



DORLECO

AUTONOMOUS VEHICLE MBSE BOOTCAMP

AUTONOMOUS SYSTEMS



Course Preview

This Bootcamp is a 10-hour real-time learning program ideal for beginners in the automotive software development space focused on autonomous systems.

IEEE will be providing PDH/CEU certificates for all the participants who successfully complete this program.

Learn how the industry implements V-cycle development, system modeling, MBD methodology, requirements generation, architecture development, controls, and software (development, flashing, and calibration) for the development of intelligent vehicle systems.

Domain Focus

AUTONOMOUS SYSTEMS

COURSE TITLE

**Model-Based Systems Engineering for
Autonomous Vehicles**

Course Outline

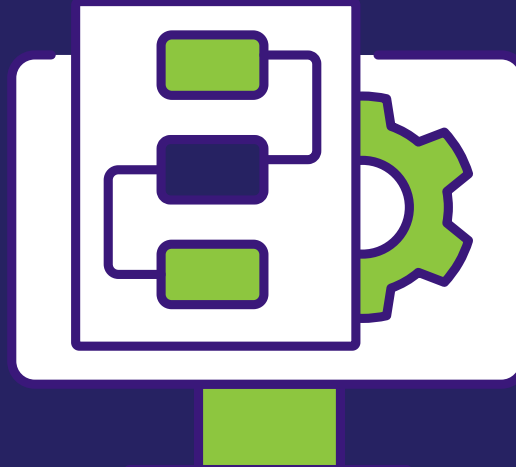
Model-Based Systems Engineering for Autonomous Vehicles

MODULE 1



Introduction to Autonomous Driving and ADAS feature development.

MODULE 2



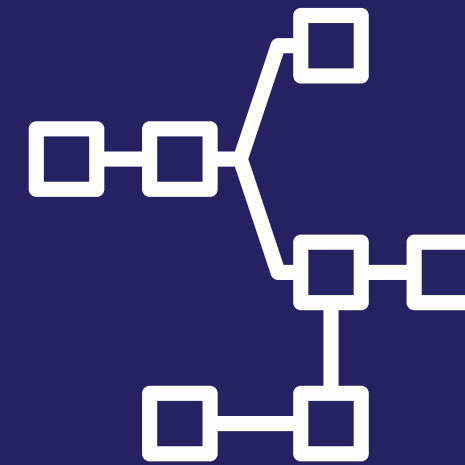
Introduction to MBSE, MBD methodology, AD toolbox by MathWorks

MODULE 3



Requirements generation, architecture development in SysML, emulator subsystem development

MODULE 4



Building model for LKA, Stateflow logic for requirements, system level test case generation

MODULE 5



Verification & Validation (MIL & SIL), code generation, PIL & HIL basics

Key Takeaways

IEEE CERTIFICATE

Take a quiz and successfully complete this program to get valuable Professional Development Hours (PDHs) under your belt.

COURSE MATERIAL

Take home all of the lecture notes, Simscape/Simulink model and relevant reference material.

LEARN ONE ADVANCED AUTOMOTIVE FEATURE

Learn real time controls implementation following standard automotive software development practices

ADVANCE YOUR EV/AV CAREER

Leverage the knowledge gained in the course for further research, interviews, internal/external projects etc.

Prerequisites

MATLAB

On-ramp:

<https://in.mathworks.com/learn/tutorials/matlab-onramp.html>

SIMULINK

On-ramp:

<https://in.mathworks.com/learn/tutorials/simulink-onramp.html>

STATEFLOW

On-ramp:

<https://in.mathworks.com/learn/tutorials/stateflow-onramp.html>

CONTROLS DESIGN

On-ramp:

<https://in.mathworks.com/learn/tutorials/control-design-onramp-with-simulink.html>

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Key Pointers

MINIMUM QUALIFICATION

Background in Mechanical/ Electrical/ Electronics/ Computer Engineering

METHOD OF DELIVERY

The program will be delivered completely online via zoom sessions

MATLAB/SIMULINK

License NOT required for the completion of this program

COURSE FEE & REGISTRATION LINK

Please write to info@dorleco.com for more information on company specific BootCamp training programs.

Got questions?

WRITE TO

info@dorleco.com

