# **OVERVIEW**

#### Degree

Master of Engineering (M.Eng.)

### Duration

3 semesters

#### Start

Annually in March (summer semester)

#### Admission requirements

- Bachelor's degree in computer science, electrical and information technology, or a related field.
- Successful completion of an assessment test.
- · Admission requirements are detailed in the study and examination regulations (§ 3 Qualification and Admission Requirements).



#### Language of instruction

English

# APPLICATION

#### Application period



th-deg.de/deadlines-m



- In the Primuss Portal at www.th-deg.de/en/apply
- Deadline for submission of required documents
- Summer semester: 15 January
- Notice of acceptance or denial
- In the Primuss-Portal at the beginning of February

#### Enrolment

Information available in letter of admission

#### Semester start

- Summer Semester Start: 15 March
- Deferred admission will not be granted



CONTACT

Are you interested in studying for this Master's in Automotive

Software Engineering and would like to find out more?

Information about course content

General enquiries about studying at DIT

ase-m-info@th-deg.de

www.th-deg.de/ase-m

welcome@th-deg.de

www.th-deg.de/en/advice

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INSTITUTE TECHNOLOG

# AUTOMOTIVE SOFTWARE ENGINEERING





### THE FUTURE OF THE AUTOMOTIVE INDUSTRY: SOFTWARE-DEFINED VEHICLES

The automotive industry is one of the most important sectors in Bavaria. Alongside major car and truck manufacturers, numerous suppliers are also based here. Modern vehicles increasingly rely on software to realize various functions, with some cars containing over 200 control units and up to 16 gigabytes of software data. This makes software a crucial component, leading the industry to refer to Software Defined Vehicles (SDV). This development demands highly complex systems with hardware and software components for increased safety, comfort, and entertainment, requiring highly qualified experts for development and implementation.

Do you already have relevant knowledge at the Bachelor's level in computer science, electrical and information technology, or a similar field and have a passion for cars and trucks? Become a professional in software engineering in the automotive industry. Deepen your knowledge in automotive informatics and work on the mobility of tomorrow.

### COURSE CONTENT

Semester 1	Image Recognition, Digital Car/Innovation Management & Customer Design, Advanced Driver Assistance Systems , Mobile Applications & Interaction Design in Vehicles, Terminology/Technical Language, Elective 1
Semester 2	Artificial Intelligence, Automotive Software Entwicklung, Project, Elective 2, Wireless and Car2X Communication, Automotive Microcontroller
Semester 3	In-Car Communication Architecture, Master's Thesis & Colloquium

### CAREER PROSPECTS

With a Master's degree in Automotive Software Engineering, you will gain advanced knowledge in software development for modern vehicles. You will be able to apply this knowledge to engineering and application-oriented problems in vehicle development. You can design and dimension vehicle components according to goals and requirements, considering technical, economic, legal, and social conditions.

Automotive Software Engineering is used in various areas at vehicle manufacturers and suppliers:

- Software Development
- System Architecture Development
- Vehicle Testing and Validation
- Project Management and Quality Control
- Research, Development, and Teaching
- Consulting and Services

### **COURSE STRUCTURE**

The English-taught Master's program in Automotive Software Engineering is designed as a full-time course and spans three semesters. It builds on a Bachelor's degree in computer science, electrical and information technology, or a related field.

Driven by the rapidly increasing demands for autonomous driving, highly complex hardware/software systems will become increasingly important. The program focuses on software development for autonomous driving, image understanding, artificial intelligence, embedded systems, in-car, and Car2X communication. Students benefit from comprehensive theory and close collaboration with DIT's technology campuses, which enable research-oriented education in state-of-the-art laboratories.