

# Functional Safety Certified Professional – Level 1 in Accordance with IEC 61508/ IEC 61511



## Course Features:

New technologies and the increasing number of functions within products mean that manufacturers have to develop more and more safety relevant systems. This not only leads to an increase in the number of electronic components, the components and systems themselves are more complex and requirements as to their safety are becoming more stringent. Safety standard IEC 61508 stipulates that organizations must ensure that persons entrusted with tasks related to functional safety have a sufficient level of competence and also that they are suitably qualified.

It is advised that participants must have minimum 3 years experience in the field of Functional Safety and other related areas in the field of Safety.

## Course Objectives:

The main objective of the course is to provide each of the professional to Design and Implement Functional Safety with applicable codes and Standard's with respect to IEC 61508 and 61511. The course provides the overview on the Safety requirement of the Plant with Respect to Process Safety, Risk Analysis, HAZOP, Design of Safety Instrumented system by Control Engineer with Installation, Commissioning, and Operation.

## Who should attend ?

- System Integrators and Engineering Consultants

- Control and Instrumentation Engineers
- Process Safety Engineers
- Loss Prevention and Reliability Professionals
- Plant Risk Analysts

## Course Contents:

- Introduction to Functional Safety
- Safety Instrumented system (SIS)
- Basics of Functional Safety
- Safety Life Cycle Concept
- Safety Integrity Level
- SIL Assessment and Verification
- Process Hazard & Risk Analysis
- Risk Reduction Analysis Techniques
- Layer of Protection Analysis (LOPA), HAZOP, FMEA, FTA & ETA
- Tolerable Risk
- Safety Requirement Specification (SRS)
- Functional Safety Standards IEC 61508 and 61511
- Hardware Design
- Software Design
- Operation and Maintenance

## Certificate

Functional Safety Certified Professional" Level 1 – In accordance with IEC 61508/ IEC 61511

## Duration

4 Days

## About Us:

TUV India Pvt. Ltd. (TÜV NORD GROUP) is a customer-focused, innovative, and independent, technical, quality & safety services organization, dedicated to providing future-proof solutions through technological excellence for the success of its customers with the highest level of integrity. With a presence at over 40 strategic locations in India; a branch office in Sri Lanka and Bangladesh; state-of-the-art laboratories at Pune, Bengaluru, Noida and Jamnagar; 100 important countries worldwide and through digital means, we are always connected to you, our esteemed customer, anywhere, anytime.

We are proud to provide increasing levels of services to the best known, largest global and national companies as well as medium and small industries in diverse sectors like Oil & Gas, Petrochemical, Nuclear, Renewables, Infrastructure, Food, Power, Manufacturing, Chemicals, Pharma, Paper, Automobiles, Railways, Aerospace, Defence, IT, Health, Hospitality, Retail, etc.

Over 1400 competent and experienced TUV India experts spread across India and over 14000 TÜV NORD experts all over the world, enthusiastically support our clients by providing value-added services in Industry Inspection, European / International Approvals, Management System & IT Certification, Sustainability, Energy Audit, Water Audit, Carbon Services, Building Infrastructure & PMC, Renewable Energy, Food & Packaging Testing, Food Certification & Inspection;

Testing of restricted and banned chemicals in Automotive and Electrical & Electronics components and other regulated industries, Product Testing – Electricals, Electronics and Industrial Machinery; Product Certification; Petroleum, Chemicals & Gas Cargo Inspection; Petroleum, Chemicals & Gas Testing; Railway Technology; Engineering, Safety Studies, and knowledge enhancing training programs under TUV India Training Academy.

## Our Services Portfolio:

- Industrial Inspection
- Management Systems & IT Certification
- Building, Infrastructure and Project Management
- Renewable Energy
- Railway Technology
- Petroleum, Chemicals and Gas Cargo Inspection
- Product Certification
- Product Testing for Electronics, Electricals, Machinery & Industrial, Automotive Batteries
- Food and Packaging Testing
- Advanced Chemical & Material Testing
- Petroleum, Chemical & Gas Testing
- Training Academy

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