VECTOR >

Certified Embedded Associate AUTOSAR Classic

Agenda VectorAcademy

Delivery Format:	This course is offered in a blended learning format.
Duration:	5 weeks (~54 hours) Approx. 44 hours of self study (via E-Learning) + 9 hours of remote sessions (1 hour welcome session and 4 Q&A sessions of 2 hours). Exam: 45 minutes Access to the Virtual Machine: 2 months, starting with welcome session
Target Group:	Project Leader, AUTOSAR ECU Developer and User
Prerequisites:	Knowledge about software development for automotive systems
Goal:	Obtain certification that verifies your knowledge in the topics listed here

1. **AUTOSAR Fundamentals: Overview and Objectives**
   - Motivation and aims
   - Organization, schedule
   - Introduction to AUTOSAR
   - AUTOSAR RTE
   - AUTOSAR BSW
   - Methodology of AUTOSAR
   - AUTOSAR in Practice

2. **Infrastructure**
   - Basic knowledge about the Vector MICROSAR BSW-Package
   - Fundamental use of the DaVinci Tools

3. **AUTOSAR in Practice: Overview and Introduction**
   - Relation between AUTOSAR, the Vector implementation MICROSAR and the DaVinci Tools
   - Mapping between AUTOSAR methodology and the Vector tool chain

4. **Operating System**
   - Basic understanding of the mediums and mechanisms of the AUTOSAR operating system
   - Tasks, alarms, events, etc.
   - AUTOSAR OS scalability classes

5. **Software Components (with hands-on experience)**
   - Handling of DaVinci Developer and RTE
   - Design of software components, ports, connections, task mapping and generation of the RTE with the DaVinci Tools (Developer, Configurator)

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6. **Input and Output (with hands-on experience)**
   - Data exchange with I/O modules
   - Configuration of the basic software for the I/O with the DaVinci Tools (Developer, Configurator)

7. **Communication (with hands-on experience)**
   - Data exchange over CAN
   - Configuration of the basic software for the communication with the DaVinci Tools (Developer, Configurator)

8. **State Management and System Services (with hands-on experience)**
   - Sleep and wake up of ECUs and bus
   - Roles of the modules ComM, EcuM and BswM
   - Configuration of the Mode Management with the DaVinci Tools (Developer, Configurator)

9. **Bussystems (Material for reference)**
   - Understanding the conceptual differences of the bus systems
   - Importance of the configuration of the basic software
   - CAN, LIN, FlexRay, Ethernet

10. **Non-volatile Memory Access (with hands-on experience)**
    - Access to non-volatile memory
    - Configuration of the basic software for the memory with the DaVinci Tools (Developer, Configurator)

11. **Diagnostics (with hands-on experience)**
    - Diagnostics with AUTOSAR
    - Configuration of the diagnostics basic software with the DaVinci Tools (Developer, Configurator)

12. **VECTOR**
    - Communication Channels to Vector

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Schedule:

