PREEvision Functional Safety

Agenda VectorAcademy

Delivery Format:	This course is offered in Classroom **or** in Remote Format
Duration:	Classroom: 2 days Remote: 14 hours
Target Group:	System architects, development engineers, quality engineers, safety engineers, documentation managers
Prerequisites:	Experience in systems or component development, ISO 26262 knowledge, participation in Course "Requirement Engineering with PREEvision"
Goal:	Model, analyze and optimize functional safe systems with PREEvision

1. Introduction to ISO 26262

- Overview ISO 26262: Functional safety for road vehicles

2. Overview Functional Safety in PREEvision

- First steps: Functional Safety with PREEvision
- Development process with PREEvision
- Content of demo model
- Safety perspectives and views

3. Item Definition, HAZOP and HARA

- Safety catalogue
- Item definition
- HAZOP: Hazard and Operability Study
- HARA: Hazard Analysis and Risk Assessment
- Traceability of safety requirements

4. Functional and Technical Safety Concept

- Modeling of the functional safety concept
- Mapping of safety requirements
- Modeling of the technical safety concept
- Hardware-Software-Interface
- Generation of safety concept reports

5. Qualitative Safety Analysis (FMEA, FTA)

- Introduction to safety analysis
- FMEA and integrated FMEA
- Qualitative fault tree analysis
- Variant sensitive fault tree analysis

VECTOR

PREEvision Functional Safety

Agenda VectorAcademy

6. **Quantitative Safety Analysis (FMEDA, FTA)**
   - Quantitative fault tree analysis
   - Hardware architectural metrics

7. **Safety Plan, Safety Case**
   - Safety plan
   - Development interface agreement
   - Safety case

8. **Clarify Open Issues**
   - Discussion of open questions regarding topics 1 - 7

9. **Discussion of Safety Process Based on Customer Use Case**
   - Presentation of the customer use case and model by the trainees
   - Discussion of customer process and relevant safety activities
   - Definition of expectations and customer goals

10. **Workshop: Functional Safety in PREEvision**
    - First steps in PREEvision related to customer use cases
    - Discussion of methods and relevant safety analysis
    - Demanded work products including customer specific adaptations

11. **Wrap-up and Next Steps**
    - Clarify open issues and prioritization
    - Define next steps in customer project