

# Safety Instrumented Systems & Functional Safety ONLINE self-paced course

Course Code  
**eLP003**

A course aimed at those who manage, participate in risk assessment, design and operation of Safety Instrumented Systems (SIS) for major accident hazard sites and offshore facilities.

This online self-paced course is aimed at process industry technicians, engineers and operations professionals to get a solid understanding of functional safety and SIS in the process industry sector. The course was developed in line with the latest version of international standard IEC 61511 (edition 2).



All learners get access to our professionally hosted Learning Management System, which tracks progress over extended periods of learning at work or at home. Team leaders can monitor progress centrally, and optionally, embed their own materials.

*This course is independently accredited by the Institution of Chemical Engineers (IChemE), and qualifies for 18 Continuing Professional Development hours.*

## FEATURES

- 24/7 Learning access to our SAP Litmos® Learning Management System
- Narrated lessons, videos and quizzes
- Self-assessment multiple choice questions
- Centralised reporting and monitoring of TEAM member progress by your appointed group leader
- Access for 12 months (TEAM licenses) or 90 days (single-user purchases)
- Optional PDF course notes to keep
- Certificate of completion, with CPD hours



COURSE PAGE LINK

Module Title	Approximate Time to Complete (Minutes)
SIS Foundation Course Instructions	10
Author's message - SIS Foundation Course	2
eLP003 - Pre-course survey (2 survey questions)	1
Safety in context	15
Buncefield Storage Depot Accident, UK - 2005	20
History of electrical systems in safety applications	10
SIS safety lifecycle overview	25
Quiz: SIS Introduction	20
The SIS safety lifecycle - ASSESSMENT	20
Key SIS terminology	30
Regulations and standards	20
IEC 61511 Edition 2 Introduction Video	5
Terminology and Standards Quiz	20
Key terminology - ASSESSMENT	20
Functional safety management overview	10
Competence introduction	5
Roles in the SIS safety lifecycle	15
Verification and Validation planning	5
Functional Safety Assessment & Audit	5
QUIZ: Functional safety management	20
FSM - ASSESSMENT	20
Process Industry Hazards Introduction	15
Hazard analysis workflow and methods	15
Introduction to Probability and Frequency	30
Protection Layer Analysis and SIL Assessment	40
SIS cyber security risk assessment introduction	20
HRA Quiz	20
Hazards, risk and SIL - ASSESSMENT	20
SIS Safety Requirements Specification	20
SRS challenges	10
SRS Quiz	20
Safety requirements specification - ASSESSMENT	20
SIS Equipment Selection	15
SIS equipment failure	20
SIS & SIF Hardware design	30
SIS Software	25
Application programming example	5
Installation, commissioning and validation	5
SIS Design and Engineering Quiz	20
SIS Design and Engineering - ASSESSMENT	20
SIS Operations	20
Bypass and override	20
SIS inspection and proof testing	20
SIS Modification & Decommissioning	10
SIS O&M Quiz	20
Operation and maintenance of SIS - ASSESSMENT	20



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