

The Gold Standard in Personnel Functional Safety Certification Programs – CFSE and CFSP



As an engineer responsible for critical industrial processes, you face a myriad of challenges:

- coping with new and changing standards
- increased pressures for process uptime and plant safety
- a growing list of responsibilities
- decreased availability of support personnel

This makes it difficult to develop, maintain, and document the expertise needed to excel at your job.

The companies that you work for are being driven to run leaner operations and optimize performance. This raises the potential for catastrophic safety-related accidents such as the explosion at Texas City, which

killed 15 people while injuring 180 more, and the fire at the Buncefield Oil Depot, which resulted in a £1 billion (1.6 billion USD) loss.

Consequently, it is more important than ever to have personnel that are competent in safety system design be part of the process for engineering and deploying safety equipment. Having trained and competent people is a **requirement** for compliance with international safety standards IEC 61508, IEC 61511 / ISA 84, and IEC 62061. It can also save money by simplifying regulatory compliance, reducing engineering costs, and preventing unplanned downtime. Completing a personnel functional safety certification program, such as the CFSE, can help address these challenges.

WHAT IS CFSE CERTIFICATION?

The Certified Functional Safety Expert (CFSE) program helps individuals gain the knowledge and skills to become recognized experts in the application & design of safety systems.

For companies it provides the proof of competence demanded by safety standards and the confidence that their personnel have truly mastered an understanding of functional safety and the safety lifecycle. It is also a critical step in developing and demonstrating a “safety culture” within an organization.

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“To Clients knowledgeable in Functional Safety, CFSE certification equals proof of experience.”
D. Chastain-Knight, CFSE 090407 003, CH2M Hill

“There is a demand for professionals with knowledge and experience related to SIS. The CFSE demonstrates that knowledge and experience.” *J. Nicholas, CFSE 090604 001, James Controls LLC*

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BENEFITS OF THE CFSE CERTIFICATION PROGRAM

The CFSE program, introduced in 2000, has delivered significant benefits to thousands of individuals and companies alike throughout its ~10 year history.

“Gives an edge over others in career, earnings, and authority in the field.”

R. Sankaranarayanan, CFSE 09 07 00128 046, Petroleum Development Oman

“It provides the opportunity to stand out from your peers in the area of functional safety. Many individuals in the organisation look to you as the subject matter expert. When you speak people listen.”

A. Ramsingh, CFSE 080611 006, BP TRINIDAD & TOBAGO LLC



“Achieving CFSE / CFSP is the best way to demonstrate your competency in Functional Safety.”

M. Khadri, CFSE 080409 003, ABB Global Industries & Services Limited, Bangalore, India

“As a young engineer (less than 3 years out of college) having the CFSP certification has helped bolster other engineer’s confidence in me in the safety verification field”

D. Kahn, CFSP 11 07 00021 016, Emerson



Certification can be received in one of four main fields:

PROGRAM DESCRIPTION

The CFSE certification program entails both a review of the applicant's experience and the satisfactory completion of a proficiency exam. Passing the CFSE exam requires a solid in-depth knowledge of functional safety. Many applicants choose to augment their existing skill set prior to the exam by attending one of the optional preparatory training classes offered by our partners.



Certification is provided in two levels; CFSE and CFSP. The CFSE is aimed at professionals where functional safety is a major part of their role in the organization. They are typically responsible for leading, coordinating, and reviewing the activities of the safety lifecycle, including the more complex activities such as SIL Selection and SIL verification. The CFSP is targeted at professionals where functional safety is a secondary role or they are expected to support safety lifecycle projects on an execution level.

1. Process Industry Safety
2. Machine Safety
3. Safety Software Development
4. Safety Hardware Development

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



NOT ALL CERTIFICATION PROGRAMS ARE CREATED EQUAL

Introduced in 2000, CFSE was the first personnel functional safety certification program in the industry, and remains the longest running program to this day.

Since then other certification programs have been introduced, but CFSE remains the "gold standard" of all programs. It has remained so because of its unmatched consistency and integrity as well as its unwavering focus on developing the knowledge and skills to be successful. The focus of the program has always been on developing usable knowledge and skills, rather than just passing a test. It is the only program that is standardized globally, which means that the same certification criteria and exams are used in every country. Another element unique to CFSE is that training and grading of exams are done completely independently, which ensures that there is no conflict of interest in the certification / audit process as required per IEC 17024. CFSE is a non-profit organization governed by a board of directors from several independent companies in order to make sure the program evolves to meet the needs of its members.

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It is the only certification program able to differentiate between true functional safety engineers, and control system engineers that have programmed a safety PLC once or twice. Evidence of this is the fact that there are not many people in the world that actually have the CFSE qualification.” Michiel Engering, CFSE 080610 011, GHD Oil & Gas

“This is the most respected certification one can get” Luis Garcia, CFSE 080415 004, Siemens Energy & Automation

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