

# Reliability, Availability, Maintainability, and Safety (RAMS)

## Course Objective

Reliability engineering training gives trainees practical experience in assessing complex systems like wind turbines and engines for safety and longevity. Through RAMS analysis, they learn to evaluate performance, identify critical components, and apply this knowledge to design safer, more reliable systems in real-world


## Target Audience:

- Mechanical, Electrical, Maintenance and Reliability Engineers
- Analysts, Operations and Project Managers.
- Quality Assurance Professionals
- Health and Safety Engineers and Inspectors
- Risk and Compliance Officers

## About the Course

**Number of Hours:** 18 h

**Mode of Study:** In-Person (3 Days)

**Location:** United Kingdom, London 

**Pre-requisite:** No previous management or leadership required

# Course Description

- **Introduction to RAMS:** Definitions, Terminologies, Inter-relationships of system elements.
- **System Performance Analysis:** Performance analysis over time, including degradation rates, time-based reliability assessments, and effect of operational conditions.
- **Reliability Statistics Application:** Probability and statistical methods (e.g., failure rate calculations, reliability prediction) to real-world scenarios.
- **Failure Modes Comparison:** Failure modes and mechanisms in mechanical systems, including wear, fatigue, and corrosion etc.
- **Analysis Methodologies:** Analysis methods, such as reliability block diagrams (RBD), Weibull analysis, and Monte Carlo simulations
- **FMEA Development and FTA:** FMEA, Fault-Tree Analysis (FTA), improving troubleshooting and preventive measures.
- **Risk Mitigation with RAMS:** Risk reduction, helping identify, prioritize, and implement strategies to mitigate risks and improve system safety and reliability

## Learning Outcomes:

By the end of the training, you will be able to:

- Analyse and improve the reliability and safety of complex mechanical systems using RAMS principles.
- Identify and assess failure modes, applying FMEA and FTA to mitigate potential risks.
- Apply statistical methods to predict system performance and enhance maintenance strategies

## Equipment:

You will only need a personal laptop and your enthusiasm.

## Why Us?

- ✓ World-class training materials developed by researchers and professionals.
- ✓ Value for money training
- ✓ Courses are based on hands-on activities and real case-studies
- ✓ Educators with over a decade of experience in industry
- ✓ Pre and post training support so you feel supported in your journey.

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**+44 (0) 752 123 4055**



**[Info@sponentech.co.uk](mailto:Info@sponentech.co.uk)**

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