

Functional Safety for Machinery Engineer Certification (TÜV Rheinland)

OEM: Rockwell Automation • Duration: 4.5 Days (36 hrs) • Code: SAF-TUV2T

COURSE MODULES & TOPICS

Objectives

- Understand the Functional Safety for Machinery Engineer Certification (TÜV Rheinland)
- Define: Legal guidelines and standards
- Risk analysis and processes (ISO 12100:2010)
- Basic electrical safety principles (IEC 60204-1)
- New standards regarding safety of machinery
- ISO 13849-1, ISO 13849-2, and IEC 62061
- Identify: Safety devices
- Safety functions of machines
- Circuits, schematics, and examples
- Perform ISO 13849/IEC 62061 calculations

Prerequisites

- Required : A completed and approved eligibility form to receive certification (see details below)
- Strongly Recommended : Functional Safety for Machinery Introduction (Course No. SAF-TUV1)

Participant Must Bring

- Printed copies of standards
- Calculator
- Paper

Student Materials

- Student Manual includes the key concepts, definitions, examples, and activities presented in this course
- IEC 60204-1 (2018)
- IEC 62061 (2021)
- ISO 12100: (2012)
- ISO 13849 part 1 (2015) and part 2 (2012)

Requirements to receive the Functional Safety for Machinery Technician Certificate (TÜV Rheinland):

- Before taking the course, an eligibility form from TÜV Rheinland must be completed and approved, proving: Minimum of 3 years of experience in the field of functional safety
- University engineering degree (Master's or Bachelor's) or global equivalent (copy of degree must be included with your eligibility form) or
- Equivalent engineer level responsibilities status certified by employer (Reference letter on company letterhead signed by a manager must be included with your eligibility form)
- Attended full SAF-TUV2T course
- Passing grade of 70% or higher on the exam

Course Agenda

Day 1

- Understanding the Functional Safety for Machinery Engineer Certification (TÜV Rheinland)
- Defining Legal Guidelines and Standards
- Defining Risk Analysis and Processes (ISO 12100:2010)
- Defining Basic Electrical Safety Principles (IEC 60204-1)
- Identifying Safety Devices

Day 2

- Identifying Safety Functions of Machines
- Identifying Circuits, Schematics, and Examples
- Defining New Standards Regarding Safety of Machinery

Day 3

- Defining ISO 13849-1
- Defining ISO 13849-2

Day 4

- Defining IEC 62061
- Performing ISO 13849/IEC 62061 calculations

Day 5

- Exam (4 hours)