

# AUTOMOTIVE SYSTEMS

CHOOSE 2 ELECTIVE MODULES FROM THE TRACK AUTOMOTIVE SYSTEMS:

## Advanced Vehicle Dynamics:

- Modeling, Simulation and Testing
- Comfort, Road Holding and Handling
- Passenger Cars, Articulated Vehicles, Motorcycles, Driver Modeling
- Minor Project

[Watch the video about the module Advanced Vehicle Dynamics](#)

## Innovations in Powertrains

- Powertrain Sizing, Functions, Subsystems and Components
- Sustainable Hybrid Drivelines and Controls
- Modeling and Optimization of Energy Efficiency
- Analysis on Overall Sustainability
- Minor Project

## Intelligent Automotive Systems

- Evolving Mobility Needs
- Sensor Technologies & Environmental perception
- Data processing Technologies
- Communication Technologies
- Supporting Infrastructure Technologies
- Human Behavior & Engineering Ethics
- Minor Project

## Hydrogen Technology

- H2 Components
- System Design, Integration, Control and Safety
- Role in Energy Transition
- Hydrogen in Society
- Minor Project

## Applied Machine Learning (theory only!)

*Note: this module is not part of the Automotive Systems track, but you can follow the theory.*

- Data Collecting, Exploration and Preprocessing for Machine Learning
- Machine Learning
- System Identification
- State and Parameter Estimation
- Advanced Modeling (Minor Project)

[Watch the video about the module Applied Machine Learning \(previously called Big Data & Small Data\)](#)