



# Professional Skills for Engineers

ONLINE  
COURSE

Next Level Skillnet are delighted to be collaborating with Limerick Chamber Skillnet in delivering the Professional Skills for Engineers Module. This module addresses a need for developing specific professional skills in early-career engineers and those new to engineering positions in engineering and technology organisations.

**Award:** Certificate of Study

**Cost:** Members €900  
Non-Members €1,125

**Qualification:** NFQ Level 9, 6 ECTS Credits

**Delivery:** Online

**Start Date:** 22 March

This online module is specifically designed to develop professional competences considered essential for working effectively in engineering-led organisations.

The primary target students are early-career engineers or those new to engineering positions. In addition, the module would also benefit those professionals who need an update and review of these key skills from leading academic and industry tutors.

## REGISTER NOW

To register please visit:

[www.nextlevel.ie](http://www.nextlevel.ie)

Contact Sue Davies

[sue@nextlevel.ie](mailto:sue@nextlevel.ie)

## COURSE CONTENT

- Engineer as a Professional; Time Management & Organisational Skills
- Communication & Presentation Skills
- Coaching & Mentoring, Team Leadership Skills
- Complex & Creative Problem Solving
- Technical Writing Skills
- Project Management Fundamentals



# Module Unit Syllabus

## Project Management Fundamentals

**Monday 22nd March 2021**

- The Nature of Projects – background to project management and how it delivers value
- Managing Scope – managing project requirements and developing project work tasks
- Detailed Planning – Preparing Schedules and Budgets
- Project Control – Addressing uncertainty and reporting performance.

## Engineer as a Professional, Time Management and Organisational Skills

**Friday 16th April 2021**

- Establishing a reflective practice for self-development
- Understanding the benefits of self-awareness and emotional management
- Understanding personal style and the impact it has in a collaborative environment
- Managing Time: Setting SMART goals and establishing objectives; setting priorities and scheduling time
- Organisational Skills
- Professional Ethics for Engineers

## Complex and Creative Problem Solving

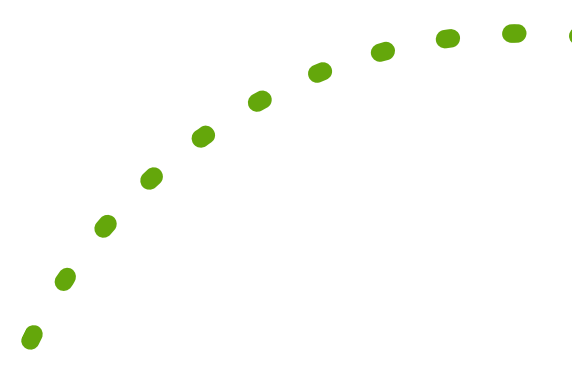
**Friday 30th April 2021**

- Model Based Problem Solving Introduction
- Fault Finding individual issues – SWAT and Taskforce
- Problem Solving Tools – 5 Whys , 5 E + 1 H , Direct Observation Techniques , KT Analysis
- Ishikawa – Team Exercises
- Mental Models
- Critical Thinking with Team Exercise
- Socratic Questioning

## Communication & Presentation Skills

**Friday 7th May 2021**

- The Nature of Projects – background to project management and how it delivers value
- Managing Scope – managing project requirements and developing project work tasks
- Detailed Planning – Preparing Schedules and Budgets
- Project Control – Addressing uncertainty and reporting performance.



## **Technical Writing Skills**

### **Friday 28th May 2021**

- Structure of reports and proposals; standard practices in presentation of scientific and engineering information
- Standard writing practices, terminology and formatting
- Structure of sentences and paragraphs: clarity, organization, continuity and emphasis
- Organizing and communicating the experimental and technical details
- Standards in the use of graphs and tables for data presentation; schematics, micrographs and pictures
- Quantitative analysis and mathematical descriptions
- Grammatical issues in technical writing

## **Coaching, Mentoring & Team Leadership Skills**

### **Friday 18th June 2021**

- Characteristics of Effective Teams
- Developing Relationships for Effective Teams
- Constructive Feedback, Delivering and Receiving Feedback
- RAPID decision making model (recommender, input, approve, decide, perform)
- Key elements of effective meetings
- Key elements of a team charter

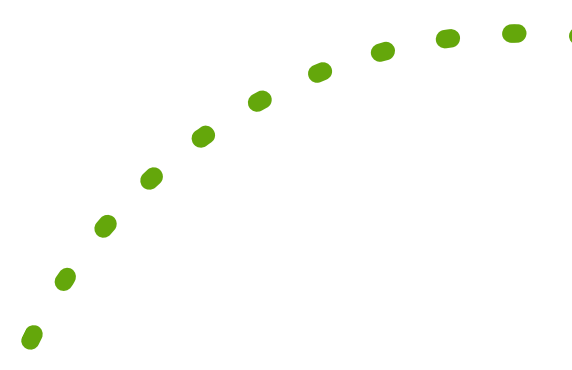
## **DELIVERY AND ASSESSMENT:**

The module will consist of 6 x one-day face-to-face workshops\* scheduled over a 4 month period (two semesters). In addition to the workshops, each unit will have online activities and Tutor interaction using the UL Learning Management System.

The six units are taught by University Lecturers and industry-based Tutors, all with significant expertise in the programme thematic areas and with experience in delivering to adult learners. Students will complete a short work based assignment for each of the six one-day workshops and submit these assignments for assessment. All six unit assessments will combine to give a module grading which will be on a Pass/Fail basis (6 ECTS at level 9).

### **\*Please Note**

Due to Covid-19 restrictions, the units for the programme will be delivered online and there will be no face to-face workshops for programme starting in March 2021.





The module is a collaboration between Science & Engineering at UL, Limerick Chamber Skillnet, Next Level Skillnet and the regional “Limerick for Engineering” industry network to develop the skills considered essential for working effectively in engineering-led organisations.

This programme is funded by Next Level Skillnet and Limerick Chamber Skillnet.

Next Level Skillnet and Limerick Chamber Skillnet are co-funded by Skillnet Ireland and network companies. Skillnet Ireland is funded from the National Training Fund through the Department of Further and Higher Education, Research, Innovation and Science.

## Funding Eligibility

Skillnet Ireland funding is available to Private Companies located in the Republic of Ireland who are paying the fees for their employees.

## FOR ADDITIONAL QUERIES:

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