

## Cyber Security Fundamentals Fast Track Recap Course

This course is intended as a fast track version of the TÜV Rheinland 3-day detailed fundamentals of cyber security course and exam and is for participants who already have a detailed knowledge of the fundamentals of cyber security and control & network architectures and who wish to progress to take part in the TÜV Rheinland CySec Security Risk Assessment or Product Design and Development courses and exam. The course provides a recap only to enable a participant to take the TÜV Rheinland fundamentals of cyber security exam as a part of the TÜV Rheinland Cyber Security Program.

### Important Note:

**If a participant fails, the Fundamentals exam they are required to take the TÜV Rheinland 3-day detailed version of the fundamentals of cyber security course before retaking the exam.**

The TÜV Rheinland Cyber Security Training Program is a unique opportunity to provide evidence of competency in Cyber Security from an internationally recognized organisation. Successful delegates, on completion of the fundamentals recap course and exam, will receive a “Letter of Confirmation” from TÜV Rheinland, which will allow them to progress to either the CySec Security Risk Assessment or Cyber Security Component training.

Successful completion of the full certificate program, completion of the Cyber Security fundamentals course and exam and either the Security Risk Assessment or Component course and exam, will result in the award of the CySec Specialist (TÜV Rheinland) certificate that demonstrates competency with respect to either assessing and specifying Industrial Automation Control and Safety System (IACS) Security or product security and provides a skill set enabling staff to fulfill responsibilities and to perform activities to recognised standards of competence, in order to:

- reduce the risk of a successful cyber attack
- satisfy legal and regulatory requirements
- meet the organisation’s system security and business objectives

The Fundamentals element of the qualification covers gaining a basic knowledge of:

Industrial Protocols, Networks and Networks Security types, ISO/OSI Reference Model Cryptography, IEC 62443 Framework, NIST Cyber Security Framework (CSF), Establishing an Industrial Automation and Control Systems Security Program, Risk Analysis, Addressing Risk with the CSMS and Monitoring and Improving the CSMS.

### **TVC Functional Safety Services FZ-LLC**

JT010126, Service Block, Al Jazirah Al Hamra, RAKEZ Business Zone-FZ, Ras Al Khaimah, United Arab Emirates

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### Course Objectives:

The objective of this course is to provide participants with a brief recap of cyber security fundamentals so as to be equipped to take the competency examination and to obtain either the CySec Specialist (TÜV Rheinland) certificate for IACS Cybersecurity Risk Assessment for the process industries according to IEC 62443 or the CySec Specialist (TÜV Rheinland) certificate acc. to IEC 62443-4 for components. The course is of modular classroom tuition structure followed by a 90-minute exam.

### Agenda:

- Industrial networks vs. Business networks
- Network types
- ISO/OSI Reference Model & OSI Layer 1: Physical
- IPv4 Addressing
- Network Address Translation (NAT)
- DHCP
- Routers & Firewalls
- Layer 2 & 3 Switches
- TCP – Connection Oriented Session
- User Datagram Protocol (UDP)
- Cryptography
- Remote Access VPNs
- Intrusion Detection Systems
- Modbus & Profibus
- IEC62443 & NIST Cyber Security Framework (CSF)
- Establishing an Industrial Automation and Control Systems Security Program
- Risk Analysis
- Addressing Risk with the CSMS
- Monitoring and Improving the CSMS

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# TÜV Rheinland Cyber Security Training Program



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### Examination:

A 90-minute exam competency examination comprising 75 multiple-choice questions

(1 mark each question)

The pass score criterion is 75%

If a participant fails, the Fundamentals exam they are required to take the TÜV Rheinland 3-day detailed version of the fundamentals of cyber security course before retaking the exam.

### Who Should Attend?

Participants should already have an understanding of the fundamentals of cyber security and control & network architectures and who may wish to progress to take part in the TÜV Rheinland CySec Security Risk Assessment or Product Design and Development courses and exam.

This course is not intended for delegates with limited understanding of the fundamentals of cyber security and control & network architectures they should consider attending the TÜV Rheinland 3-day detailed version of the fundamentals of cyber security course.

### Participant eligibility requirements:

In accordance with the TÜV Rheinland Functional Safety and Cyber Security Training Program:

- A minimum of 3 to 5 years' experience in a related field (e.g. Control & Instrumentation, process engineering, IT/OT, functional safety or cyber security).
- University degree or equivalent engineering experience and responsibilities as certified by employer or engineering institution.

### Course Provider:

TVC Functional Safety Services FZ-LLC

### Contact:

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