



## Certified Safety Integrity Level SIL Professional Training



VELOSI TRAINING  
INSTITUTE L.L.C.

# Introduction

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Velosi Training Institute LLC is a new venture of Velosi Asset Integrity Limited, which offers a comprehensive range of specialized courses in Certified Technical Training, Exam Preparatory, HSE, Training in Oil and Gas Field, ISO, NEBOSH, IOSH, Food Safety Courses, Administrative & Business related trainings, Corporate and Postgraduate Qualifications.

Our most valuable asset at Velosi, as a globally recognized training provider, is our experienced trainers, who are experts in their fields and can tailor the curriculum to our clients' specific needs in order to sharpen their knowledge, prepare them for the next phase of their careers, and implement best industry safety practices.

## Course Overview

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Velosi is conducting online training for Certified SIL Professional/Expert. This certification is structured in 2 levels which will test the fundamentals of functional safety engineering as per IEC 61508 & 61511.

As an important risk reduction measure, Safety Instrumented Systems (SIS) play an important role in most of the process facilities worldwide. Within the context of functional safety, the necessary steps to follow to cover the needs and the requirements for the whole life cycle of safety-instrumented systems are dealt with. In accordance with the requirements set in the associated international standards such as IEC 61508/ IEC 61511 all phases including the design activities, verification & validation, commissioning & start up, the normal operation phase, and de-commissioning phase for safety-related systems that are based on electrical, electronic, and/or programmable electronic (E/E/PE) technology shall be managed during their life cycle.

## Learning Objectives:

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- Provide the delegates with a clear understanding about Functional Safety Life Cycle concepts as per IEC 61511, why there is a need for such concept, its link to PHA/ Risk assessments and how to manage the required steps.
- Achieve a thorough understanding on SIL determination, SIL verification, SIL validation and the associated requirements in view of required Safety Instrumented Functions (SIF) realized by Safety Instrumented Systems (SIS) to control risks associated with hazardous scenarios in process facilities.

## Who should attend?

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This course is appropriate for a wide range of professionals but not limited to.

- Process & Design Engineer
- Safety Professionals
- Instrumentation & Control Engineer
- Operations & Maintenance Engineer
- Asset Integrity Engineer
- Plant Engineers
- Project Managers

## Benefits

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Learning is an investment that pays off in the long run. It allows a person to expand their career prospects, improve their professional skills, and become more competent.

- Career Development
- Increased Job Opportunities
- Technical Expertise
- Worldwide Recognition



# Course Outline

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## Module 1

- A review on Process safety management systems (PSM), definition, importance, evolution, the types and the link to Functional Safety
- An introduction to Risk Assessment in process industry: definition, importance, principles and expressions; ALARP concept, ALARP demonstration using CBA

## Module 2

- A review on Likelihood analysis techniques (FTA, RBD, ETA); Consequence analysis concepts
- Understanding the importance of SIL determination, Layer of Protection Analysis (LOPA)

## Module 3:

- Management of Functional Safety, Functional safety concept based on IEC 61511
- Safety Requirements Specification
- SIL verification, concepts and understanding of different calculation methods and limitations, failure rate data and limitations, understanding of proof testing (complete and incomplete), the associated procedures and effectiveness, the impact of CCF on PFD/ PFH, systematic failure, human factors (Part 1 of 2)

## Module 4:

- SIL verification, concepts and understanding of different calculation methods and limitations, failure rate data and limitations, understanding of proof testing (complete and incomplete), the associated procedures and effectiveness, the impact of CCF on PFD/ PFH, systematic failure, human factors (Part 2 of 2)
- ABL (Average Before Logic) & AAL (Average After Logic), the difference and the impact on the reliability assessments;
- Spurious trips; SIL validation

## Module 5

- Practical industry examples and discussions

## Training Details

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<b>Trainer Qualifications</b>	The trainer holds a Bachelor's Degree in Electrical Power and Machines Engineering having SIS Certification in Functional Safety Engineering and a CompeX EX Certified Inspector. He brings over 15 years of work professional experience in SIL, FSA, SRS, CMFA, Field Instrumentation, Fire & Gas Detection, DCS, Safety Instrumented System, Subsea Control System and PLC.
<b>Mode of Training</b>	Training will be conducted via Microsoft teams online. Meeting invites will be shared on the day before the first day of training.
<b>Course Material</b>	<ul style="list-style-type: none"><li>• Presentation Slides</li><li>• Training Recordings</li><li>• Study References</li></ul>
<b>Number of Participants per Class</b>	Minimum of 10 students per batch Course Duration is 25 hrs. Including examination & clarifications. The training schedule is flexible and will be either in the mornings on the weekends and evenings on weekdays as per Velosi's Approved Training Schedule.
<b>Registration / Payment Method</b>	The interested participants should register his/her name and other necessary details through Velosi's online registration form or email confirmation to the designated contact person. Payment must be settled in full after the registration process. Payment can be made online through the payment link provided by Velosi or through bank transfer.
<b>Certification Issuance Policy</b>	The training certificate (Digital Copy) will be awarded to participants who completed the training and passed the exam with 80% or higher score.

## Discount Scheme

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Participants can avail discount of either an early bird or group discount whichever is higher with additional discount when signing up for 2 or more courses.

### Early Bird Discount:

- 10% Discount if you register 2 weeks in advance.
- 5% Discount if you register 1 week in advance.

### Group Discount (same company only)

- 15% Discount for groups of 5 or more.
- 10% Discount for groups of 3-4.

### Bundle Discount

- Sign up for 2 courses and get an extra 10% off.
- Sign up for 3 courses and get an extra 15% off.

## Why Choose Us

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- In-Depth Comprehensive Explanation of all Sections.
- Continuous Assessment with Section-wise Practice Tests.
- Study Material in the form of PPT, Group Discussions, etc. written in very easily understandable manner.
- Technical clarifications at all levels during/after training.
- Providing Real Exam Questions & Answers.
- Offers reasonable price and seasonal discounts.
- Give flexibility in training schedule.
- Ability to learn at your own time with access to live recordings.
- Incorporate Case Studies from Real-World Situations.
- Trainees are eligible to earn Continuing Professional Development (CPD) credits.



## Other Courses We Offer:

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- **Velosi Certified Programs**

- Certified Fire Protection Professional
- Certified PHA HAZOP Leader
- Certified Process Design Professional/Expert
- Certified Reliability Professional
- Certified SIL Professional/Expert
- Certified Asset Integrity Professional/Expert
- Certified Tableau Data Analyst
- Certified Environment Impact Assessment Professional

- **Oil & Gas Field Training**

- Asset Integrity Management
- Pipeline Integrity Management
- Wellhead Integrity Management
- Structural Integrity Management
- Safety Integrity Level (SIL)
- Process Engineering - AutoCAD Training Course

- **Health, Safety & Environment (HSE) Training**

- **ISO Training**

- **NEBOSH Training (Certificates, Awards & Diplomas)**

- **Exam Preparation Training**

- BCSP Associate Safety Professional (ASP)/ Certified Safety Professional (CSP)
- NFPA Certified Fire Protection Specialist (CFPS)
- EXIDA Certified Functional Safety Professional/Expert (CFSP/CFSE)
- ABIH Certified Industrial Hygienist (CIH)
- SMRP Certified Maintenance and Reliability Professional (CMRP)
- PMI Project Management Professional
- API Training (510, 571, 579, 580, 581, 653 & RP 2SIM)
- Sig Sigma Green Belt
- ASNT NDT Level III

- **Food Safety Training**

- Basic Food Hygiene Training (level 2)
- Intermediate Food Hygiene Training (Level 3)
- Advance Food Hygiene Training (Level 4)
- HACCP Awareness Training (Level 2)
- Intermediate HACCP Training (Level 3)
- Advance HACCP Training (Level 4)

- **IOSH Training (Managing, Leading & Working Safely)**

- **High-field (HABC) Accredited Training**

- **Administrative & Management Skills Training**

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