

Oil & Gas Plant Design & Maintenance

COURSE OVERVIEW

This course covers the core principles of designing and maintaining oil and gas facilities. It follows the asset lifecycle from initial concept to ongoing integrity management, blending process engineering with maintenance strategies. Participants will learn to apply industry standards to design process units and develop maintenance programs that maximize safety, reliability, and profitability in the oil and gas industry.

WHO SHOULD ATTEND?

This course is designed for process engineers, mechanical engineers, maintenance engineers, plant managers, and facility engineers. It is also highly suitable for design engineers, inspection personnel, reliability engineers, and technical professionals involved in the specification, operation, or integrity management of oil and gas production facilities, refineries, and petrochemical plants.

COURSE OUTCOMES

Delegates will gain the skills and knowledge to:

- Interpret and apply key industry codes and standards in plant design.
- Develop and implement preventive and predictive maintenance strategies.
- Apply risk-based inspection (RBI) and reliability-centered maintenance (RCM) principles.
- Troubleshoot common process and equipment performance issues.
- Manage the planning and execution of plant turnarounds.
- Utilize engineering drawings, including P&IDs and PFDs, for design and maintenance.

KEY COURSE HIGHLIGHTS

At the end of the course, you will understand;

- The fundamentals of process plant layout and equipment design.
- Key design and operational aspects of pressure vessels, heat exchangers, pumps, and compressors.
- The role of safety instrumented systems (SIS) and process safety management (PSM).
- Non-destructive testing (NDT) methods and fitness-for-service (FFS) assessment.
- Strategies for corrosion control and material selection.
- Maintenance planning, spare parts management, and work order systems.
- Performance metrics for measuring plant and maintenance effectiveness.

All our courses are dual-certificate courses. At the end of the training, the delegates will receive two certificates.

1. A GTC end-of-course certificate
2. Continuing Professional Development (CPD) Certificate of completion with earned credits awarded