# AUTOSAR 4 in Practice

## Agenda VectorAcademy

<table>
<thead>
<tr>
<th>Duration:</th>
<th>3 Days</th>
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<tbody>
<tr>
<td>Target Group:</td>
<td>ECU Developers of automobile suppliers and OEMs</td>
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<td>Prerequisites:</td>
<td>Participation in the AUTOSAR seminar or good AUTOSAR knowledge</td>
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<td>Goal:</td>
<td>Handling of Vector AUTOSAR solution</td>
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### 1 | Overview and Introduction | 0.75 h
- Relation between AUTOSAR, the Vector Implementation MICROSAR and the DaVinci Tools (Developer, Configurator)
- Mapping between AUTOSAR methodology and the Vector tool chain

### 2 | Operating System | 1.0 h
- Basic understanding of the mediums and mechanisms of the AUTOSAR operating system
- Tasks, alarms, events, etc.
- AUTOSAR OS Scalability Classes

### 3 | Software Components (with Exercises) | 2.25 h
- Handling of DaVinci Developer and RTE
- Design of software components, ports, connections, task mapping and generation of the RTE

### 4 | Input and Output (with Exercises) | 3.5 h
- Data exchange with I/O modules
- Configuration of the basic software for the I/O with the DaVinci Tools (Developer, Configurator)

### 5 | Communication (with Exercises) | 3.25 h
- Data exchange over CAN
- Configuration of the basic software for the communication with the DaVinci Tools (Developer, Configurator)
## State Management and System Services (with Exercises)

- Sleep and wake up of ECUs and bus
- Roles of the modules ComM, EcuM and BswM
- Configuration of the Mode Manager Modules in the basic software

## Bus Systems (material for reference)

- Understanding the conceptual differences of the bus systems and the importance of the configuration of the basic software
- CAN, LIN, FlexRay, Ethernet

## Nonvolatile Memory Access (with Exercises)

- Access to nonvolatile memory
- Configuration of the basic software for nonvolatile memory access

## Diagnostics (with Exercises)

- Diagnostics with AUTOSAR
- Configuration of the diagnostics basic software with the DaVinci Tools (Developer, Configurator)