Internal Combustion Engine Control

1. Introduce the actuators involved in the control of internal combustion engines.
2. Introduce the sensors involved in the control of internal combustion engines.
3. Introduce the basics and structures of system architectures in automotive subsystems and describe the V-model in detail.
4. Introduce the automotive bus systems in general and describe the LIN, CAN, FlexRay and MOST in detail.
5. Introduce the ECU diagnostic options and the protection possibilities against the manipulation of ECUs.
6. Introduce the hardware architecture and functions of electric control units.
7. Introduce the HIL, MIL and SIL system testing in the automotive industry.
8. Introduce the application possibilities of the Design of Experiments method in the automotive industry.