



OLLSCOIL NA GAILLIMHÉ
UNIVERSITY OF GALWAY

FOCUSSED LEARNING. ENDLESS POSSIBILITIES.

Specialist Diploma in
Lean & Quality Systems

- + Part-time
- + Flexible
- + Online
- + Connected
- + Career
- + Opportunity

Reasons to study this course:

- Participants will be equipped in continuous improvements, Operations Excellence Methodologies, Lean, Six Sigma and Quality Management techniques.
- Enterprise modelling and simulation is studied with an emphasis on optimising business processes and skills in change management.
- It addresses lean and quality systems within manufacturing and services sectors.

Course Facts

ECTS: 30

NFQ Level: 8

Duration:

1 year, part-time

Mode of study:

Online Learning

Fees: See course website

www.universityofgalway.ie/courses/adult-and-continuing-education-courses/lean-and-quality-systems

Start date: September

Contact

Course Administrator

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Apply online:

www.universityofgalway.ie/adult-learning/how-to-apply

Specialist Diploma in Lean & Quality Systems

Your part-time course:

This one-year, part-time course is intended for those who wish to focus their skills with a view to moving into specialist and hybrid lean roles, e.g. internal lean consultants, waste minimisation specialists, process optimisation advisors. It is also suitable for those who wish to upskill and specialise. On completion of the course, graduates will have highly marketable, up-to-date knowledge and skills relevant to product, process and service optimisation and improvement.

Your modules:

- Lean Thinking/Lean Tools
- Quality Science Six Sigma
- Problem Solving Tools & Techniques
- Enterprise Modelling & Simulation
- Project

The project topic is chosen by the participant in consultation with their supervisor and will be company based where possible.

Entry Requirements:

Applicants should have completed a Diploma at NFQ Level 7 of 90 ECTS minimum, in a Science, Engineering or Technical area, or otherwise prove that they satisfy the prerequisites of each of the modules as listed in the course outline section. An International English Language Testing System (IELTS)/ TOEFL certificate is required if English is not your first language to indicate your competency in written and spoken English.

Delivery & Assessment:

The course is delivered using an online learning approach with Saturday workshops (approximately 10 hours per module). The delivery model also includes self-directed learning elements. Students complete a project which requires them to apply their knowledge to real-world scenarios.

Career Opportunities & Further Study:

Graduates find employment in well-established industries which are embedded in the local economy, providing a basis for sustainable long-term employment and career advancement. Graduates can opt to progress to the BSc in Science & Technology Studies (NFQ level 8) with credit for their studies. The Specialist Diploma in Lean & Quality Systems is approved by Engineers Ireland as a CPD learning opportunity and contributes 600 hours towards an engineer's CPD requirement. Students are provided the opportunity to take the American Society for Quality (ASQ) green belt online exam to enhance their studies to a Green Belt Qualification.





Modules

Lean Thinking/Lean Tools

The module provides an overview of Lean Tools, a recognised precursor for digitalisation, Industry 4.0, the Toyota Production System (TPS) and Lean principles. Students examine the main components of the TPS system including Just-in-Time (JIT) and cellular manufacturing. The module covers the main lean tools including Value Stream Mapping, 5S, Kaizen, and Standard Work. The principles behind each of the tools and the various elements involved in effectively using these tools is discussed.

Quality Science - Six Sigma

This module introduces the concept of Quality Science. Students will study Six Sigma methodology, and gain a foundation in the statistical methods and statistical thinking that forms the basis of the Six Sigma DMAIC process. Students build on this foundation so that they have the confidence and statistical skills necessary to visualise and interpret data. Learners develop a working knowledge of the statistical package Minitab.

Problem Solving Tools & Techniques

The Problem Solving Tools and Techniques module gives students an appreciation of the tools and techniques used by organisations to implement quality improvement and Six Sigma projects. Students analyse problems utilising the Six Sigma DMAIC problem solving framework.

Enterprise Modelling & Simulation

Enterprise modelling is the process of building models of whole or part of an enterprise using process models, data models, resource models and/or new processes etc. Enterprise modelling deals with the process of understanding an enterprise and improving its performance through creation of enterprise models. It is based on knowledge about the enterprise, previous models and/or reference models.

Lean & Quality Systems Project

In this project the student will utilise Lean Six Sigma tools and apply those to real life scenarios. The student will develop a project plan and execute a practical research project using well established research methodology methods. Students will be allocated an academic supervisor who will work with them to offer guidance and ensure the successful completion of the project. This module will enable the student to develop their project management skills, team-working and communication skills.

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