COURSE OVERVIEW IE0366-4D
Certified Functional Safety Professional (CFSP)
Certified Functional Safety Expert (CFSE)

Course Title
Certified Functional Safety Professional (CFSP)
Certified Functional Safety Expert (CFSE)

Course Date/Venue
Session 1: February 09-12, 2025/Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE
Session 2: November 10-13, 2025/Business Meeting, Crowne Plaza Al Khobar, Al Khobar, KSA

Course Reference
IE0366-4D

Course Duration/Credits
Four days/2.4 CEUs/24 PDHs

Course Description

This practical and highly-interactive course includes real-life case studies and exercises where participants will be engaged in a series of interactive small groups and class workshops.

This course provides an overview of process industry safety engineering from the point of view of the risk analysts, process safety coordinators and control systems design engineers.

It delivers a complete overview of the functional safety lifecycle. The course reviews process hazard analysis (PHA), consequence analysis, layer of protection analysis (LOPA), safety integrity level (SIL) target selection, safety requirements specification (SRS) generation, failure rates, device and system reliability, SIF verification, SIF detailed design and operations requirements.

This course forms a broad review in preparation for the Certified Functional Safety Professional (CFSP) process industry application engineering exams.

During this interactive course, participants will learn the safety instrumented system; the principles of risk management; the safety lifecycle; the likelihood analysis; the tolerable risk; the safety instrumented system (SIS) failure; the failure rate to SIL; the single devices to system; the redundant architectures; the requirements to SIF; the SIF design and verification in the safety lifecycle and the detail design and operation.

Course Objectives

Upon the successful completion of this course, each participant will be able to:-

- Get certified as a "*Certified Functional Safety Professional (CFSP) or Certified Functional Safety Expert (CFSE)*"
- Discuss safety instrumented systems and the principles of risk management
- Illustrate safety lifecycle and explain process hazard analysis (PHA)
- Carryout consequence analysis, likelihood analysis and the layer of protection analysis (LOPA)
- Recognize tolerable risk, SIL target selection and safety requirements specification (SRS)
- Identify safety instrumented system (SIS) failure, failure rate to SIL and single devices to system
- Describe redundant architectures and identify the requirements to SIF
- Carryout SIF design and verification in the safety lifecycle, SIF detail design and operations

Exclusive Smart Training Kit - H-STK®

*Participants of this course will receive the exclusive "Haward Smart Training Kit" (**H-STK®**). The **H-STK®** consists of a comprehensive set of technical content which includes **electronic version** of the course materials, sample video clips of the instructor's actual lectures & practical sessions during the course conveniently saved in a **Tablet PC**.*

Who Should Attend

This course provides systematic techniques and methodologies of functional safety for process safety engineers, control engineers, reliability engineers, engineering/operations management, plant risk analysts, loss prevention professionals, CFSE and CFSP process application candidates and certified functional safety professionals (CSFP).

Exam Eligibility & Structure

Exam Candidates shall have the following minimum prerequisites:-

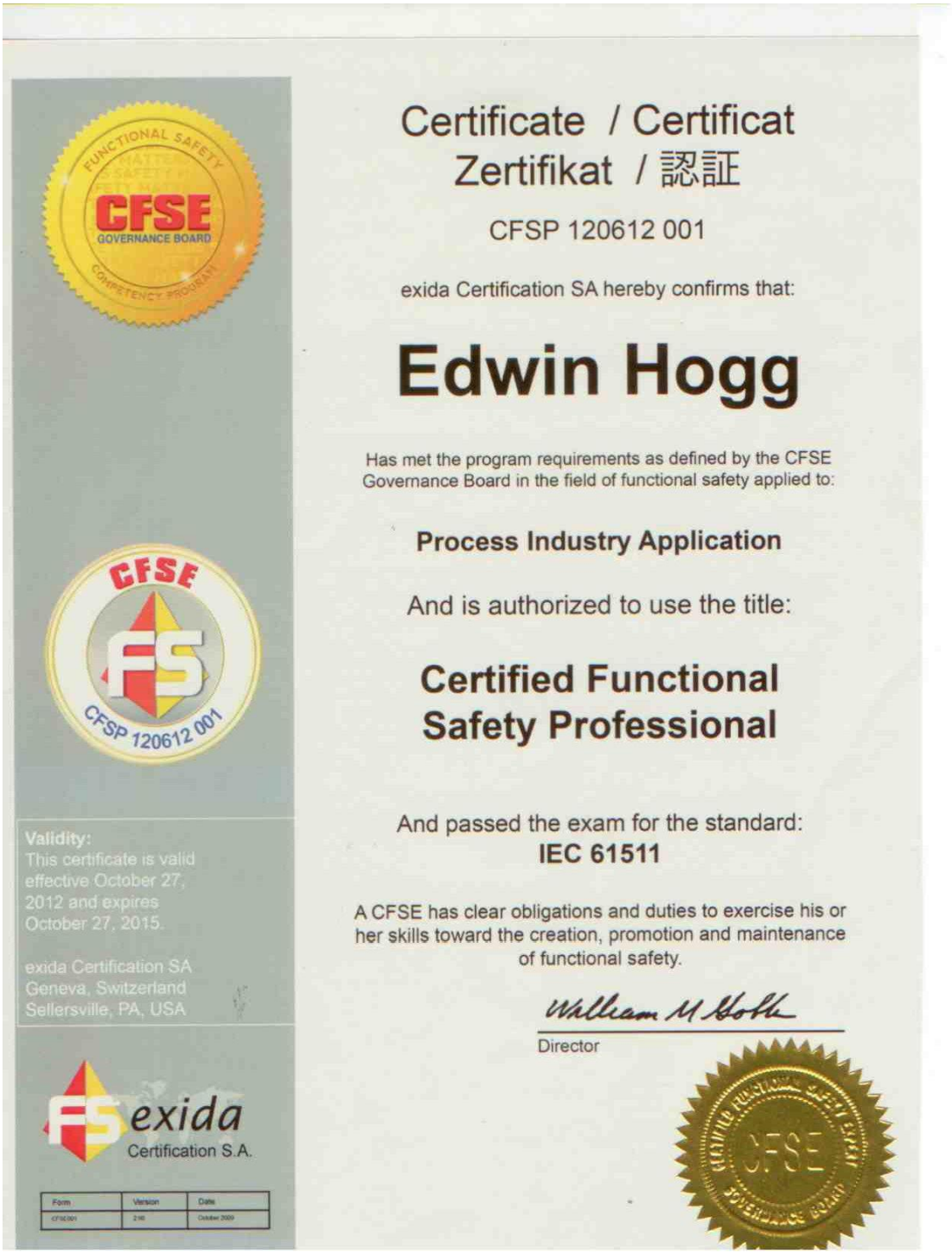
CFSE Requirements	CFSP Requirements
10 years of equivalent experience (adjusted for education level) with a significant safety component	2 years of equivalent experience (adjusted for education level) with a significant safety component
Submit a case study that demonstrates the applicant's knowledge and safety experience.	No case study required
Score > 80% on a two part exam containing multiple choice, short answer, and case study problems	Score > 80% on a single part exam containing multiple choice and short answer questions
The participant must be a Certified Functional Safety Professional (CSFP)	

Course Certificate(s)

(1) Internationally recognized Competency Certificates will be issued to participants who completed a minimum of 80% of the total tuition hours and successfully passed the exam at the end of the course. Certificates are valid for 5 years.

Sample of Certificates

The following are samples of the certificates that will be awarded to course participants:-



Certificate / Certificat
Zertifikat / 認証

CFSP 120612 001

exida Certification SA hereby confirms that:

Edwin Hogg

Has met the program requirements as defined by the CFSE Governance Board in the field of functional safety applied to:

Process Industry Application

And is authorized to use the title:

Certified Functional Safety Professional

And passed the exam for the standard:
IEC 61511

A CFSE has clear obligations and duties to exercise his or her skills toward the creation, promotion and maintenance of functional safety.

William M Hobbs
Director

Validity:
This certificate is valid effective October 27, 2012 and expires October 27, 2015.

exida Certification SA
Geneva, Switzerland
Sellersville, PA, USA

exida Certification S.A.

Form	Version	Date
CFSE001	2.00	October 2009

(2) Official Transcript of Records will be provided to the successful delegates with the equivalent number of ANSI/IACET accredited Continuing Education Units (CEUs) earned during the course.

Haward Technology Middle East

Continuing Professional Development (HTME-CPD)

Page 1 of 1

CEU Official Transcript of Records

TOR Issuance Date: 20-Sep-18

HTME No. PAR10475

Participant Name: Eissa Al Hajri

Program Ref.	Program Title	Program Date	No. of Contact Hours	CEU's
IE0366-IH	FSE 100: Functional Safety Engineering: Certified Functional Safety Professional (CFSP)	September 16-20, 2018	25	2.5

Total No. of CEU's Earned as of TOR Issuance Date **2.5**

TRUE COPY

Maricel De Guzman
Academic Director

Haward Technology has been approved as an Authorized Provider by the International Association for Continuing Education and Training (IACET), 1760 Old Meadow Road, Suite 500, McLean, VA 22102, USA. In obtaining this approval, Haward Technology has demonstrated that it complies with the ANSI/IACET 1-2013 Standard which is widely recognized as the standard of good practice internationally. As a result of their Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for programs that qualify under the ANSI/IACET 1-2013 Standard.

Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking Continuing Education Units (CEUs) in accordance with the rules & regulations of the International Association for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

Haward Technology is accredited by

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Certificate Accreditations

Certificates are accredited by the following international accreditation organizations: -

- The International Accreditors for Continuing Education and Training (IACET - USA)

  Haward Technology is an Authorized Training Provider by the International Accreditors for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this authority, Haward Technology has demonstrated that it complies with the **ANSI/IACET 2018-1 Standard** which is widely recognized as the standard of good practice internationally. As a result of our Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for its programs that qualify under the **ANSI/IACET 2018-1 Standard**.

  Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking **Continuing Education Units** (CEUs) in accordance with the rules & regulations of the International Accreditors for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

  Haward Technology Middle East will award **2.4 CEUs** (Continuing Education Units) or **24 PDHs** (Professional Development Hours) for participants who completed the total tuition hours of this program. One CEU is equivalent to ten Professional Development Hours (PDHs) or ten contact hours of the participation in and completion of Haward Technology programs. A permanent record of a participant's involvement and awarding of CEU will be maintained by Haward Technology. Haward Technology will provide a copy of the participant's CEU and PDH Transcript of Records upon request.

- British Accreditation Council (BAC)

  Haward Technology is accredited by the **British Accreditation Council** for **Independent Further and Higher Education** as an **International Centre**. BAC is the British accrediting body responsible for setting standards within independent further and higher education sector in the UK and overseas. As a BAC-accredited international centre, Haward Technology meets all of the international higher education criteria and standards set by BAC.

Training Methodology

All our Courses are including **Hands-on Practical Sessions** using equipment, State-of-the-Art Simulators, Drawings, Case Studies, Videos and Exercises. The courses include the following training methodologies as a percentage of the total tuition hours:-

30% Lectures
20% Practical Workshops & Work Presentations
30% Hands-on Practical Exercises & Case Studies
20% Simulators (Hardware & Software) & Videos

In an unlikely event, the course instructor may modify the above training methodology before or during the course for technical reasons.

Course Instructor(s)

This course will be conducted by the following instructor(s). However, we have the right to change the course instructor(s) prior to the course date and inform participants accordingly:

Mr. Greg Chantler, PEng, BSc, ElecEng, CFSE, FS Expert, has over **25 years** of professional experience in the field of **Process Safety** Management, **Quantitative Risk** Analysis, **Process Hazards** Analysis, **SIL** Determination, **SIL** Verification, **Fault Tree & Event Tree** Analysis, **SLC** Process & Procedure Definition, **Safety Instrumented** System Design, **Project** Management & Execution, **Failure Modes Effects & Diagnostics** Analysis, **Reliability** Engineering, **Electrical & Electronics** Engineering and **Control System Vulnerability** Assessments.For the past 18 years he has been involved in consulting and engineering design of safety related systems within the process industry. Formerly a **Lead Engineer** of a **safety system** vendor, he was responsible for the application of the **FSC Safety Shutdown** systems in a suite of typical mainstream industries (Refining, Pulp and Paper etc.). Subsequently, he worked for a company that provides advanced control solutions to the industry, where his duties made him responsible for the entire project lifecycle of safety systems, including being actively involved in the design of the Pebble Bed Modular Reactor. He also worked as a **Senior Consultant** wherein he provided consulting services based on the **IEC functional safety standards** mainly within the Southern African and Middle East Region, and has established a bit network within the companies operating in this area. This consulting work has led to him being an **Expert** in all aspects of the **functional safety standards**, including **HAZOP** and **SIL Selection** facilitation, **SRS development**, **SIL Verification** calculations and development of operations and maintenance procedures. For the past 15 year he has implemented and maintained secure office IT network at various companies and has conducted several control system vulnerability assessments on Petro-chemical facilities. Presently residing in South Africa and working for Exida, he continues to execute projects related to functional safety, including **SIL Assessments**, **cyber-security risk assessments** and **SIL Verification** projects.

Mr. Chantler is a **Registered Professional Engineer** and has a **Bachelor's** degree in **Electrical Engineering**. Further, he is a **Certified Instructor/Trainer**, a **Certified Function Safety Expert** and Has delivered and presented innumerable training courses and workshops worldwide.

Course Fee

US$ 7,500 per Delegate + **VAT**. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Exam Fee

US$ 700 per Delegate + **VAT**.

Accommodation

Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking.

Course Program

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the course for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

Day 1

0730 – 0800	*Registration & Coffee*
0800 – 0815	*Welcome & Introduction*
0815 -0830	***PRE-TEST***
0830 – 0930	***Introduction to Safety Instrumented Systems***
0930 – 0945	*Break*
0945 – 1100	***Principles of Risk Management***
1100 – 1230	***The Safety Lifecycle***
1230 – 1245	*Break*
1245 – 1420	***Process Hazard Analysis (PHA)***
1420 – 1430	***Recap***
1430	*Lunch & End of Day One*

Day 2

0730 – 0930	***Consequence Analysis***
0930 – 0945	*Break*
0945 – 1100	***Likelihood Analysis***
1100 – 1230	***Layer of Protection Analysis (LOPA)***
1230 – 1245	*Break*
1245 – 1345	***Tolerable Risk***
1345 - 1420	***SIL Target Selection***
1420 – 1430	***Recap***
1430	*Lunch & End of Day Two*

Day 3

0730 – 0930	***Safety Requirements Specification (SRS)***
0930 – 0945	*Break*
0945 – 1100	***Safety Instrumented System (SIS) Failure***
1100 – 1230	***From Failure Rate to SIL***
1230 – 1245	*Break*
1245 – 1345	***Single Devices to System***
1345 - 1420	***Redundant Architectures***
1420 – 1430	***Recap***
1430	*Lunch & End of Day Three*

Day 4

0730 – 0930	***Operations***
0930 – 0945	*Break*
0945 – 1100	***Requirements to SIF***
1100 – 1230	***SIF Design & Verification in the Safety Lifecycle***
1230 – 1245	*Break*
1245 – 1415	***SIF Detail Design***
1415 – 1430	***Course Conclusion***
1430	*Lunch & End of Course*

Practical Sessions

This practical and highly-interactive course includes real-life case studies and exercises:-

Course Coordinator

Mari Nakintu, Tel: +971 2 30 91 714, Email: mari1@haward.org