



# GENERATION APPRENTICESHIP

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## EQUIPMENT SYSTEMS ENGINEER(MEng)



The Irish Manufacturing Sector is in transition from Industry 3.0 to Industry 4.0/5.0. To be successful, we must master the task of efficiently integrating complex cyber technologies into physical manufacturing equipment. With this in mind, University of Limerick, in conjunction with the ESE Academy have developed a suite of modules for manufacturing sector employees, which form the Masters level Equipment Systems Engineering (ESE) apprenticeship.

### For Professionals who wish to:

- Procure, design, manufacture, commission, support or optimise Industry 4.0/5.0 equipment for the high-tech manufacturing sector in Ireland.
- Collaborate with others to broaden their overall access to emerging research, technologies and best working practice to meet the challenges of Industry 4.0/5.0.
- Improve their problem-solving techniques in the high-tech manufacturing equipment domain.
- Be recognised as technical leaders in a topic relevant to Equipment Systems Engineering.
- Possess the skills to implement Industry 4.0/5.0 technologies in manufacturing.

<b>NFQ Level</b>	Level 9 Major Award
<b>Qualification upon completion</b>	Masters in Engineering (MEng)
<b>Duration</b>	2 years
<b>Industry Lead</b>	The ESE Academy
<b>Education Provider</b>	University of Limerick
<b>Delivery</b>	<ul style="list-style-type: none"><li>• 1 day per semester on campus</li><li>• Weekly online lectures</li><li>• A dedicated Masters thesis supervisor</li><li>• Participation in a Community of Practice</li><li>• Support from an Industry Mentor within the company</li><li>• Completion of a company project</li></ul>
<b>Applications by</b>	July for a September start

## Benefits to the Employer

- Developed by industry for industry
- Improves staff retention and productivity
- Addresses and tackles skills shortage
- Government subsidised qualifications

## Benefits to the Apprentice

- Gain a Masters while working
- Develop career enhancing skills
- Learn best-practice from other organisations
- Excellent career progression prospects

## Course Content

Year 1		
Autumn	Spring	Summer
Manufacturing Equipment Cyber Technologies	Cyber-Physical Equipment Procurement	Equipment Systems Engineering Project Review (Project Charter)
Automated System Design	Cyber-Physical Manufacturing Solutions	Apprenticeship Personal and Professional Portfolio 1
Year 2		
Autumn	Spring	Summer
Equipment Systems Engineering Research 1 (Project scoping)	Equipment Systems Engineering Research 2 (Project execution)	Equipment Systems Engineering Research 3 (Project submission)
		Apprenticeship Personal and Professional Portfolio 2

By participating on the Equipment Systems Engineering (ESE) apprenticeship program you will be provided with:

- An overview of relevant commercially available cyber technologies.
- Access to a learning platform with key learning assets from leading cyber technology providers.
- The tools and techniques to manage your equipment procurement processes which ensure that you are implementing appropriate cyber technologies in accordance with current best practice.
- The latest Cyber-Physical manufacturing equipment solutions, which are currently in development, to solve real-world challenges.
- The opportunity to have your work peer reviewed and published, using a Creative Commons (CC) licensing model, for the benefit of the manufacturing ecosystem.

## Entry Criteria

- Employers must be willing to complete an approval process by UL & SOLAS, and commit to support the apprentice throughout the programme.
- Support from an industry mentor within the company throughout the apprenticeship.
- Apprentices should hold a NFQ level 8 at minimum level 2.2 in a relevant area. Applicants who have completed a level 8 apprenticeship in a related field are also eligible to apply.
- Applicants with a lower qualification may also be considered provided they can prove to have considerable industrial experience as well as evidence of the ability to study at Masters Level.

## Funding

Fees for Executive Apprenticeships are highly subsidised for approved applicants and represent 80-90% saving on programmes fees.

Further Information or to apply to the programme: [email apprenticeships@ul.ie](mailto:apprenticeships@ul.ie).

Tel: Philomena Kelly 061-237770

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