

FS Engineer Training

TÜV Rheinland Functional Safety Program



TÜV Rheinland
Functional Safety Training Program

 TÜV Rheinland®
Precisely Right.



***PANTAC System Control is a
TÜV Rheinland, Industrie Service GmbH,
ASI accepted course provider for the
TÜV Rheinland, Functional Safety Program.***

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TÜV Rheinland - Functional Safety Engineer Certificate

This training course is designed for engineers and consultants involved in any part of the functional safety lifecycle in the oil & gas, chemical and processing industries. Anyone can participate in the training course however only those who wish to attend the exam in order to get a Functional Safety Engineer (TÜV Rheinland) certificate, have to fulfil the requirements of the TÜV Rheinland Functional Safety Program.

The Functional Safety Engineer course is held over 4 days with the exam on the final day. Lunch and refreshments are provided. Class size is limited to ensure that all students receive the best quality training and results possible.

The TÜV Rheinland Functional Safety Program is based on standards AS/IEC 61508 – AS/IEC 61511, Pantac Control provides training to achieve eligibility for the TÜV Rheinland Functional Safety Engineer certificate.

The course is delivered by Pantac Control's technical director, Paul Van Dyk. Paul has over 20 years experience in safety systems, is a Functional Safety Expert (TÜV Rheinland, # 215/13) and EnergySafe Type B, advanced gas safety accredited. Paul also holds a US Patent for continuous on-line Safety Integrity Level calculation methods.



Turbine controls
Simulators
Human Machine Interface
Battery management

PanSIL safety manager
SIL workshops
Generator controls
Compressor controls

Functional Safety Engineer Course Agenda

Day 1

- Overview of the TÜV Rheinland Functional Safety Program
- Introduction to Safety Instrumented Systems
- International Safety Standards
- Regulations and Enforcement
- Process Hazard Analysis (PHA)
- Safety Integrity Level (SIL)
- Introduction to SIL Determination Methods

Day 2

- Layer of Protection Analysis (LOPA)
 - Examples of use
 - Conclusions
- Safety Requirement Specification (SRS)
 - Scope
 - Template for Guidance and use.
- Afternoon Exercise and Quiz

Day 3

- SIL Verification
 - IEC-61508 and 61511 Methods
 - Fault Tree Analysis (FTA)
 - Human Error
- Management of Functional Safety
 - Role of individuals
 - Plan for verification, assessments, auditing and validation.
 - Procedures for evaluating performance after SIF is installed
- Design

Day 4 (half day)

Knowledge and comprehension of Pantac Control's training course material will be verified by a proficiency examination consisting of 100 multiple choice questions, and 5 multi-part working problems. The overall passing criteria is 75%.

Participants who:

- 1) Complete the training course.
- 2) Pass the proficiency examination.
- 3) Meet the eligibility criteria.

Are eligible to receive a TÜV Rheinland Functional Safety Engineer certificate.

Additional Student Information

Course material and exam are in English.

Course hours are typically 8:30 AM to 4:00 PM with coffee and lunch breaks.

Time for evening review of the day's lecture material and exercise assignments is highly recommended.

Students should be present throughout the entire 3 days of lectures in order to be eligible for the exam on the 4th day.

All documentation required for the course will be in the Training Manual provided.

Each student should bring a calculator to class and to the exam. The only engineering functions needed are exponents.

The closed book exam is focused on concepts and exercises reviewed during the lectures. The exam is generally completed within 3 hours and has a maximum time limit of 4 hours.

Course fee: \$3,600 (ex GST) per person for the course including exam and certification.
\$2,900 (ex GST) per person for course only (no exam or certification).

Multiple registrations from the same company at the same time receive a 10% discount.

To register expression of interest (no charge) email sales@pantac.com.au



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