



Safety Instrumented Systems Training Program

June 17 – 20, 2024

Div. of Provincial Controls

CET Center is presenting TUV Certification course in *Functional Safety Engineering*

The course provides an overview of the key concepts associated with Functional Safety Engineering, covering in depth the entire safety life cycle and will help you develop a thorough understanding of the Safety Instrumented Systems (SIS) by covering Process Hazard and risk analysis, management of functional safety, SIL determination, Layer of Protection Analysis, basics of Safety Instrumented Systems (SIS) design and implementation requirements based on current and emerging standards and covers design verification techniques. Real life examples will be discussed to enforce the teaching.

The content is well suited for managers, engineering professionals, technicians, and sales personnel who would like to formalize their knowledge base.

On the 4th day of course, a four-hour exam conducted by Cteris Consulting Inc. personnel will allow each student the opportunity to qualify for certification as a *TUV Functional Safety Professional (TUV FSP)*.

Course Presented by:

Cteris Consulting Inc.
TUV FSP Provider

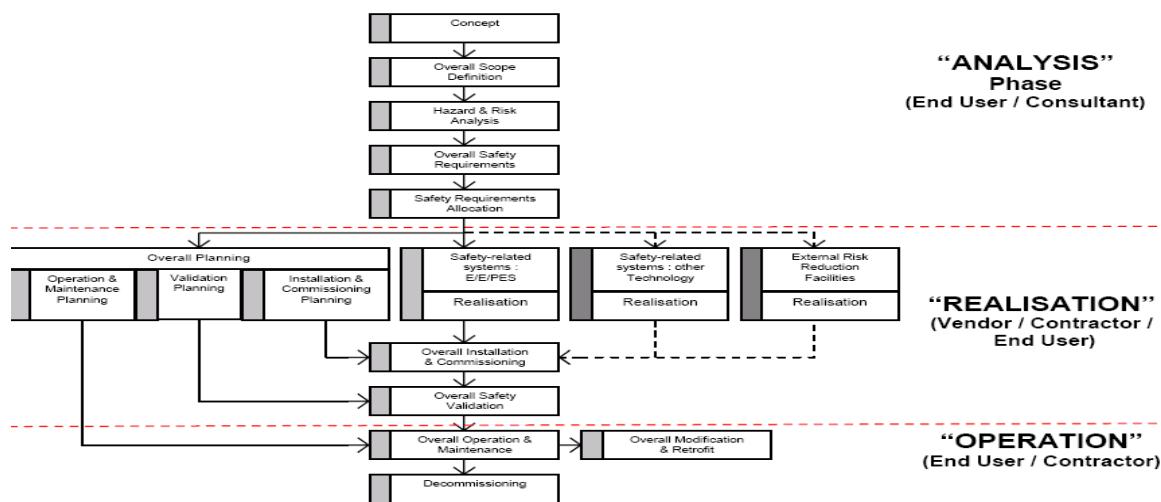


Instructor: Harry Cheddie - P.Eng, CRE, CQE, CFSE

Harry has been teaching this highly successful and equally sought after courses for more than a decade across the globe, publicly and privately, to individuals and companies associated with process industries. He is also the author of two international best sellers on the subject of *Safety Instrumented Systems* and *Probabilistic Analysis* of said systems. In addition, he provides safety and risk consulting to some of the largest oil & gas, petrochemical, and EPCM companies across the world by discerning project hazards and implementing practical solutions

Course Location:

EDMONTON, ALBERTA
(Exact Location to be confirmed)



Who should attend:

- Professionals who need to understand the concepts and principles of IEC 61508 and IEC 61511
- Loss Prevention Professionals
- Risk Professionals
- Safety & Reliability Engineers & Co-ordinators
- Instrumentation Engineers & Technologists
- Maintenance Engineers & Technicians
- Consulting Engineers
- Management Personnel



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Registration & Payment

Fill in your details on the form below and fax to 519-336-8082; For questions, contact

Kalpen Vachharajani; Phone: 519-384-4690; Email: training@cetcenter.com

Name: _____ Position: _____
Company: _____ Mailing Address: _____
Phone: _____ Fax: _____ Email: _____

♦ **Payment Details - Full payment is required prior to commencement of the course.**

Please Check Your Selection Below	Before Apr 19/24	After Apr 19/24
<input type="checkbox"/> TUV Functional Safety Certification Course – June 17 to 19 (3 Days) + June 20 TUV Exam (1 Day)	\$3,425+HST	\$3,595 + HST
<input type="checkbox"/> TUV Functional Safety Certification Exam Sitting Fee	No Charge	No Charge
<input type="checkbox"/> TUV Functional Safety Certification Fee	\$400 + HST	\$400 + HST

Cash Cheque Company P.O. (made to Provincial Controls), PO# _____

- ♦ Payment Options: Credit Card (4% charge will apply) / PO & Cheque - Make payable to "Provincial Controls" & mail to: **Provincial Controls, 864 Philip St. East, Sarnia, Ontario N7T 1Z6, Canada.**
- ♦ Cancellation Fee: 15% between May 3 to 16, 2024; 50% between May 17 to 30, 2024. No refund after May 31, 2024. No refund for NO SHOW, substitutes are welcome.
- ♦ Attendees who successfully pass the TUV exam will be subject to \$400+HST Certification Fee. Once after the certification fee is paid, TUV SUD certificate as Functional Safety Professional (TUV FSP) will be issued.
- ♦ Minimum 6 years of experience to write TUV Exam. Credit for PHD, Masters & Bachelor Degrees are 4, 3 & 2 years.

The course fee covers course attendance & material

Course Contents

<ul style="list-style-type: none">• Introduction to Safety Instrumented Systems (SIS)• Safety Lifecycle concepts and the tasks included in the safety Lifecycle• Overview of IEC Standards – 61508 & 61511• The principles and purposes of Risk Management• The purpose and available methods for process hazards analysis• The methods for identifying safety instrumented functions• LOPA – Layer of Protection Analysis• Methods for assigning SIL, both qualitative and quantitative	<ul style="list-style-type: none">• The development of safety requirements specs• Probability Theory• Basic Reliability Engineering• System Reliability Modelling• SIS Failure Modes• Safety Instrumented System Design• Fault Tolerant Architectures• Safety Instrumented System Functions (SIF) Verification using block diagrams, fault trees• Installation, Start-up, Operation & Maintenance• Extensive real-world examples & solutions
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