

# PREEvision Functional Safety

## Agenda VectorAcademy

<b>Delivery Format:</b>	This Course is offered in Classroom Format
<b>Duration:</b>	2 days
<b>Target Group:</b>	System architects, development engineers, quality engineers, safety engineers, documentation managers
<b>Prerequisites:</b>	Experience in systems or component development, ISO 26262 knowledge, participation in Course "PREEvision Function Development"
<b>Goal:</b>	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

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### 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