



## Training Courses

SAFETY  
NONSTOP



# TÜV Functional Safety Program

## Aim

As a professional involved with functional safety, the participant's ability to demonstrate competency in this subject is taking on greater importance and is being driven by standards such as AS 61508 and AS 61511.

The TÜV Functional Safety Program will provide the participant with valuable skills and knowledge which can be used in their daily activities. It also offers TÜV approved certification on the successful completion of a final exam.

The course has been developed to provide an overview of current industry standards, functional safety concepts and current tools used to determine safety integrity levels while applying industry recognised techniques and methodologies.

Below are testimonials from clients who have successfully completed the TÜV Functional Safety Program with Tino Vande Capelle, HIMA's TÜV Functional Safety Expert and trainer.

*"His knowledge of the subject was excellent and he could give examples from his own work experience. He could gauge a person's understanding and give extra help and support if required."* Peter Smith

*"The course was very helpful and practical, with good quality training materials. Tino is an excellent presenter who was able to clearly communicate the concepts and provide examples from his experience to illustrate the points."* Rebekah Mutton

*"He proved to be a highly knowledgeable expert in the functional safety with lots of practical experience. His teaching style is easy-going, entertaining even but highly effective. I thoroughly recommend Tino as a functional safety expert and trainer."* Tung Nguyen

Eligibility pre-requisites apply.

## TÜV functional safety program outline:

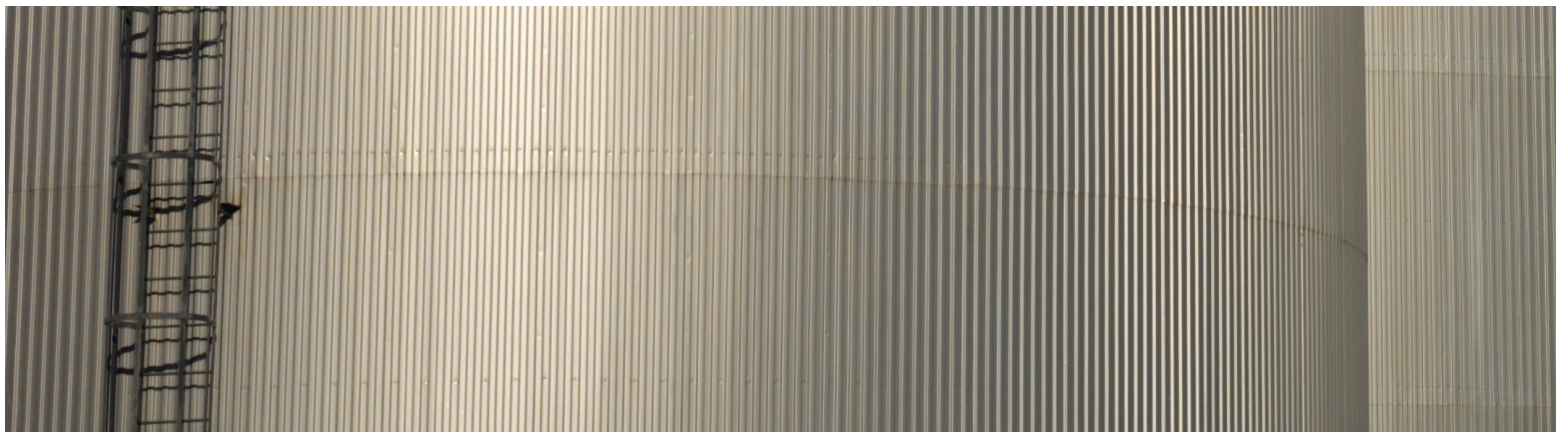
- Introduction to Functional Safety
- Hazard and Risk Analysis
- Planning the Safety System
- Hardware Design
- Hardware Reliability
- Software Design
- Operation and Maintenance

## Duration

3.5 days

## Investment per person - HIMA training facility

\$4,490 (excluding GST)



# Analysis and Design of Safety Instrumented System

## Aim

This training course provides the knowledge required to appreciate what is required for the analysis and design of Safety Instrumented Systems for the process industry. The course follows the analysis and realisation phases of the AS 61511 lifecycle.

## Analysis and design of safety instrumented system course outline:

- Basic Principles of Safety Instrumented Systems
- Process Hazard Analysis
- SIL Assessments
- Safety Requirement Specifications
- Choosing Technology
- SIL Verification
- Detailed Design
- Integration
- Installation and Commissioning
- Validation
- Functional Safety Management

## Duration

1 day

## Investment per person - HIMA training facility

\$1,200 (excluding GST)

# Operation and Maintenance of Safety Instrumented System

## Aim

This training course introduces current and new field service personnel to the requirements of the AS 61511. It shows them how to operate and maintain Safety Instrumented Systems in the process industry such that the designed functional safety level is maintained throughout the operations and maintenance phase of the AS 61511 lifecycle.

## Operation and maintenance of safety instrumented system course outline:

- Basic Principles of Safety Instrumented Systems
- Planning and Scheduling
- Procedures
- Proof Testing and Inspection
- Management of Change
- Training and Competency
- Configuration Management

## Duration

1 day

## Investment per person - HIMA training facility

\$1,200 (excluding GST)



# HIMA Advanced System Training

## Aim

This course provides a complete overview of the safety lifecycle of the HIMax, HIMatrix or HIQuad Programmable Electronic System (PES). It provides training on hardware and communication configurations including system architectures and maintenance along with the configuring, loading and modifying of a HIMA PES application program.

## Duration

4 days

## Investment per person - HIMA training facility

\$2,800 (excluding GST)

## Total investment – site based training

\$24,000 (excluding GST)

Note: maximum of 8 students per course

## HIMax, HIMatrix or HIQuad advanced system training course outline:

### Day One

- Introduction to HIMA Hardware
- Functional Safety Overview
- HIMA SIS Technology and HIMax/HIMatrix/HIQuad Components
- IEC 61131-3
- Introduction to ELOP II, ELOP II Factory or SILworX

### Day Two

- Offline Simulation
- Introduction to I/O Types
- Hardware Management & System Variables
- Code Generating, Loading and Reloading, Erasing Application
- Programming Exercise

### Day Three

- Online Test
- Archive and Restore
- Importing and Exporting Variables, I/O and Communications
- Code Comparator and Revision Management
- HIMax/HIMatrix/HIQuad System Diagnostics

### Day Four

- System Maintenance
- Operating System Upgrades
- Communications
  - MODBUS
  - OPC
  - SOE
  - safeethernet
  - HIPRO-S





# HIMA Maintenance and Troubleshooting Training

## General Course Information

### Aim

This training course provides the participant with the skills and knowledge to monitor and maintain a HIMA safety system.

### HIMax, HIMatrix or HIQuad maintenance and troubleshooting course outline:

#### Day One

- Introduction to HIMA Hardware
- Functional Safety Overview
- HIMA SIS Technology and HIMax/HIMatrix/ HIQuad Components
- Configuration, Libraries, Resource Types, Data Types
- Structure of System Software and Projects
- Offline Test and Code Generation of User Programs

#### Day Two

- Loading and Starting of the HIMA Safety System
- Online Test, Forcing of I/O Circuits
- Forcing of Signals
- Exchange of Modules During Operations
- HIMax/HIMatrix/ HIQuad System Diagnostics

### Duration

2 days

### Investment per person - HIMA training facility

\$1,400 (excluding GST)

### Total investment – site based training

\$13,500 (excluding GST)

Note: maximum of 8 students per course

### Pre-requisites

- Experience using MS Windows operating systems and software
- Ability to comprehend P&ID drawings
- Understanding of digital logic

### Location

Training courses are delivered at our training centres in Perth, Melbourne and Brisbane. Alternatively, site based courses can be arranged to maximise staff availability.

### Availability

Please visit [www.hima.com.au](http://www.hima.com.au) for the latest course schedule, although dates are generally flexible and we can usually cater around a working day of your choice. Please allow at least two weeks notice to confirm a course date in Perth and three weeks notice elsewhere.

### HIMA based training

Courses held at HIMA training centres include:

- provision of training systems
- documentation
- lunch and refreshments.

### Site based training requirements

For on-site training, HIMA requires the client to provide:

- quiet and secure training room
- PC work stations (two students per PC)
- data projector (1280 x 1024 resolution)
- lunch and refreshments
- large whiteboard.

Contact HIMA for site training



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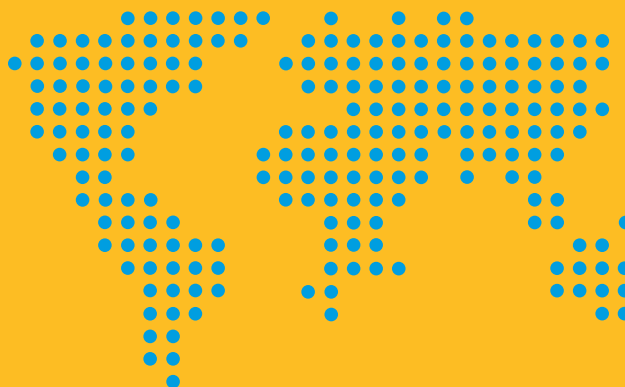
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For a detailed list of all our subsidiaries and representatives,  
please visit our website: [www.hima.com/contact](http://www.hima.com/contact)



HIMA AUSTRALIA PTY LTD (PERTH) IS  
CERTIFIED BY SAI GLOBAL IN  
ACCORDANCE WITH AS/NZS ISO 9001:2008

