

DYNA4 Vehicle Model incl. ADAS-Sensors

Agenda VectorAcademy

Delivery Format:	This course is offered as a series of Remote Training sessions or in Classroom Format . The course content can be customized from listed agenda items (sessions) according to customer requirements. Combination with items of DYNA4 Fundamentals and DYNA4 Engine courses is possible.
Duration:	1-2 Days (Classroom) depending on selected items (sessions), customer specific for Remote Training
Target Group:	Application engineers and developers in the field of model-based vehicle and environment simulation with focus on vehicle dynamics, (sensor based) driver assistance in a traffic environment and driving performance and consumption.
Prerequisites:	DYNA4 Fundamentals, basic understanding of vehicle dynamics/driver assistance
Goal:	Understand the model approaches of the relevant components of the DYNA4 simulation model for vehicle dynamics, ADAS as well as driving performance and consumption (modular drivetrain model and electric system), knowledge of the corresponding model parameters

1. Model background of Vehicle Dynamics model features

5 h

- > Multibody chassis including axle kinematics
- > Engine and drivetrain
- > Tire model TM-Easy
- > Speed control and course control internals
- > Control Unit internals (brake system, engine and drivetrain)
- > Exercises

2. Model background of ADAS model features

5 h

- > Vehicle model
- > ADAS sensors (Idealized sensors and GPU sensors)
- > ADAS Control Units (ACC, AEB)
- > Traffic
- > Exercises

3. Model background of Electrified Powertrain features

4 h

- > Mechanical components of modular drivetrain
- > Electrical components of modular drivetrain
- > HCU internals
- > Task implementation for driving cycles incl. postprocessing