- Drones

Classroom based, blended and on-line trainings are scheduled through the year. For more information or to register for trainings please go to www.amtce.ie/courses

Code	Course Title	Delivery Mode	Duration
AMC22141	**Fundamentals of 3D Construction Printing**	**Classroom / Workshop**	**2 days***
Course Aim	The aim of this programme is to provide the learner with an in-depth overview of the fundamentals of the: 3D Construction Printing (3DCP) technology, technical information on the materials used and technological processes employed to ensure successful construction printing operations. Current applications and business opportunities will be presented, with financial models discussed. The live demonstration will give a practical insight into the processes and daily operations of the 3DCP.		
Learner Profile	Professionals seeking to enhance their knowledge of Modern Methods of Construction (MMC), and in particular 3D Construction Printing: ■ Professionals in Construction: Engineers, architects and construction managers looking to integrate 3DCP technology into their projects. ■ Manufacturing Specialists: Individuals involved in manufacturing processes who want to explore the applications of 3D printing in construction. ■ Education: Educators from e.g. architecture, civil engineering or building construction sectors.		

AMC22227	**Building Information Modelling & Information Management Fundamentals incorporating ISO 19650**	**Live Online**	**2 days**
Course Aim	This course is aimed at anyone needing a better understanding of how to manage information and Building Information Modelling (BIM) processes. It provides a fundamental understanding of the principles of information management enabled by BIM. ■ Review of the core standards, specifications and guidance, including the ISO 19650 series. ■ Development of an understanding of how information is managed, delivered and used from project delivery through to occupation.		
Learner Profile	■ Professionals in the Architecture, Engineering or Construction (AEC) industries seeking to enhance their knowledge of BIM and Information Management. ■ Individuals responsible for managing, delivering and using (building) information throughout the lifecycle of a project. ■ Those looking to implement ISO 19650 standards within their organisation.		

** Day 1 is classroom-based, learning the theory behind the process. Day 2 is based in the workshop on site with the printer for a live 3D construction printing demonstration.*

*** Split over five consecutive days of 2.5-hour sessions.*

Code	Course Title	Delivery Mode	Duration
AMC22229	**Essentials of Revit Architecture**	**Live Online**	**10 hours**
Course Aim	On successful completion of this course learners will understand the concepts of Building Information Modelling (BIM) and get an introduction to the tools for parametric building design and documentation using Revit Architecture.		
Learner Profile	The course is aimed at new users of Revit software from an architectural or engineering background.		

AMC22231	**Drone Operation: EU Open Category A2 Course**	**Classroom**	**6 hours**
Course Aim	This is an EU-wide Course for the A2 Open Category including all subjects that are deemed necessary for this category.		
Learner Profile	This course is suitable for beginners or experienced drone operators who want to operate in the A2 Open Category. The A2 Open category is suited to low-risk operations in open space, and positive environmental factors that allow drones to operate safely.		

AMC22142	**Drone: EU Specific Category (A2) Theoretical Ground School Course***	**Classroom**	**2 days**
Course Aim	The aim of the EU Specific Category Theoretical Ground School Course is to equip professional and aspiring commercial drone pilots with the necessary knowledge and skills to receive certification to fly UAS (Unmanned Aircraft Systems) from the Irish Aviation Authority, to operate within Europe. This comprehensive programme will cover essential subjects, including airspace navigation, meteorology, technical and operational mitigations for ground and air risks, and Specific Operating Risk Assessments (SORA). It is designed for those who need to conduct complex drone operations beyond the scope of the Open Category (which is deemed for low-risk drone operations).		
Learner Profile	This course is designed for professional drone pilots who need to conduct flying operations in the EU Specific Category(A2) with respect to Standard Scenario (STS) 01/02 & Pre-Defined Risk Assessment (PDRA) S01/S02. It is also designed to be suitable for individuals wishing to become a professional commercial drone pilot for example in the following sectors: Construction, Manufacturing, Quantity Surveying.		

** From the vendor: Please note that the course descriptors for our EU-specific category (A2) and A1/A3 open category courses may be subject to change. These courses are reviewed on an annual basis to ensure compliance with evolving legal frameworks and European directives. Adjustments to course content may be necessary to reflect new regulations or updates in standards, ensuring that the training remains relevant and legally compliant. We will keep you informed of any significant changes, but please be aware that course materials are dynamic and aligned with regulatory requirements.*


Cyber
Security
» Cyber Essentials
» CompTIA
» Cisco
Classroom based, blended and on-line trainings are scheduled through the year. For more information or to register for trainings please go to www.amtce.ie/courses

Code	Course Title	Delivery Mode	Duration
AMC22122	**Cyber Awareness**	**Classroom / Online / Self Directed***	**14 hours**
Course Aim	The purpose of this course is to experience a cyber-attack, increase personal awareness and improve behaviours around the main cyber threats (e.g. phishing), and existing regulation.		
Learner Profile	All Staff should attend cyber awareness training on a regular basis.		

	Cyber Security Beginner Course R1	AMTCE and Online	92.5 hours**
Course Aim	Learn the essential knowledge, skills, tricks and tools needed to begin a cyber career. This learning path will unpack some of the mysteries of information technology. Beginning with how people use computers and fundamental items like system hardware and device peripherals, you'll explore the details of operating systems and look at how to set up and configure a device. Then you'll follow along as we explore crucial networking concepts and skills such as managing files and application software and configuring network connectivity. Next, we prepare for the worst with courses on computer maintenance, threat mitigation, troubleshooting and more. Wrap up with an exploration of developing and implementing software, allowing you to start on the path to creating your own programs.		
Learner Profile	No prior knowledge of cybersecurity or work experience is required. The only prerequisite is a passion for technology and cybersecurity. This course will suit individuals who have the right aptitude and attitude to cyber work and are considering it as a career option and interested in entry roles. A Cybersecurity Beginner role focuses on the foundational skills and knowledge that will allow anyone to take the first step towards transitioning into a cybersecurity career. Completion of Cyber Awareness would be beneficial.		

	Cyber Security Operation Centre Analyst Course R1	AMTCE and Online	92.5 hours**
Course Aim	Security Operations Center (SOC) Analysts are responsible for analyzing and monitoring network traffic, threats and vulnerabilities within an organization's IT infrastructure. This includes monitoring, investigating and reporting security events and incidents from security information and event management (SIEM) systems. SOC Analysts also monitor firewall, email, web and DNS logs to identify and mitigate intrusion attempts. Exam options include: CompTIA CYSA+ and CompTIA Security+		
Learner Profile	Learners will need to have already completed Cyber Awareness, Cyber Beginner and have some work experience in IT and or Cyber.		

** Live Introductory Workshop delivered online or face to face followed by individual self-directed online learning via online account.*

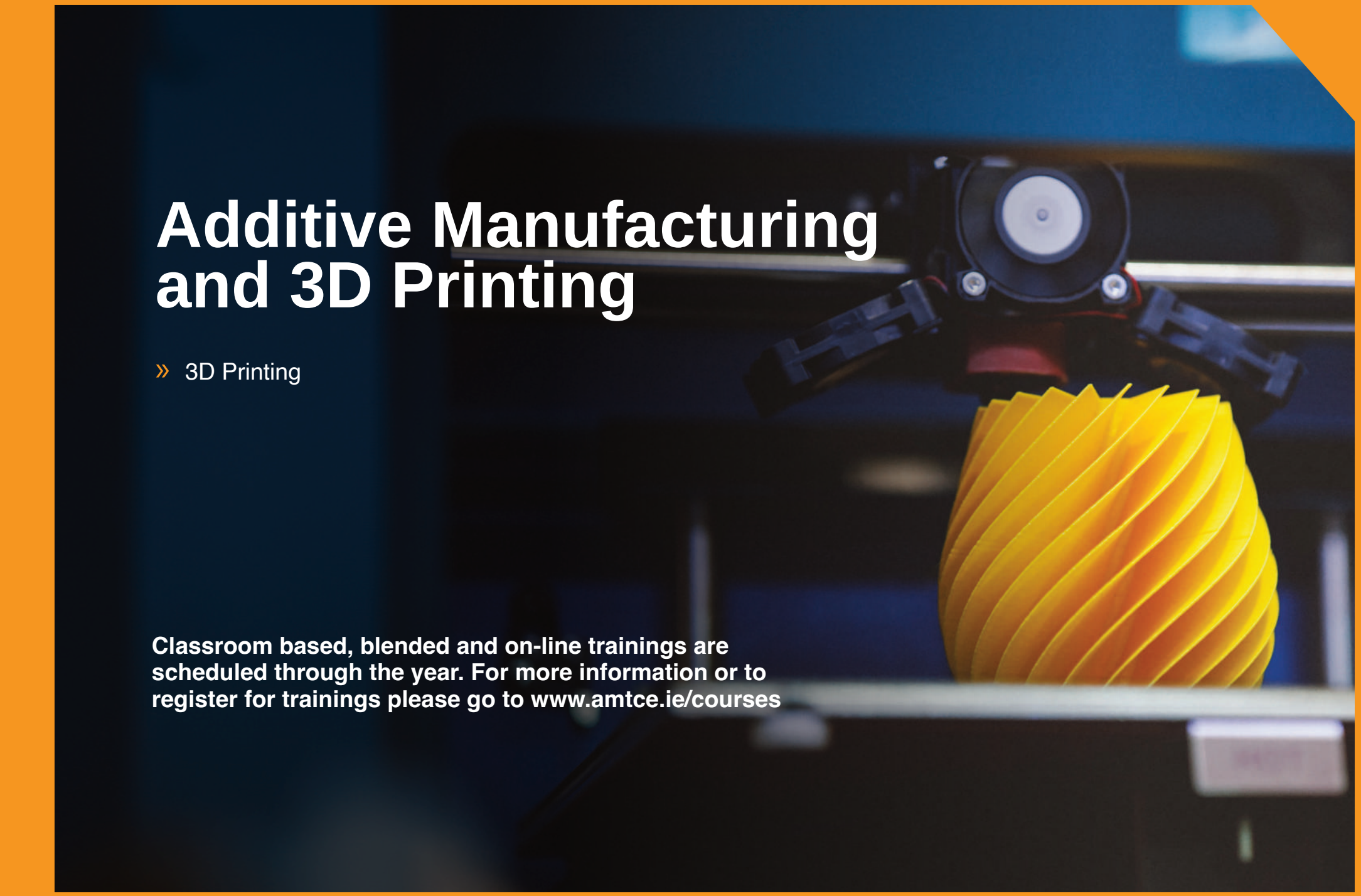
*** 2.5 Hours Workshop + 90 hours on-line with Technical Training Support.*


ICT
Innovations
» Cloud Computing and Data Management
» Programming and Networking
» Data Visualisation
» IIoT
» Artificial Intelligence (AI) and Machine Learning
Classroom based, blended and on-line trainings are scheduled through the year. For more information or to register for trainings please go to www.amtce.ie/courses

Code	Course Title	Delivery Mode	Duration
AMC21077	**Data Visualisation in Manufacturing**	**Online**	**1 day**
Course Aim	This course will allow the learner to understand the practical and visual application of key data. It This course will introduce data visualisation, with a practical hands-on module, using data visualisation software (either Tableau or PowerBI).		
Learner Profile	This course is targeted to those with no or limited experience in data visualisation. It is suitable for professionals interested in learning how to best visualise data and create charts in a business intelligence platform (Tableau or PowerBI is used, according to the preference of the class).		
AMC21038	**Introduction to Artificial Intelligence and Machine Learning in Manufacturing**	**Live Online**	**1 day**
Course Aim	This course is designed to provide a general introduction for anyone interested in understanding and using machine learning (ML). It covers the core machine learning concepts plus more state-of-the-art approaches, planning and evaluating a machine learning project, plus outlining the potential pitfalls involved. (The aim of the course is to give an overview of what ML is and what it can do, not how to build algorithms).		
Learner Profile	Introductory course for learners with little or no previous data analytics knowledge. Managers who want to learn the language and tools of Machine Learning in the context of AI.		
AMC21037	**Introduction to Industrial Internet of Things (IIoT)**	**Live Online**	**1 day**
Course Aim	This course provides the learner with an introduction to Industrial Internet of Things (IIoT) and how it delivers value in a manufacturing environment. It is designed to provide a broad, un-biased introductory overview of IIoT. It covers the acronyms, pitfalls, and challenges involved in deploying an IIoT project.		
Learner Profile	Manufacturing Process Engineers, Project Managers interested in sensor technology deployment.		
AMC22159	**Information and Application of Data Capture and Analysis**	**Live Online**	**1 day**
Course Aim	The aim of this course is to introduce the basics of information use, data acquisition, data analysis, available tools and common pitfalls in data analytics.		
Learner Profile	This course could be a good starting point for people that are considering IIoT(Industrial Internet of Things)/data analyst engineer careers as well as individuals who wish to apply data science to improve their business but don't know where to start and what is involved.		

Additive Manufacturing and 3D Printing

» 3D Printing



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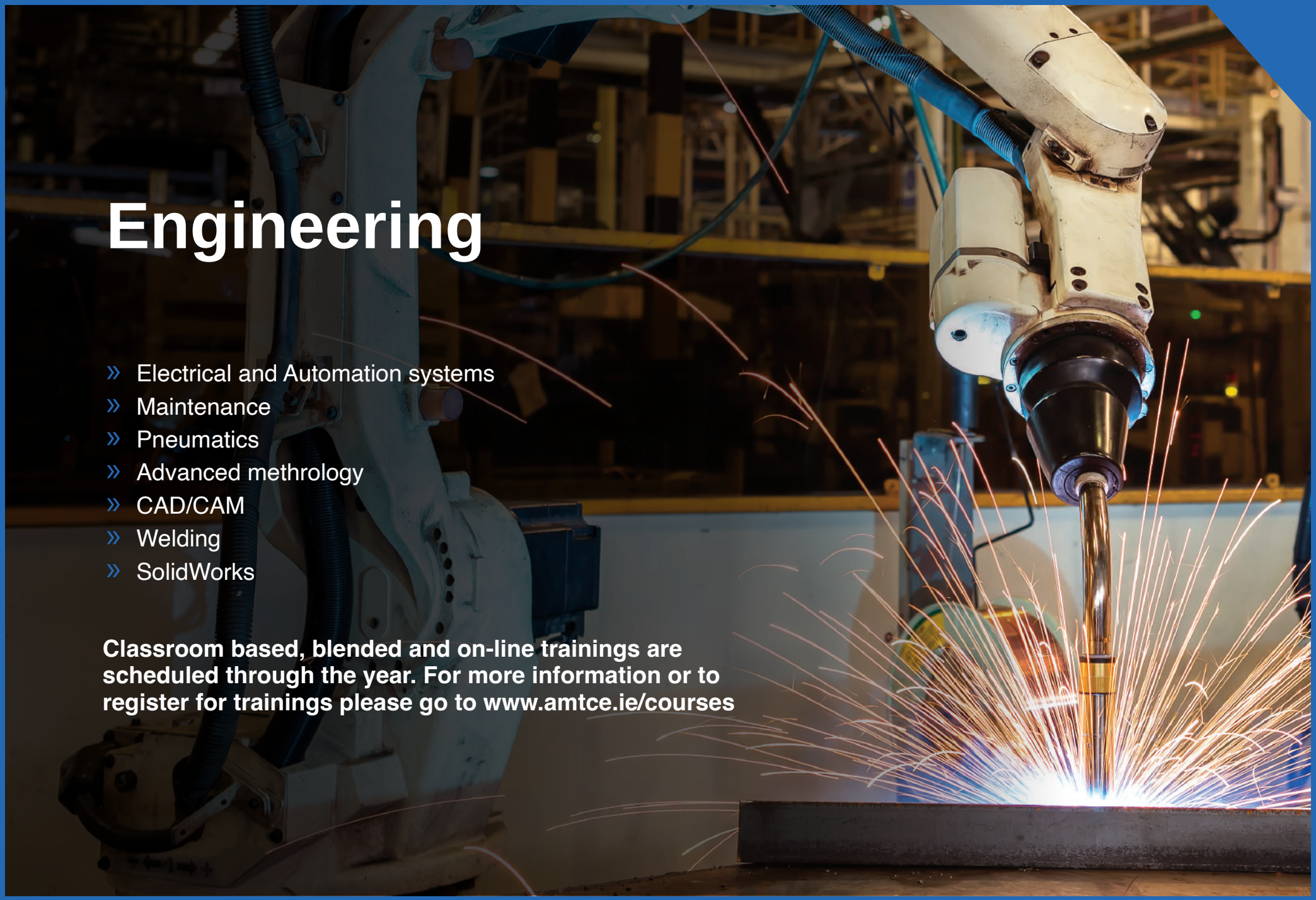
Code	Course Title	Delivery Mode	Duration
AMC21023	**3D Advanced Materials Training**	**Classroom**	**1 day**
Course Aim	This course is designed to provide learners with the skills and knowledge to select and work confidently with a wide range of FDM advanced material.		
Learner Profile	Possess a good understanding of FDM 3D printing and want to take their knowledge to the next level (3+ months experience), be an active user of a 3D printer.		

AMC21022	**3D Application Training**	**Classroom**	**1 day**
Course Aim	This course provides the learner with the practical knowledge which allows them to identify applications that are suitable and provided cost savings with additive manufacturing, and to provide the ability to reverse engineer parts for additive manufacturing.		
Learner Profile	Have a good understanding of FDM 3D printing and wanting to take their knowledge to the next level (3+ months experience) A working knowledge of CAD is desirable.		

AMC21021	**3D Certified User Training**	**Classroom**	**2 days**
Course Aim	This course takes individuals from beginner level knowledge through to being competent users of an Ultimaker 3D printer. It will provide the learner with a strong grounding in how to configuration and operate of the printer on a day-to-day basis.		
Learner Profile	New user / relatively new user / someone wanting to further their knowledge of 3D printing (Not an advanced user course).		



Engineering

- Electrical and Automation systems
- Maintenance
- Pneumatics
- Advanced methrology
- CAD/CAM
- Welding
- SolidWorks

Classroom based, blended and on-line trainings are scheduled through the year. For more information or to register for trainings please go to www.amtce.ie/courses

Code	Course Title	Delivery Mode	Duration
AMC22230	**Industrial Instrumentation Calibration**	**Classroom**	**7 weeks***
Course Aim	The certificate in Industrial Instrumentation Calibration (CIIC) is designed to develop learners to understand the principles of instrument calibration, calibration terminology, calibration system documentation, and relevant procedures, and to develop the skills to calibrate industrial process instruments and control elements, and measure, record and evaluate data. Learners will gain high value practical skills in process instrumentation calibration.		
Learner Profile	Candidates who are: ■ Seeking to expand their skill and qualifications to facilitate them working in manufacturing or service industry. ■ Currently working within the sector (typical background in Electrical or Mechanical trades or other Engineering background) who are seeking to develop their technical skills and improve performance or ■ Those seeking career advancement by developing their skills and career mobility by gaining an approved qualification in instrumentation calibration.		

AMC21036C	**Geometrical Dimensioning and Tolerancing to ASME Y14.5 – Level 1**	**Online**	**3 days**
Course Aim	The course is based on the American ASME Y14.5 Standard and is applicable to users of the 1994, 2009 and 2018 revisions. The course covers the fundamental concepts of Geometrical Dimensioning and Tolerancing (GD&T) and its application and interpretation.		
Learner Profile	The course is suitable for anyone who is familiar with the conventions of engineering drawing and dimensional (or ±) tolerances and is relevant to anyone who must produce or interpret mechanical engineering specifications (e.g. Designers, Engineers, Inspectors, Technicians, Engineering Management).		

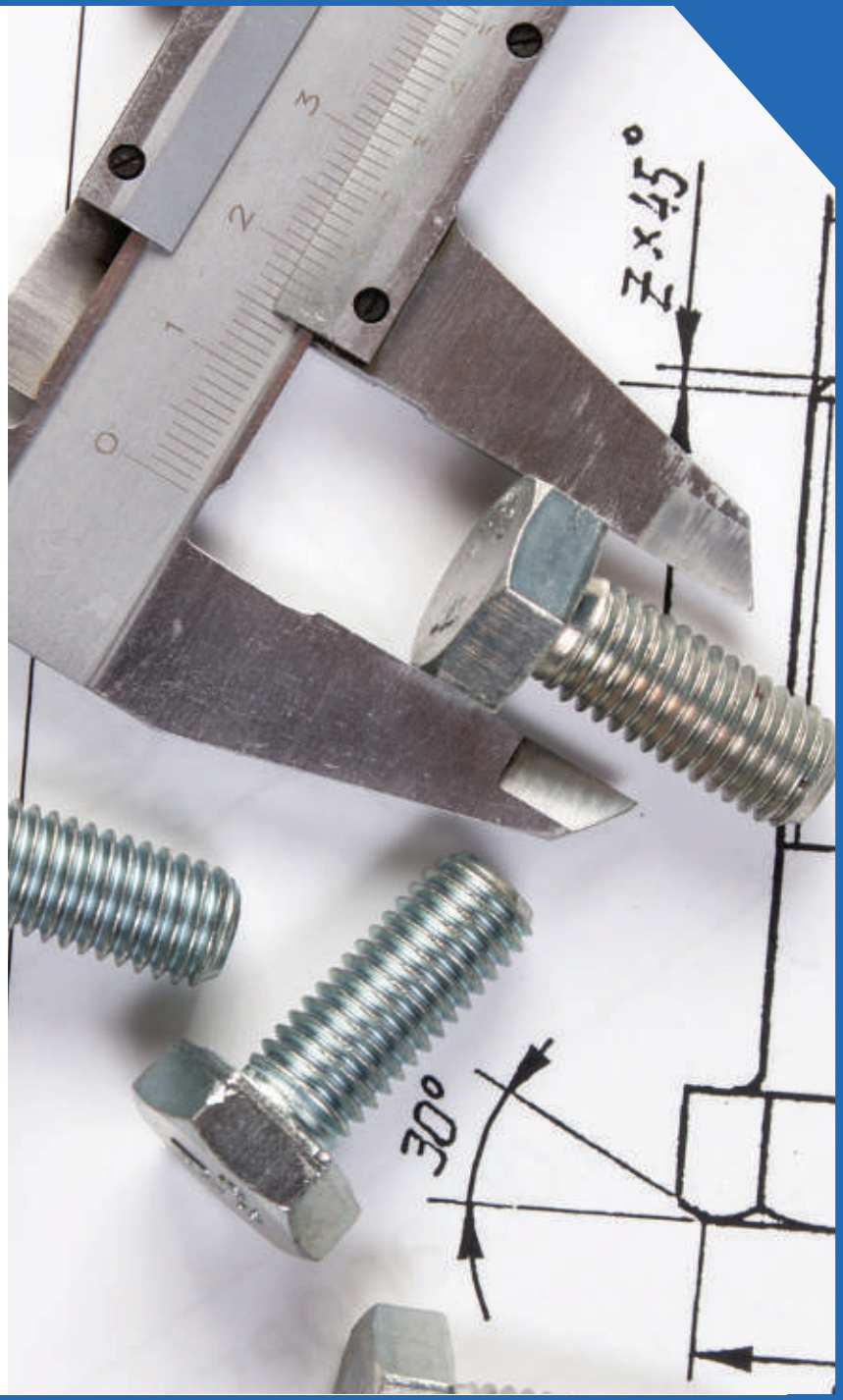
** Learners will attend 7-days in class, typically 1 day per week over a 7-week cycle.*

Code	Course Title	Delivery Mode	Duration
AMC21036B	**Geometrical Dimensioning and Tolerancing to BS and ISO Standards – Level 2**	**Classroom / Workshop**	**2 days**
Course Aim	The course covers more advanced aspects of geometrical tolerancing and its application and interpretation. The course is based on BS 8888 and ISO standards.		
Learner Profile	For Designers, Engineers, Inspectors, Technicians and Engineering Management		

AMC22050	**CNC Milling Course: Controller – Basic 3 Axis (X, Y & Z) Milling**	**Classroom / Workshop**	**3 days**
Course Aim	Designed for operators in engineering already experienced using milling machines but want extra knowledge to understand what the programs are doing and how to do simple editing and adjustments of offsets etc.		
Learner Profile	The course is designed for machine operators currently operating or beginning to operate CNC Mills at an operator level i.e. part loading, basic tool changing, wear adjustments etc. It is a basic Fanuc milling course designed for people with some knowledge and experience of the machining process and CNC controls but who want to acquire the necessary skills to program 3-axis CNC Mills. The course is suitable for those with either Doosan 3-axis mills or other manufacturers' Fanuc controlled machines with similar configuration.		

“This training course has transformed how I create working drawings for the more detailed and critical parts required for different applications, and will remove the current need for operators to ask questions as I will now be able to include more details on the drawings.”

Michael Cunningham
Biopharma Design Engineer
TEG (Specialist Engineering Company)

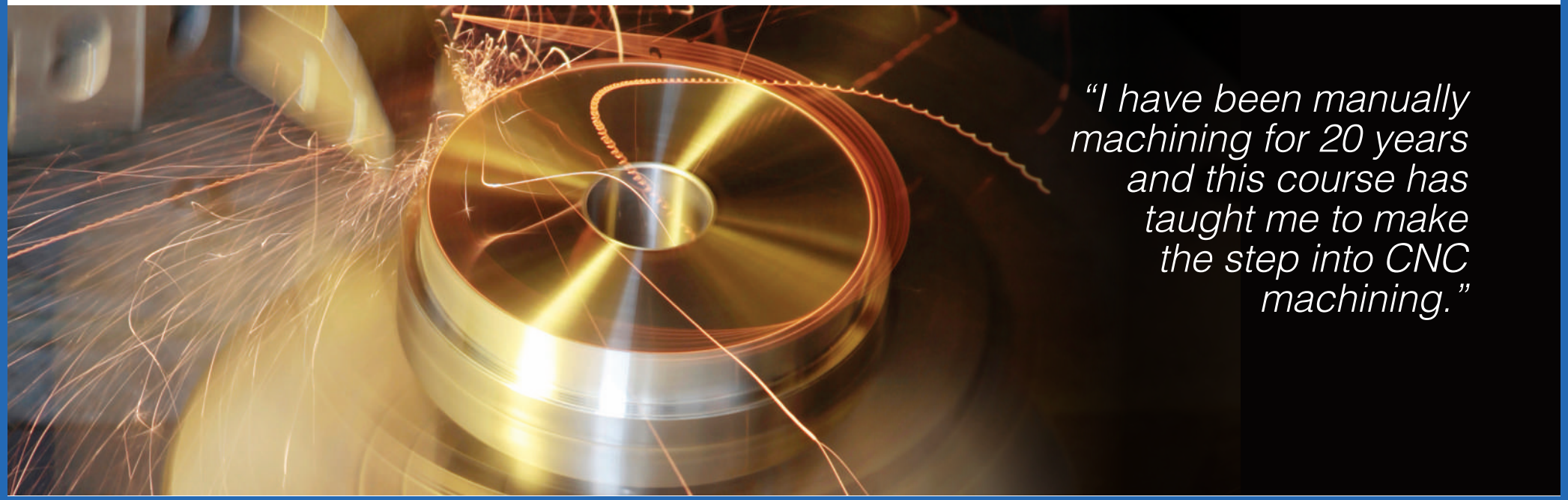


Code	Course Title	Delivery Mode	Duration
AMC22051	**CNC Milling Course: Hands on Milling - Operator to Setter**	**Classroom / Workshop**	**3 days**
Course Aim	This is a basic CNC (Computer Numerical Control) milling course designed for people with some knowledge and experience of the machining process and CNC controls and wish to acquire new skills in CNC programming. This will enable them set up and optimise production jobs. It is a hands-on course where learners will gain practical experience as each module of the course will be delivered at the CNC machine with live demonstrations of each step over the course duration.		
Learner Profile	Operators/programmers currently operating CNC mills at an operator level i.e. part loading, basic tool changing, wear adjustments etc. Learners who are seeking to upgrade their existing skills from experience of the machining process, to acquiring knowledge of CNC programming.		

AMC22055	**CNC Turning Course: Hands on Turning – Operator to Setter**	**Classroom / Workshop**	**3 days**
Course Aim	This course will allow the learner to understand the practical and visual application of key data. It This course will introduce data visualisation, with a practical hands-on module, using data visualisation software (either Tableau or PowerBI).		
Learner Profile	Operators/programmers currently operating CNC mills at an operator level i.e. part loading, basic tool changing, wear adjustments etc. Learners who are seeking to upgrade their existing skills from experience of the machining process, to acquiring knowledge of CNC programming.		

AMC22054	**CNC Turning Course: Controller - Basic 2 Axis (X & Z) Turning**	**Classroom**	**3 days**
Course Aim	This is a basic Fanuc turning course designed for engineering operators with some knowledge and experience of the machining process and CNC (Computer Numerical Control) controls but who want to acquire the necessary skills to program 2-axis lathes. The course aims to provide knowledge and understanding of what the programs are doing, and how to do simple editing and adjustments of offsets etc.		
Learner Profile	The course is suitable for those with either Doosan 2-axis lathes or other manufacturers' Fanuc-controlled machines with a similar configuration.		

Code	Course Title	Delivery Mode	Duration
AMC22056	**CNC Turning Course – Controller – Advanced 4 Axis Turning course covering C & Y on Fanuc control with ISO codes and NC Guide**	**Classroom**	**3 days**
Course Aim	This is an advanced Fanuc milling course designed for people with some knowledge and experience of the machining process and CNC controls but who want to acquire the necessary skills to program multi-axis lathes including C&Y. The course is aimed at operators and setters looking to acquire new and upgrade existing skills, and at adult learners with knowledge and experience of the machining process looking to make the step up to CNC Programming. The course is suitable for customers with either Doosan multi-axis lathes or other manufacturers' Fanuc controlled machines with a similar configuration.		
Learner Profile	The course is suitable for customers with either Doosan multi-axis lathes or other manufacturers' Fanuc controlled machines with a similar configuration		



Code	Course Title	Delivery Mode	Duration
AMC22086	**Fanuc Custom Macro B**	**Classroom / Workshop**	**2 days**
Course Aim	This course this course is designed for operators in engineering already experienced using the machine at an advanced level and want to leverage CNC (Computer Numerical Control) machines' full capabilities through macro programming. CNC programming with the use of Fanuc custom Macro B, enables you to design and implement powerful advanced CNC macro programming techniques that result in unparalleled accuracy, repeatability and enhanced productivity (ideal for a family of parts). The course begins with step-by-step instructions and then gradually proceeds in complexity.		
Learner Profile	The course is suitable for those with Fanuc controlled machines or with a similar configuration. Operators currently operating CNC machines at a very high level i.e. Programming as a controller. Others such as designers, engineers or technicians could benefit from the course.		

AMC22060	**Hyper MILL 5 Axis Training**	**Classroom**	**2 days**
Course Aim	The course is an advanced CAD/CAM*1 course aimed at upskilling CAD/CAM programmers in 5 Axis simultaneous machining cycles to manufacture complex 3D parts using state of the art CAD/CAM technology.		
Learner Profile	The course is suitable for those with or looking to acquire hyper MILL CAD/CAM software		

AMC22058	**HyperMILL Part 1 Training**	**Classroom**	**3 days**
Course Aim	The course is an introduction to HyperMILL. The course provides programming skills for 2.5D and 3D machining. Advanced and comprehensive step by step course to gain advanced skills to program 2.5D and 3D parts.		
Learner Profile	Operators and setters looking to acquire new and upgrade existing skills, and those with knowledge and experience of the machining process looking to upskill to CNC Programming.		

“We have just finished a HyperMILL 2-part practical milling course, booked through ease with the great help from the team at AMTCE.

The IMR based trainers were professional with a wealth of knowledge. The course content was clear and concise from the start, so much so, we have written small programs already using their content which will add value to our business going forward as we have eradicated a single point of failure.

This whole experience was trouble free, and we hope to work with the AMTCE again to complete more training to help our business in the future.”

Craig Pidgeon
Programming & Technical Lead
Schivo Medical

Code	Course Title	Delivery Mode	Duration
AMC22061	**Hyper MILL Part 2 Training**	**Classroom**	**14 hours**
Course Aim	The course is an advanced CAD/CAM*1 course aimed at upskilling CADCAM programmers in using CAD/CAM technology to program cylindrical parts for manufacture using state of the art CADCAM technology. The course is suitable for customers with or looking to acquire hyper MILL CAD/CAM software.		
Learner Profile	The course is suitable for those with or looking to acquire hyper MILL CAD/CAM software		

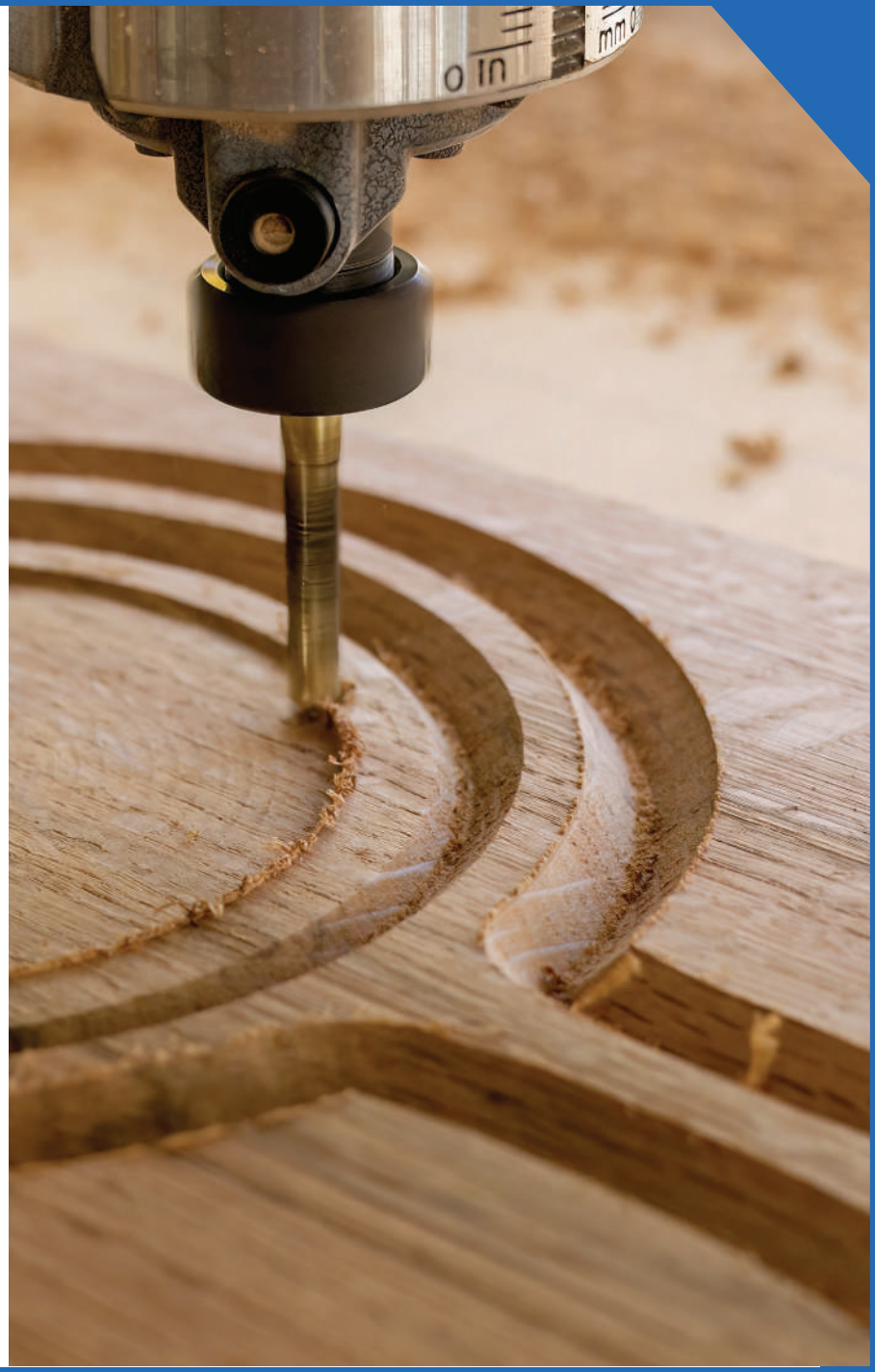
AMC21014	**Preventive Maintenance**	**Blended**	**5 days**
Course Aim	The aim of this course is to provide the learner with the knowledge, skills, and competencies to develop a practical preventive maintenance schedule for plant and equipment, and to enable the learner to work independently or in a supervisory capacity.		
Learner Profile	This course is suitable for electrical or mechanical technicians and/or engineers who are setting up or operating a preventive maintenance programme.		

AMC21015	**Maintenance Planning**	**Classroom**	**1 day**
Course Aim	This course aims to equip the learner with the fundamental theory of maintenance organization by examining and understanding current maintenance industry metrics. The course will also cover maintenance risk assessments.		
Learner Profile	This course is suitable for technicians and engineers who wish to implement best practices in maintenance planning.		

“The AMTCE basic level B-Solid CNC training has given me the fundamental skills needed for success in machining. Small class numbers allowed for more personalised attention from a skilled instructor, creating an atmosphere suitable to questioning. This intimate setting not only promoted greater understanding, but also encouraged collaborative learning among peers. As a result, I have a solid understanding of programming and machining operations, which has greatly increased productivity and accuracy.

This training experience has improved my work quality, laying a solid basis for future development and success in our CNC machining.”

Ann Marie Woods
Píu Alto, Drogheda, Co.Louth



Code	Course Title	Delivery Mode	Duration
AMC21054	**Introduction to Pneumatics**	**Classroom**	**2 Days**
Course Aim	The course is designed to introduce learners to the basic principles, properties and components used in pneumatic and electro-pneumatic systems		
Learner Profile	Engineers and Technicians who manage or operate pneumatic systems and pneumatically actuated equipment.		

AMC21053	**Pneumatic Technologies**	**Classroom**	**2 days**
Course Aim	This course is designed to enable learners to carry out maintenance tasks on electro-pneumatic circuits, understand electro-pneumatic schematics, identify components of an electro-pneumatic circuit and repair system faults.		
Learner Profile	The course is aimed at engineers and technicians who are working on pneumatic automation systems.		

AMC21008	**Pneumatics Systems Maintenance**	**Classroom**	**4 days**
Course Aim	On completion of this course learners will be able to perform system maintenance tasks, root cause failures, understand system design and identify key maintenance strategies for pneumatic systems.		
Learner Profile	Maintenance technicians and Engineers actively working on pneumatic systems.		

Code	Course Title	Delivery Mode	Duration
AMC22089	**B_Solid Base Programming Course**	**Classroom**	**5 days**
Course Aim	This programme is designed to provide learners with the knowledge and understanding of parametric (3D CAD-CAM) *1 programming, use of B_Solid software for 3-axis machining operations in a wood working manufacturing environment. (The course could also be applied to a plastics machining environment).		
Learner Profile	The ideal profile would be a CNC (Computer Numerical Control) Machine Operator or Programmer.		

AMC22092	**B_Solid Advanced Programming Course**	**Classroom / Workshop**	**5 days**
Course Aim	To provide training in parametric programming (3D CAD-CAM) to create, modify, and manage drawings and projects in a wood manufacturing environment. (The course could also be applied to a plastics machining environment).		
Learner Profile	Machine Operator or programmers with experience in this sector.		

Code	Course Title	Delivery Mode	Duration
AMC21009	**Programmable Logic Controllers**	**Classroom**	**4 days***
Course Aim	This course will enable a learner to interrogate a PLC system (Allen Bradley or Siemens PLC boards) to determine the cause of equipment faults in modern manufacturing equipment.		
Learner Profile	Learner should have reached the standards of knowledge, skill and competence associated with the preceding level of the National Framework of Qualifications. This may have been achieved through a formal qualification or through relevant life and work experience.		

AMC21010	**Introduction to Programmable Logic Controllers**	**Classroom**	**3 days****
Course Aim	This course will provide learners with a strong understanding of how PLCs act as the hub in an automated process.		

AMC22167	**QQI Level 6 Electrical Principals and Troubleshooting**	**Blended*****	**6 days********
Course Aim	The course will develop a knowledge and understanding of general electrical circuit and component theory and then progress to the skills required by industrial maintenance technicians to safely diagnose and repair faults in control and safety circuits.		
Learner Profile	Learner should have reached the standards of knowledge, skill and competence associated with the preceding level of the National Framework of Qualifications. This may have been achieved through a formal qualification or through relevant life and work experience.		

** 2/3 days per week over 2 consecutive weeks, this is flexible per iteration*

***Consecutive*

**** 5 days Classroom Based, 1 day online classroom (1st day online classroom)*

***** 3 weeks of 2 day blocks or 2 weeks of 3 day blocks (this is flexible per iteration)*

Code	Course Title	Delivery Mode	Duration
AMC22168	**Industrial Electrical Systems**	**Blended***	**6 days****
Course Aim	To provide learners with the theoretical foundational knowledge, safety awareness and practical skills required by industrial maintenance technicians to safely inspect and replace faulty components in electrical panels serving production equipment. In many work environments maintenance staff (non-craft electrical) are restricted to working live on voltages below 50 volts. Employers are increasingly looking for multiskilled technicians and this module enables non-electrical staff to diagnose faults of electrically controlled equipment.		
Learner Profile	Learner should have reached the standards of knowledge, skill and competence associated with the preceding level of the National Framework of Qualifications. This may have been achieved through a formal qualification or through relevant life and work experience.		

AMC22194	**Electrical Principles and Troubleshooting (Recognition of Prior Learning)**	**Classroom**	**3 days*****
Course Aim	The overall aim of the Electrical Principles and Troubleshooting programme is that learners can safely fault-find on Industrial control circuits. (Excluding 3-phase motor control circuits). This will enable learners to contribute valuable productivity improvements to their employers by diagnosing down-time issues on automated industrial systems as well as suggesting modification and improvements to enhance productivity.		
Learner Profile	Learners must have achieved the QQI Level 6 Industrial Electrical Systems award in order to complete this 3 day RPL version within the last 12 months		

** 5 days Classroom Based in the AMTCE, 1 day online classroom (1st day of course)*

*** 3 weeks of 2 day blocks or 2 weeks of 3 day blocks (this is flexible per iteration)*

**** 3 consecutive days*

Pharma, Med Tech, Bio, Food and Beverage

» Pharma, Medtech, Bio
» Food and Beverage

Classroom based, blended and on-line trainings are scheduled through the year. For more information or to register for trainings please go to www.amtce.ie/courses

Code	Course Title	Delivery Mode	Duration
AMC21097	**Introduction to Cleanroom Operations**	**Live Online**	**1 day**
Course Aim	The aim of this course is to provide learners with key knowledge to work within regulated cleanroom environments in the medical technology, pharmaceutical and biopharmaceutical sector.		
Learner Profile	Candidates from a Production, Quality, or Engineering background who wish to gain an understanding of cleanroom technology and operations. Candidates who wish to upskill and develop a career within the Medical Device or (Bio)pharmaceutical industry.		

AMC21098	**Introduction to Technical Writing for the Manufacturing Sector**	**Live Online**	**1 day**
Course Aim	Learners will gain an understanding of the importance of preparing technical documents for a specific audience using a standardised, concise approach. Learners will be equipped with the tools for writing technical documents to a high standard.		
Learner Profile	Learners who wish to gain skills in technical writing for the manufacturing sector, particularly those who are employed in the Life Science industries of Pharmaceutical Manufacturing and Medical Device (manufacturing or assembly), where specific regulatory requirements for documentation are required.		

AMC22034	**Advanced Technical Writing for the Manufacturing Sector**	**Live Online**	**1 day**
Course Aim	This programme aims to establish a high standard of technical writing within manufacturing organisations. The programme will provide practical guidance on templates, layout, style and language to develop documentation, which is factual, coherent, succinct, and readable for an intended audience. The course will incorporate key concepts such as Corrective and Preventative actions (CAPA), deviations and root cause analysis.		
Learner Profile	Learners who wish to upskill in advanced technical writing for the manufacturing sector, particularly those who are employed in the Life Science industries of Pharmaceutical Manufacturing and Medical Device (manufacturing or assembly) - where specific regulatory requirements for documentation are required. Learners will be introduced to the importance of data integrity and preparing documentation for auditors.		

Code	Course Title	Delivery Mode	Duration
AMC21099	**Introduction to cGMP for the (Bio) Pharmaceutical Industry**	**Live Online**	**1 day**
Course Aim	The aim of this course is to provide learners with fundamental knowledge related to the requirements of working in a cGMP (Good Manufacturing Practice), regulated (bio)pharmaceutical manufacturing environment. On completion of the programme learners will be able to demonstrate core knowledge of quality systems, industry regulatory requirements, validation, documentation, and manufacturing technologies.		
Learner Profile	Learners seeking core knowledge required to work in a cGMP (Good Manufacturing Practice) (Bio)Pharmaceutical manufacturing environment. This could include those interested in transferring from another related sector such as from the food and drinks industry.		

AMC22016	**Introduction to QC for (Bio)Pharmaceutical Manufacturing**	**Live Online**	**1 day**
Course Aim	The aim of this course is to provide learners with a solid understanding of the role of Quality Control (QC) within an organization and how it relates to the manufacture of pharmaceutical products. Participants will gain knowledge in key areas including QC regulatory obligations, current Good Manufacturing Practice (cGMP), QC test methods and QC/laboratory information systems and typical QC Standard Operating Procedures (SOP) documentation.		
Learner Profile	Learners seeking core knowledge of the QC function, test methods and regulatory requirements, as they relate to a (Bio)Pharmaceutical manufacturing environment. This could include those interested in transferring from another related sector such as from the food and drinks industry.		

Code	Course Title	Delivery Mode	Duration
AMC22237	**Certificate in Quality Assurance Essentials for (Bio) Pharmaceutical Manufacturing**	**Blended***	**6 months**
Course Aim	This programme is designed to provide learners with the essential knowledge and skills required to excel in quality assurance within the biopharmaceutical manufacturing industry. Consisting of two specialised modules, this programme covers critical aspects of manufacturing operations and quality assurance standards. Learners will gain a foundational understanding of the theory and practical applications which are essential for this biopharmaceutical sector and will be equipped with a broad base skill set to gain entry level positions within this sector. Participants will study biopharmaceutical laboratory techniques, regulatory compliance, cGMP (current Good Manufacturing Practice), and will also delve into operational issues and deviations to identify root causes and potential solutions.		
Learner Profile	Learners seeking a qualification that will enable them to progress within their current employment or take up employment in the biopharmaceutical industry.		

Code	Course Title	Delivery Mode	Duration
AMC22238	**Certificate in Principles and Practice of Bioprocessing**	**Blended****	**3 months**
Course Aim	This course aims to provide a comprehensive understanding of the fundamental concepts and techniques involved in the application of biological systems for industrial manufacturing. This module will provide learners with the essential knowledge and skills of “upstream” (cell culture scientific concepts) and “downstream” (product purification) processes, equipping learners with the principles of bioreactor design, critical process parameters and an understanding of bioprocesses from laboratory scale to commercial production.		
Learner Profile	Learners seeking a qualification that will enable them to progress within their current employment or take up employment in the biopharmaceutical industry.		

**Module on: Quality Assurance - one live 3-hour online class per week. One Saturday in-person class 10am – 4pm.*
Module on: Cleanroom Operations & Plant Utilities - one live 3-hour online class per week. One Saturday in-person class 10am – 4pm.

***One live 3-hour online class per week and one Saturday in-person class 10am – 4pm*

“Oceanpath have recently taken part in food related training programmes with the AMTCE.

These programmes and trainings have given our team the skills and development needed to increase their knowledge in the food manufacturing industry.

It is a great organisation for personal and professional development, as well as learning and adapting new skills to the business.”

Áine Lynch
Product Development & Sustainability Manager
Dunn’s of Dublin / Oceanpath / Carr and Sons

Code	Course Title	Delivery Mode	Duration
AMC22017	**Introduction to Validation for the Pharmaceutical Industry**	**Live Online**	**2 days**
Course Aim	This course aims to help learners understand the regulatory requirements related to validation practices and documentation, to ensure consistent high-quality pharmaceutical products. The module will provide the core foundational knowledge and understanding of the fundamental principles and concepts related to including key set protocols of IQ (Installation Qualification), OQ (Operational Qualification), PQ (Process Qualification). Learners will also gain knowledge related to validation documentation.		
Learner Profile	Learners who are already in the pharmaceutical sector who wish to upskill in Validation skills and/or Learners who are seeking access to the field of Validation and who wish to gain an understanding of the importance of Validation in the pharmaceutical industry.		

AMC22147	**Developing Essentials Skills for the Food and Beverage Manufacturing Sector – Introduction Level**	**Live Online**	**1 day**
Course Aim	This programme is designed to provide learners with the knowledge, skills, and competencies necessary for individuals working in production, quality control and supporting roles within the food industry. Learners will gain core foundational knowledge and understanding of food safety and manufacturing concepts. In addition to a HACCP overview and BRCGS, participants will be introduced to key food manufacturing principles and practices including good documentation and record keeping, microbiology and allergens for the food industry, control of food safety risks and lean manufacturing.		
Learner Profile	Production operators, quality technicians and those seeking roles in the food industry.		

Code	Course Title	Delivery Mode	Duration
AMC22148	**Developing Essentials Skills for the Food and Beverage Manufacturing Sector – Intermediate Level**	**Live Online**	**2 days**
Course Aim	This course is aimed at individuals working in team leader or supervisory role in quality management, food processing and operations management of the Food and Beverage sector. Learners will gain a greater understanding of quality assurance and food safety risk management, to confidently lead and manage team members within a food or beverage production environment. Learners will also be introduced to lean thinking, DMAIC and sustainability concepts, which are central in improving process efficiencies.		
Learner Profile	Learners are likely to be supervisors, team leaders or trainee managers in production or quality roles within the food and beverage industry who wish to enhance their knowledge and competencies in key skills areas of food and beverage manufacturing.		

AMC22149	**Developing Essentials Skills for the Food and Beverage Manufacturing Sector – Advanced Level**	**Live Online**	**2 days**
Course Aim	This course is designed for individuals in leadership roles within the food and beverage industry. Learners will increase their knowledge of the requirements of a food safety and risk management system, incorporating VACCP (Vulnerability Assessment Critical Control Points) and TACCP (Threat Assessment and Critical Control Points). Learners will gain the skills necessary to implement continuous improvement tools, corrective action methodologies and lean thinking concepts and their application in a food manufacturing environment. Learners will also advance their knowledge of food safety culture and effective team management for a food business.		
Learner Profile	Learners are likely to be in leadership roles in production or quality departments within the food and beverage industry. Learners who wish to enhance their competencies in key skills areas e.g. food safety, innovation, new product development, sustainability, digitalisation, and process improvement in a food manufacturing environment.		

Code	Course Title	Delivery Mode	Duration
AMC22199	**Advanced Skills in Validation – Equipment Validation**	**Live Online**	**1 day**
Course Aim	The aim of course is to provide participants with a foundational understanding of equipment validation concepts and practices specific to the biopharmaceutical industry.		
Learner Profile	Learners who are already in the pharmaceutical sector who wish to increase their knowledge base in equipment validation and/or learners who are seeking access to the area of validation and who wish to upskill specifically in equipment validation. (Candidates are likely to have completed the Introduction to Validation for the Pharmaceutical Industry course (AMC22017), if they are new to validation).		

AMC22200	**Advanced Skills in Validation – Process Validation**	**Live Online**	**1 day**
Course Aim	This aim of this training is to provide participants with a foundational understanding of key concepts and regulatory requirements of process validation in the biopharmaceutical industry.		
Learner Profile	Learners who are already in the pharmaceutical sector who wish to increase their knowledge base in Process Validation and/or learners who are seeking access to the area of Validation. Candidates are likely to have completed the Introduction to Validation for the Pharmaceutical Industry course (AMC22017), although this is not a prerequisite.		

AMC22201	**Advanced Skills in Validation – Computer Systems Validation**	**Live Online**	**1 day**
Course Aim	The aim of this training is to provide participants with a fundamental understanding of Computer Systems Validation (CSV) principles, regulatory requirements, and best practices relating to validating computer systems used in regulated industries.		

Code	Course Title	Delivery Mode	Duration
AMC22202	**Advanced Skills in Validation – Cleaning Validation**	**Live Online**	**1 day**
Course Aim	This aim of this training is to provide participants with a foundational understanding of cleaning validation principles, methods, and regulatory requirements for cleaning validation in the (bio) pharmaceutical industry.		
Learner Profile	Learners who are already in the pharmaceutical sector who wish to increase their knowledge base in cleaning validation and/or learners who are seeking access to the area of validation and who wish to upskill specifically in cleaning validation. (Candidates are likely to have completed the Introduction to Validation for the Pharmaceutical Industry course (AMC22017) if they are new to validation).		

AMC22206	**Essential Skills for Medical Device Manufacturing**	**Live Online**	**25 hours**
Course Aim	To provide learners with an understanding of Medical Device Manufacturing, covering key industry aspects, market dynamics, QMS systems, regulatory compliance, the principles of Operational Excellence, fundamentals of Risk Management and CAPA systems.		
Learner Profile	Candidates who wish to develop a career within the Medical Device industry. Candidates within the Medical Device industry and wish to upskill and gain a wider understanding of the sector.		

AMC22207	**High Purity Water and Steam Systems for Pharmaceutical, MedTech and Manufacturing Industries**	**Live Online**	**2 days**
Course Aim	This course aims to provide learners with an understanding of high purity grades of water used in pharmaceutical manufacturing (and industries where high purity grades of water are a requirement such as within the medical device and electronics manufacturing sectors). The programme will cover key aspects of pharmaceutical water systems including, the definition and specifications of different pharmaceutical water grades, regulatory standards governing water quality, identification and removal of impurities, principles of water system design, and the various Water for Injection (WFI) generation processes. The course will also include technical requirements for cold and hot systems in WFI generation, storage, and distribution.		
Learner Profile	Candidates from an Engineering, Quality or Production background who wish to gain a good understanding of the technical aspects of the production and control of purified water systems for pharma, medical device, electronic engineering and manufacturing applications.		

Operational Optimisation

- Micro-credential Programmes
- Lean
- Project Management

Classroom based, blended and on-line trainings are scheduled through the year. For more information or to register for trainings please go to www.amtce.ie/courses

Code	Course Title	Delivery Mode	Duration
AMC21057	**Six Sigma Yellow Belt**	**Classroom**	**2 days**
Course Aim	This course provides learners with an understanding of Lean methodologies at an introductory (Yellow Belt) level.		
Learner Profile	Learners will be working in or moving towards a Lean Environment and involved in continuous improvement and workplace projects at a junior level.		

AMC21059	**Six Sigma Green Belt**	**Classroom**	**5 Days***
Course Aim	This course provides learners with a comprehensive understanding of Lean and Six Sigma methodologies at an intermediate (Green Belt) level. The course also covers the practical application of these tools and techniques.		
Learner Profile	This 5-day Green Belt training course is recommended from those who wish to increase their knowledge base in Lean Six Sigma methodologies. This will enable learners to be able to manage larger improvement projects and delegate project work to Yellow Belts within a project team. “Green Belts” would lead projects which are intended to improve efficiency, reduce or eliminate wasteful practices and deliver cost savings with application in industrial manufacturing environments/processes.		

AMC22033	**Certificate in Transversal Skills for a Digital Workplace**	**Blended****	**6 weeks**
Course Aim	The aim of this course is to provide learners with the skills to recognise the changing business environment and identify the skills and competencies to act in such an environment.		
Learner Profile	Anyone seeking an understanding of diverse transversal skills that are now required to work effectively in an increasingly global and digitised environment, across multiple manufacturing and service-related industries.		

**5 days (1 day per week over 5 weeks)*

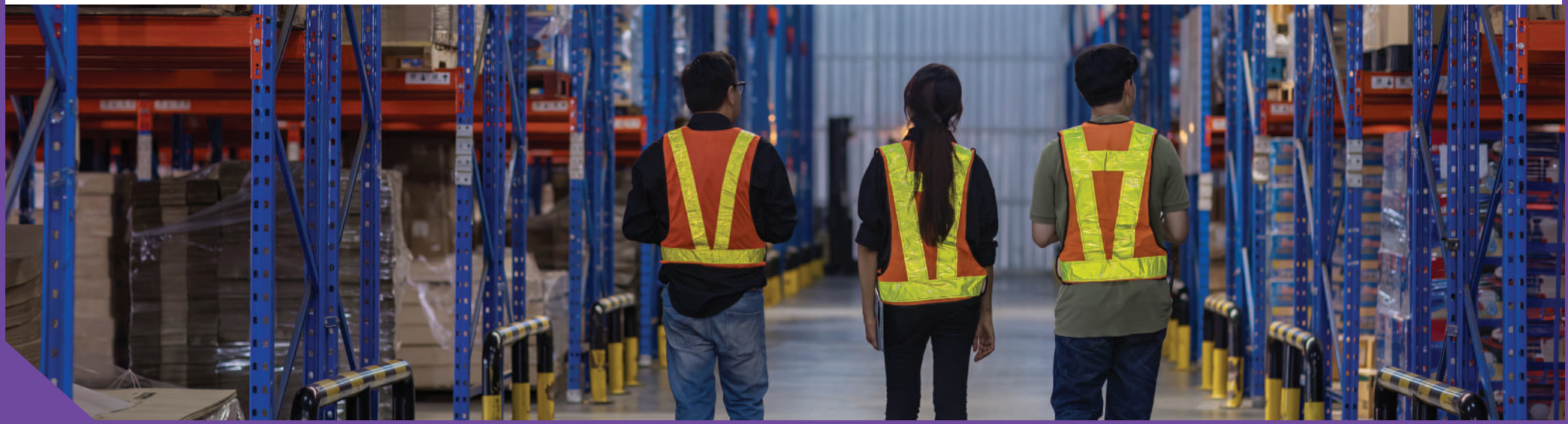
*** 1 classroom lecture in the AMTCE 10am – 4pm and 5 evenings, once a week over 5 weeks (6.30pm –9.30pm) (21hrs in total)*

Code	Course Title	Delivery Mode	Duration
AMC22150	**Certificate in Operational Excellence**	**Blended**	**16 weeks***
Course Aim	This programme is designed for learners who wish to improve their knowledge of operational excellence/process improvement methodologies, with a specific focus on digitization strategies. The certificate course comprises 3 modules: ■ Operational Excellence – Lean Thinking. ■ Operational Excellence – Six Sigma. ■ Digital Communication and Technical Reporting. These modules will provide the learner with foundational knowledge of process digitization and operational excellence which is essential as industries face significant challenges and changes in the coming years. The course will provide learners with the foundational knowledge, skills and competences they require to enter and sustain employment as the 'Operators and Technicians of the Future' in advanced manufacturing contexts where process digitisation occurs, or where a transition to process digitisation is anticipated.		
Learner Profile	The programme is specifically designed for learners seeking a qualification that will enable them to either progress within their current employment or take up employment in the manufacturing or service sectors. The programme will be open to applications from Irish citizens, EEA nationals and learners who otherwise have the right to reside in Ireland and who meet the programme's English Language Proficiency requirements. The College will not be entering the programme on the Interim List of Eligible Programmes (ILEP) and therefore will not be recruiting non-EEA learners. The profile of the target learner group will include: ■ Mature domestic learners who are in operational roles within manufacturing/service and seek to maintain the currency of their skills or progress in their careers (up-skilling). ■ Mature domestic job seekers who have no previous experience in manufacturing/service and seek a qualification that will prepare them to enter an operational role (re-skilling).		

**One Saturday per month 10-4pm, 2 evenings online during each week.*

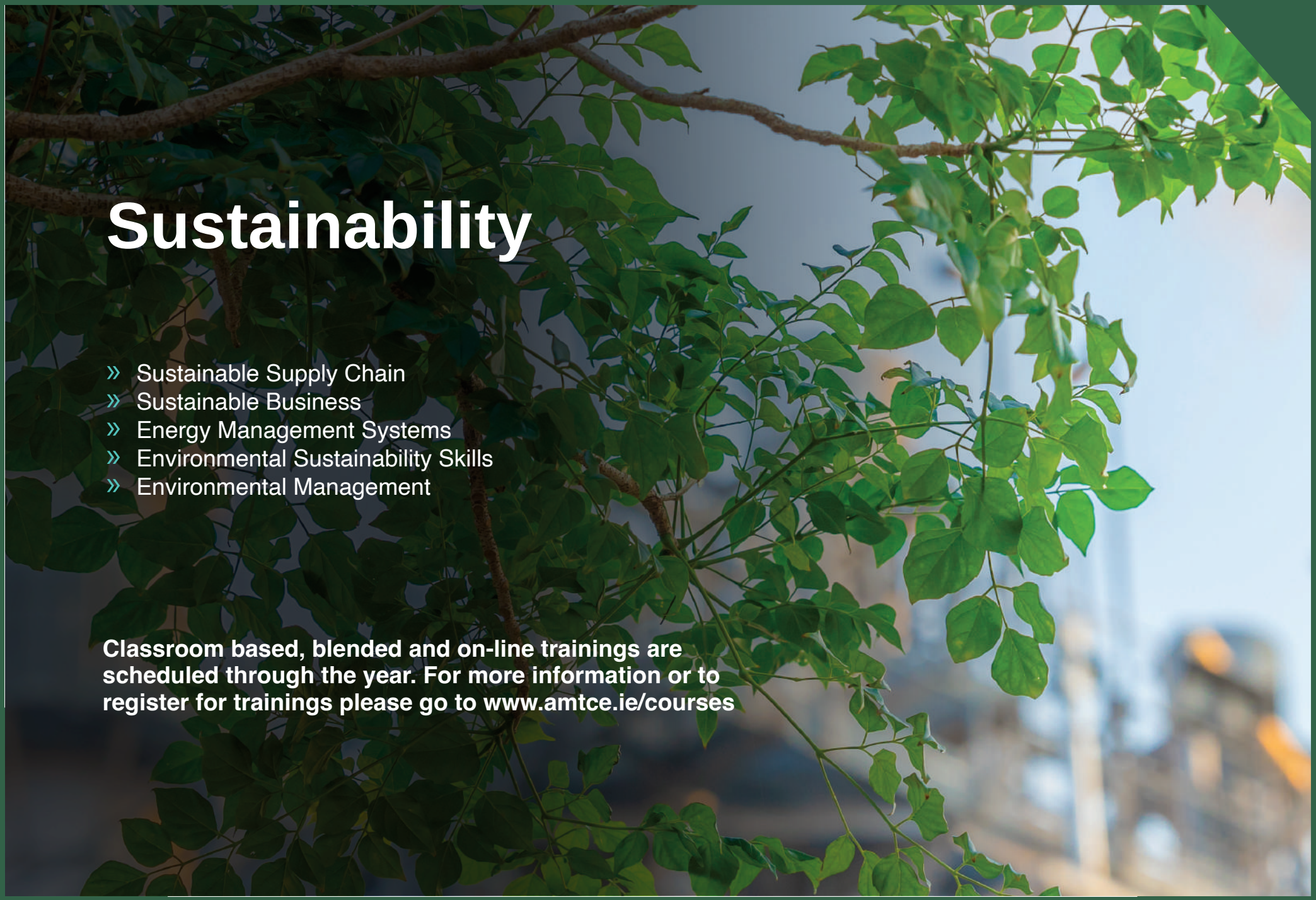
Code	Course Title	Delivery Mode	Duration
AMC22151	**Certificate in Supply Chain**	**Blended**	**5 months***
Course Aim	Aims to give learners a knowledge of project management techniques used to identify the roles involved (in a team) and the processes used when managing an industrial project from the conceptual stage to full completion. On completion of this programme the learner should be able to: ■ Identify the key functions of operations management, including, organisational strategy; product design; forecasting; inventory management; quality control; scheduling; supply chain management and facilities management. ■ Describe knowledge of the emerging and future trends of operations management, including, organisational strategy; product design; forecasting; inventory management; quality control; scheduling; supply chain management and facilities management. ■ Describe the basics of project management frameworks and project management methodologies through conceptual applications in industry environments, incorporating the project life cycle, the role of project managers, and the project teams in the context of cost, time, and quality/ performance.		
Learner Profile	Learners looking for a foundational knowledge of the core elements of these key business functions, in addition to gaining insights into new emerging trends and the impact of digitisation on supply chains and operations. Through participation in the programme, learners will gain essential skills to support expanding smart manufacturing operations, enabling participants to make a valuable contribution to the implementation of digitalisation strategies within the organisation.		

**One Saturday per month 10-4pm, 2 online evenings during each week*



Code	Course Title	Delivery Mode	Duration
AMC22158	**Project Management**	**Classroom**	**5 days***
Course Aim	This project management training course is designed to provide the learner with the knowledge, practical skills and understanding required to lead projects to a successful conclusion. It gives the learner the skills and competencies to take responsibility for the planning, implementation, and review of a project, to effectively manage resources and complete them within designated timeframes.		
Learner Profile	Learners who are new to the area of project management and who wish to develop knowledge of the associated tools and methodology of project management. The course is suitable for learners from a range of functions including for example Manufacturing, Engineering, IT and Business Management.		

**1 day per week over 5 weeks.*



Sustainability

- Sustainable Supply Chain
- Sustainable Business
- Energy Management Systems
- Environmental Sustainability Skills
- Environmental Management

Classroom based, blended and on-line trainings are scheduled through the year. For more information or to register for trainings please go to www.amtce.ie/courses

Code	Course Title	Delivery Mode	Duration
AMC22235	**Sustainable Supply Chain Procurement**	**Classroom**	**30 hours***
Course Aim	To equip the learner with the knowledge, skills, and competence to demonstrate an understanding of sustainable procurement and supply chain processes and consider the opportunities this affords for improving environmental and social issues. It will introduce participants to the role played by sustainability in procurement and discuss how this can be applied in practice within their organization. It will also give added value and preparedness learners working in SME's. Specifically it will enable learners in all organizations to understand the benefits of introducing sustainable practices to identify changes that could be implemented and to review current requirements in this ever changing legislative space.		
Learner Profile	The programme is particularly well suited towards those involved in purchasing and/or procurement, contract management and those who require upskilling in these areas. It would also suit those who are interested in joining their organisation's 'green team'.		

AMC22238	**QQI Level 5 Lean Practice for Sustainable Business**	**Classroom**	**16 weeks**
Course Aim	**Lean Principles Module:** To introduce the learner to the broad concept of sustainability and to provide deeper understanding of business sustainability in the context of climate change and climate action. This module will also introduce the concept of Lean and how the utilization of lean principles tools and skills can support organizations to become more resource efficient and reduce their carbon footprint. **Lean Tools Module:** To provide to the learner with the lean methods and techniques that will enable them to identify their current state of their utilization of resources, materials and processes, and develop practical solutions that can be implemented within an organization as a response to existing sustainability challenges.		
Learner Profile	The programme primarily targets those who are seeking to develop their Lean and sustainability skills and competencies and apply them within their workplace.		

**3 hr X 10 sessions*

Code	Course Title	Delivery Mode	Duration
AMC22121	**Energy Management Systems (EnMS) Auditor/Lead Auditor ISO 50001**	**Classroom**	**5 days**
Course Aim	To provide learners with the knowledge and skills required to competently audit an entire energy management system against the requirements the Energy Management standard, ISO 50001. The programme primarily targets those who are seeking to develop their Lean and sustainability skills and competencies and apply them within their workplace.		
Learner Profile	Learners are likely to be from a managerial or engineering professional background and are persons that: ■ Have responsibility for conducting internal/external energy audits, ■ Have responsibility for energy management ■ Have responsibility for the management and development of an Energy Management System. ■ Those who wish to enhance their auditing skills and knowledge		

AMC22208	**Environmental Sustainability Skills for Managers**	**Classroom**	**2 days**
Course Aim	This course aims to provide supervisors and managers with a strategic and operational overview of environmental sustainability as it affects their specific industry and work activities. It is aimed at those individuals who have no formal background in Environmental or Sustainability matters.		
Learner Profile	The Sustainability Skills for Managers course aims to provide supervisors and managers with a strategic and operational overview of sustainability, including environment, social and governance (ESG) as it affects their specific industry and work activities.		

Code	Course Title	Delivery Mode	Duration
AMC22209	**Pathways to Net Zero**	**Classroom**	**2 days**
Course Aim	The course is aimed at persons who might be: ■ Responsible for developing a carbon reduction strategy (e.g. net zero) for their organisation. ■ Responsible for decarbonising a particular part of an organisation. supply chain, business travel, estates etc. ■ A sustainability specialist with net zero as a new responsibility.		
Learner Profile	Persons who are: ■ Developing a net zero approach (or other carbon reduction strategy) for their organisation. ■ Supporting an existing net zero strategy. ■ An environmental/sustainability specialist with net zero as a new responsibility. ■ Communicating or helping to communicate an organisation's net zero approach. ■ Responsible for decarbonising a particular part of an organisation, e.g., supply chain, business travel, estates, etc.		

AMC22210	**Foundation Certificate in Environmental Management**	**Classroom**	**5 days**
Course Aim	The aim of this course is to provide a solid foundation in sustainability and the associated management tools deployed to improve environmental performance in an organisation. Learners will obtain a comprehensive understanding of environmental and sustainability controls and how to manage these in their own work environment. It is aimed at learners who are starting out in environmental management.		
Learner Profile	■ Learners who are starting out in environmental management and want a solid foundation of environment and sustainability knowledge to build on. ■ Those who would like to gain Associate membership of IEMA.		

Apprenticeships

- QQI L6 2 year Cyber Security Apprenticeship
- QQI L6 2 year Robotics Automation Apprenticeship

For more information or to register for apprenticeships please go to www.amtce.ie/apprenticeships

Apprenticeships

What is an Apprenticeship?

An apprenticeship is a training and education programme. It mixes learning in a college or training institution with work-based learning in a company. At least half of apprenticeship learning is done on the job.

As an apprentice, you earn while you learn. You have a formal employment contract, and you are paid a salary during your apprenticeship training. Apprenticeships can last between two and four years.

Apprenticeships also lead to internationally recognised qualifications. These range from level 6 to level 10 on the National Framework of Qualifications.

Apprenticeships At the AMTCE

Apprenticeships at the AMTCE offer an excellent opportunity to establish a rewarding career in a variety of sectors within the economy such as Advanced Manufacturing, ICT, Pharma or Food and beverage manufacturing, and can provide a pathway into Level 7-9 qualifications in Institutes of Technology or University.

Course Name	Delivery Mode	Duration
QQI L6 Cyber Security Apprenticeship Programme	**Blended**	**2 Years**

Course Aim	If you are a tech enthusiast and enjoy problem solving, this L6 Cybersecurity apprenticeship Programme may be what you are looking for to start or to progress your career in this area of work. With this two-year apprenticeship, you will become a fully qualified cybersecurity worker, with an NFQ Level 6 Advanced Certificate in Cybersecurity. You will also receive industry-recognised CompTIA Cybersecurity Certifications as part of the programme. You may then choose to work as a cyber security professional in a wide range of industries including telecoms, technology, government, finance, and education. A cybersecurity professional's job involves applying an understanding of cyber threats, hazards, risks, controls, measures, and mitigations to protect organisations, ICT systems, and people. You may specialise in the technical side of cyber security, working in areas such as security design and architecture; security testing; Investigations; and response, or the risk analysis side, concentrating on areas such as operations; risk; governance and compliance. By the end of your training, you will be able to: • Discover through a mix of research and practical exploration vulnerabilities in a system. • Analyse and evaluate security threats and hazards to a system, service and process. • Carry out a cyber security risk assessment. • Research and investigate common attack techniques and recommend how to defend against them. • Understand basic data security theory-concepts such as security, identity, confidentiality, integrity,availability,threat,vulnerability,risk and hazard.

Course Name	Delivery Mode	Duration
Electrical Apprenticeship Phase 2	**Blended**	**22 Weeks**

Course Aim	On successful completion of the apprenticeship programme, apprentices are qualified to work within the recognised trade or profession. The course delivery alternates between the workplace and educational providers (AMTCE)
Learner Profile	■ The minimum age at which the employment of an apprentice may commence is 16 years of age. ■ The minimum educational requirements are: 1. Grade D in five subjects in the department of Education & Skills Junior Certificate Examination or an approved equivalent, or the successful completion of an approved Pre-Apprenticeship course or three years' work experience gained over sixteen years of age in a relevant designated industrial activity as SOLAS shall deem acceptable. ■ It should be noted that these are the current approved minimum educational requirements for apprenticeship programmes, however, previous experience of the following subjects would be an advantage but not essential: Mathematics, Technology, Technical Drawing / Graphics, Physics and Construction Studies.

Course Name	Delivery Mode	Duration
Robotics and Automation Apprenticeship	**Blended**	**2 Years**

Course Aim	The Robotics and Automation Apprenticeship (RAA) programme aims to provide apprentices with the skills, knowledge, competencies, and practical application to secure and retain quality employment in advanced technician roles across the various advanced manufacturing sectors including engineering, food & drinks, pharma etc. A Robotics and Automation Technician operates, designs, installs supports, and maintains the on-demand availability of both robotic and factory automation systems. RAA apprentices will be trained and qualified to manage, monitor, and maintain automated manufacturing equipment and assembly processes, monitor and check product quality and document results in adherence to prescribed protocols and safety procedures aligned with specific manufacturing environments. The course delivery alternates between the workplace and educational providers (AMTCE).
Learner Profile	■ Be 17 years or older ■ Have achieved a pass grade (O6/H7) in 5 or more subjects (including maths and English) at ordinary level in the leaving cert Or ■ A full QQI Level 5 or higher qualification

Course Name		Delivery Mode	Duration
Toolmaking Apprenticeship Phase 2		**Classroom / Workshop**	**20 weeks**
Course Aim	On successful completion of the apprenticeship programme, apprentices are qualified to work within the recognised trade or profession.		
Learner Profile	■ The minimum age at which the employment of an apprentice may commence is 16 years of age. ■ The minimum educational requirements are: Grade D in five subjects in the Department of Education & Skills Junior Certificate Examination or an approved equivalent, or the successful completion of an approved Pre-Apprenticeship course or three years' work experience gained over sixteen years of age in a relevant designated industrial activity as SOLAS shall deem acceptable. ■ It should be noted that these are the current approved minimum educational requirements for apprenticeship programmes, however, previous experience of the following subjects would be an advantage but not essential: Metalwork, Physics, Engineering, Technology, Mathematics and Technical Drawing/Graphics.		

"I have had an amazing time joining the cyber security apprenticeship and recommend it to anyone who like myself was not able for full time collage. I have worked in retail for 12 years and joining the apprenticeship I was able to change my whole career outlook. Having the mix of study as a class and working in a company was easier for me as you are able to use any skills you have learnt on the job and gain even more experience. After the two years you will have so much knowledge but you also come out with hands on experience setting you up for a full time job."

James OBrien
AMTCE Cyber security apprentice

"The FIT cybersecurity apprenticeship has been a huge turning point in my life. I have thoroughly enjoyed my time in the course and on the job. It has been intensive but rewarding, and the opportunity to land in the calibre of company I've got in such a short time is invaluable. I'd recommend choosing an apprenticeship over college for anyone in a position such as myself who didn't have the resources at the time to go to college. The network I've developed and hands-on work I've completed will help me for the rest of my time in this field. I really can't recommend it enough. I recently joined the PenTest team in work"

Walter Dawed
AMTCE Cyber apprentice with Deloitte

Traineeships

- QQI L6 1 Year Advanced Manufacturing Technician Traineeship: Pneumatics
- QQI L6 1 Year Advanced Manufacturing Technician Traineeship: Electronics

For more information or to register for traineeships please go to www.amtce.ie/traineeships

Traineeships

What is a Traineeship?

Traineeships are short, structured training programmes which combine learning in an education and training setting as well as learning in the workplace in partnership with employers. A Traineeship can provide you with an opportunity to develop cutting edge skills and on-the-job knowledge, enhancing your career options and improving your employability.

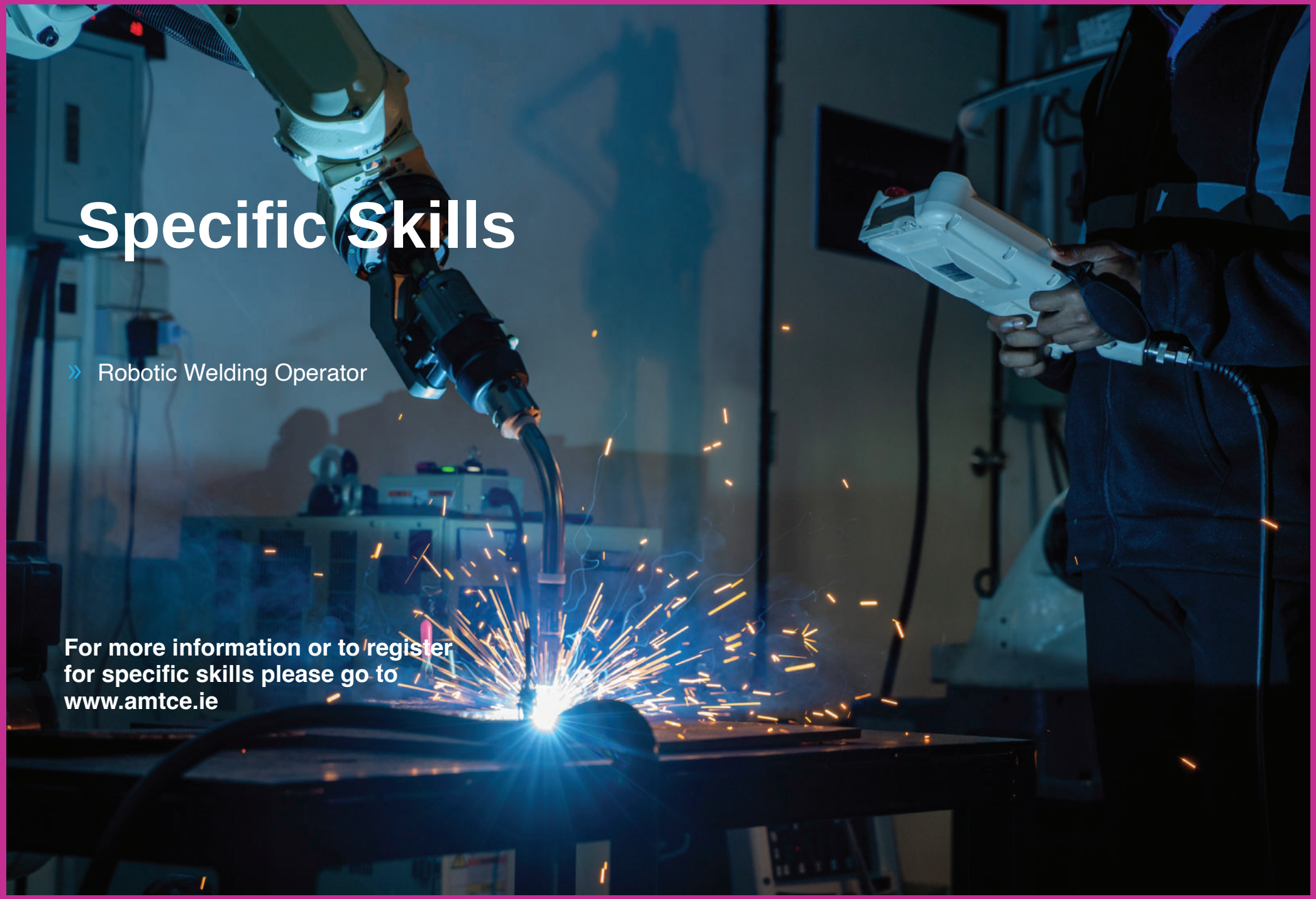
AMTCE Traineeships

The AMTCE, in partnership with FIT (Fastrack into Technology), and supported by Intel, are currently running two QQI L6 Advanced Manufacturing technician Traineeships. These traineeship programmes position learners to pursue a challenging and rewarding career as a manufacturing technician. On completion, they will have the skills to work on teams across mechanical electrical, electronic, and robotic disciplines.

These programmes are 48 weeks in duration, delivered over 51 weeks to allow for holidays. The programmes are delivered on a full-time basis, Monday-Friday. Both programmes are delivered under the Traineeship model , as 30% of the training being “on-the-job”, satisfied within these programmes as 12 week work placement module. Successful learners can become more competitive in the employment market or can confidently progress on to further and higher education.

Course Name		Delivery Mode	Duration
QQI L6 1 Year Advanced Manufacturing Technician Traineeship: Pneumatics		**Full time face to face delivery in Navan**	**52 Weeks**
Course Aim	• These traineeship programmes position learners to pursue a challenging and rewarding career as a manufacturing technician. On completion, they will have the skills to work on teams across mechanical electrical, electronic, and robotic disciplines		
Learner Profile	• Over 18 years. • Have a competent level of spoken and written English. • Must have numerate literacy with the capacity to learn new skills and absorb varied product knowledge. • A problem solver with the capacity to work as a member of a team and to communicate clearly with others. • Good hand-to-eye coordination, mechanical aptitude and visual acuity is important. • Demonstrate a level of personal motivation. • Have an interest in Electrical, Electronic and/or Mechanical systems. • A clear desire to work in the field of equipment maintenance.		

Course Name		Delivery Mode	Duration
QQI L6 1 Year Advanced Manufacturing Technician Traineeship: Electronics		**Full time face to face delivery in Navan**	**52 Weeks**
Course Aim	These traineeship programmes position learners to pursue a challenging and rewarding career as a manufacturing technician. On completion, they will have the skills to work on teams across mechanical electrical, electronic, and robotic disciplines		
Learner Profile	• Over 18 years. • Have a competent level of spoken and written English. • Must have numerate literacy with the capacity to learn new skills and absorb varied product knowledge. • A problem solver with the capacity to work as a member of a team and to communicate clearly with others. • Good hand-to-eye coordination, mechanical aptitude and visual acuity is important. • Demonstrate a level of personal motivation. • Have an interest in Electrical, Electronic and/or Mechanical systems. • A clear desire to work in the field of equipment maintenance.		



Specific Skills

» Robotic Welding Operator

For more information or to register for specific skills please go to www.amtce.ie

Code	Course Name	Delivery Mode	Duration
Robotic Welding Operator		**Full time face to face delivery in AMTCE**	**34 weeks**
Overview	The aim of this course is to equip learners with the skills and knowledge required for the operation and programming of a robotic welding cell for use in a diverse range of advanced manufacturing settings.		
Learner profile	Over 18 years of age. Previous welding experience would be advantageous.		

AMTCE Location

53°58’34.3”N 6°23’54.9”W

https://maps.app.goo.gl/ExuqAZD2jVT2nqkg8


AMT
CE
Ionad Oiliúna
Barr Feabhais
Ard-Déantúsaíochta
Advanced
Manufacturing Training
Centre of Excellence
Staff & Visitor
Car Park
Disabled Parking

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Centre of Excellence

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Email: amtceskillstoadvance@lmetb.ie

AMTCE

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