



The Royal Institution of Naval Architects

## EXPERIENTIAL LEARNING REPORT INCORPORATED ENGINEER (IENG)

Candidates who do not have the exemplifying academic qualification for IEng as recognised by the UK Engineering Council or relevant Washington Accord signatory are required to submit an **Experiential Learning Report (ELR)** demonstrating that they have achieved the same level of underpinning knowledge and understanding through their practical experience within the workplace.

The required outcomes of an accredited course which meets the academic requirement for IEng are defined in terms of;

- underpinning science, mathematics & engineering principles
- engineering analysis
- design
- economic, social, environmental and ethical context
- engineering practice
- management & leadership.

### Section 1: How to complete the Experiential Learning Report

Specific examples of activities should be provided for each outcome, in sufficient detail to enable the Membership Committee to assess whether the required knowledge and understanding has been achieved.

- 1. Contextualize the Experience:** Briefly introduce the organization, your role, and the time period of your experience.
  - Example: "During the summer of 2023, I interned at XYZ Corp as a Marketing Assistant, where I supported digital campaigns targeting a young demographic."
- 2. Responsibilities and Tasks**
  - **List Key Duties:** Outline the primary tasks and responsibilities you undertook.
    - Be specific: Instead of saying "handled data," describe "analysed sales data to identify trends for quarterly reporting."
  - **Provide Context:** Explain how your role fit into the organisation's broader goals or projects.
- 3. Achievements and Contributions**
  - **Highlight Accomplishments:** Use metrics, if possible, to demonstrate the impact of your work.
  - **Focus on Results:** Showcase how your work contributed to the organisation's success or improved processes.
- 4. Challenges and Problem-Solving**
  - **Describe Challenges:** Share one or two significant challenges you faced during the experience.
  - **Explain Your Approach:** Detail how you addressed these issues and what you learned from them.
    - Example: "When a key project faced delays, I implemented a revised timeline and led daily check-ins to ensure team accountability."
- 5. How does it meet the Learning Outcome Area?**
  - **Connect to the learning outcome area:** Relate your practical experiences to academic requirement for IEng?

**Tips for Writing**

- **Use Clear Language:** Avoid jargon unless it's widely understood in the field.
- **Be Concise but Detailed:** Stick to the most impactful elements of your experience.
- **Quantify Impact:** Use data to validate achievements whenever possible.
- **Maintain Professional Tone:** Keep the tone formal and reflective.

Inability to provide an example for every outcome will not necessarily preclude a successful application, but the advice of the Institution should be sought as to whether sufficient information has been provided to enable the Membership Committee to assess whether the required level of knowledge and understanding has been achieved.

**Section 2: Non-accredited University Study (optional)**

Candidates may also support their application with details of their university program if they have studied in a relevant engineering program, and must be accompanied with supporting documentation. Please fill out Section 2.

## Part 1: Experience Learning Recording

Underpinning science and mathematics	Detail of activities	Employment details of where activity took place / reference within academic studies
Apply knowledge and understanding of the scientific and engineering principles underpinning relevant current technologies, and their evolution;		
Apply knowledge and understanding of mathematics, including statistics, necessary to support application of key engineering principles.		

<b>Engineering Analysis</b>	<b>Detail of activities</b>	<b>Employment details of where activity took place / reference within academic studies</b>
<p>Conduct systematic analysis and modelling of broadly defined problems using first principles to bring about continuous improvement.</p>		
<p>Utilise quantitative methods and computer software, frequently within a multidisciplinary context, and appreciate their limitations.</p>		
<p>Use the results of analysis, coupled with evaluation of technical information from all sources, to solve broadly defined engineering problems, coupled with the application of relevant technologies and processes.</p>		
<b>Design</b>	<b>Detail of activities</b>	<b>Employment details of where activity took place</b>

		<b>/ reference within academic studies</b>
Design solutions to broadly defined problems, noting constraints and applying an integrated or systems approach.		
Design solutions, using practical creativity, that meets needs (eg user, business & customer) taking into account applicable health and safety, diversity, inclusion, cultural, societal, environmental and commercial matters, codes of practice and industry standards.		
For a new or adaptation of an existing design ensure fitness for purpose (including operation, maintenance, reliability, sustainability, etc).standards.		

<b>Economic, social, environmental and ethical context</b>	<b>Detail of activities</b>	<b>Employment details of where activity took place / reference within academic studies</b>
Apply knowledge and understanding of management techniques, including commercial and economic factors, which may aid achievement of engineering objectives.		
Evaluate the environmental and societal impact of sustainable solutions to broadly defined problems and understand the requirement for engineering activities to promote sustainable development.		
Be aware of the framework of relevant legal requirements governing engineering activities, including personnel, health, safety, and risk (including environmental risk) issues;		
Identify and analyse ethical concerns and make reasoned ethical choices informed by professional codes of conduct.		

<p>Use a risk management process to identify, evaluate and mitigate risks (the effects of uncertainty) linked to a project or activity. Mitigation action should be both holistic and proportionate and include security risks.</p>		
<p><b>Engineering Practice</b></p>	<p><b>Detail of activities</b></p>	<p><b>Employment details of where activity took place / reference within academic studies</b></p>
<p>Apply knowledge and understanding of workshop and laboratory practice, coupled with the ability to use relevant materials, equipment, tools and processes.</p>		
<p>Understand where engineering knowledge can be applied (eg</p>		

operations and management, application and development of technology etc) including quality management systems that support continuous improvement.		
Communicate effectively with technical and non-technical audiences		



<b>Management and leadership</b>	<b>Detail of activities</b>	<b>Employment details of where activity took place / reference within academic studies</b>
Apply knowledge of engineering management principles, commercial context, project management and relevant legal matters.		
Function effectively as an individual and as a member or leader of a team.		
Recognise the responsibilities, benefits and importance of supporting equality, diversity and inclusion (EDI) and promote EDI in your work		

## **Part 2: University Course Information (Optional Supporting Documentation)**

<b>University Name</b>	
<b>Course Program Title</b>	
<b>Course Start Date</b>	/MM/YY
<b>Graduation Date</b>	MM/YY
<b>Awarding Grade</b>	

Module Title / Code	% Coursework vs % Exam	Final Mark

### **Supporting Documents**

If you wish the Membership Committee to take into consideration your University studies alongside your experiential learning report, please ensure the following documents are included in your application:

#### **Mandatory:**

1. Degree Certificate (certified copy)
2. Degree Transcript (certified copy)
3. Course handbook / Module Handbook that outlines the content of the course/module, the assessment method and learning outcomes

#### **Optional:**

4. Exam papers
5. Thesis/dissertation/final year project