

## PRACTICAL AND INTERNATIONAL

“Internationality” is a very important feature at Esslingen University. We offer the opportunity for students from diverse cultural backgrounds to study, work and live together. This is made possible partly through active contact with partner universities in many countries throughout the world. The intercultural cooperation on project work is also of added value to master’s students.

Esslingen University maintains regular contact with many international companies. This is important when it comes to the implementation of theory during the practical semester. The Esslingen University master courses are regularly accredited by renowned associations such as the FIBAA and ASIIN.

## ESSLINGEN – AN IDEAL PLACE TO STUDY

With a population of over 90,000 inhabitants, the town of Esslingen is situated in the Neckar valley and surrounded by picturesque vineyards. Only 20 kilometres away is Stuttgart the county of Baden-Wuerttemberg’s capital.

Esslingen’s history dates back over 1,200 years but the town always had it’s sights on the future. Since the industrialisation of Esslingen, the town has been an attractive area for business and industry and companies like Daimler, Eberspächer and Festo have settled here.

The historical old town with its many half-timbered houses, numerous bars and restaurants and a diversely cultural scene, is the ideal background for promisingly successful years of study.

## WHERE AND HOW TO APPLY?

Hochschule Esslingen  
University of Applied Sciences  
Graduate School  
Flandernstr. 101  
73732 Esslingen  
GERMANY  
Phone: +49 (0) 714 397-44 74  
Fax: +49 (0) 714 397-44 77-44 63  
meng@hs-esslingen.de  
www.graduate-school.de

## ADMISSION REQUIREMENTS

- › Major Vehicle Dynamics: Bachelor of Automotive Engineering, Mechanical Engineering or equivalent
- › Major Car Electronics: Bachelor of Mechatronics, Electrical Engineering or equivalent
- › Major Software Based Automotive Systems: Bachelor of Information Technology, Electrical Engineering or equivalent

Two references and one letter of motivation


English language test (please see our website for details)

Tuition fees: 500 Euro per semester

**Application deadline:** March 31st

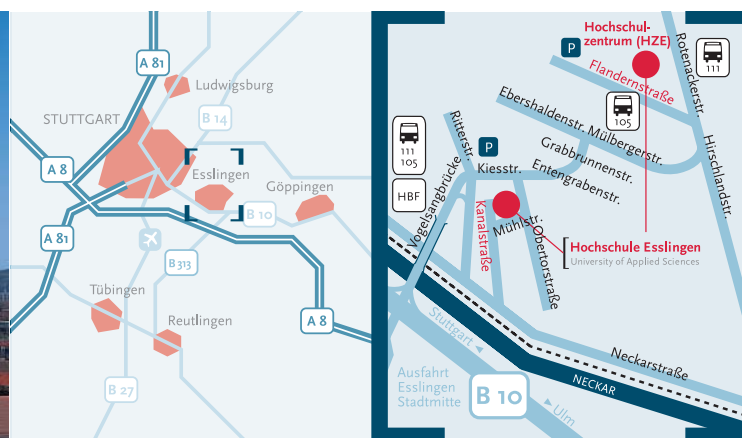
[www.hs-esslingen.de](http://www.hs-esslingen.de)

accredited by



**AUTOMOTIVE SYSTEMS**  
Master of Engineering

Design: www.jungkommunikation.de - January 2008



Graduate School

GS

## AUTOMOTIVE SYSTEMS

### Master of Engineering

- > Study in the heart of the European Automotive Industry
- > Learn through interdisciplinary and intercultural projects
- > Study in English – live in Germany

In recent years automotive systems have increased in number, scope and complexity. The automotive industry is faced with an enormous challenge due to the rise in competition and steadily increasing requirements regarding cost, active and passive safety and fuel economy.

These challenges can only be met by expanding and cross-linking the present automotive systems. In spite of increasing complexity, systems with greater safety, availability and reliability have to be realised.

The development of such systems demands specialist qualifications and knowledge plus the ability and willingness to work in an interdisciplinary and international team. The aim of the course is to communicate these skills.

### INTERESTING AND INNOVATIVE

The program is designed for students who wish to become highly qualified engineers in the field of automotive systems for the development of feedback control systems, automotive software and automotive electronics. Students have to choose one of the three majors:

- > Software Based Automotive Systems
- > Vehicle Dynamics
- > Car Electronics

After the study program they will have gained specialized professional qualification in sophisticated Automotive Systems.

Graduates who choose the major “Software based Automotive Systems” will have the chance to work in the field of Development, market launch and supervision of vehicle series production of suitable and innovative car communication systems and of safe software.

Graduates who choose the major “Vehicle Dynamics” will have the chance to work in the field of Development and Testing of innovative automotive functions for steering, suspension and powertrain to improve ride & handling, stability, driveability and fuel economy.

Graduates who choose the major “Car Electronics” will have the chance to work in the field of specification, development and testing of control units and their integration in the car, taking into account car specific basic conditions like function, packaging, EMC etc.

### STUDY IN THE HEART OF AUTOMOTIVE INDUSTRY

As the university is located in the very heart of the automotive industry, students benefit greatly from the close links to the technological and industrial leaders situated in the area, such as BOSCH, Daimler, Audi, Porsche, FESTO and many others.

### Faculty and Teaching Philosophy

The faculty teaching consists of a mixture of professors from the Esslingen University of Applied Sciences as well as experts from our corporate partners. Because of our strong commitment to provide our students hands-on knowledge, many of our courses are team-oriented including case studies, company visits and project work. In this way, students have the best of the analytical and the pragmatic approaches to each discipline.



## A GOOD BALANCE OF THEORY AND PRAXIS

### The Master of Engineering Study Program

3.	<b>MASTER THESIS</b> Scientific Work, Documentation, Defence <b>SOFTSKILLS FOR ENGINEERS</b> Softskills for Engineers
2.	<b>MAJOR: “VEHICLE DYNAMICS”</b> Ride and Handling: Handling, Suspension Modeling Powertrain: Transmission Systems, Transmission Control, Engine Control Systems <b>MAJOR: “SOFTWARE BASED AUTOMOTIVE SYSTEMS”</b> Automotive Communications: Onboard and Offboard Communication Systems, Man-Machine-Interactions (MMI) Reliable Embedded Systems: Safety and Security, Selected Topics on Real-Time Systems <b>MAJOR: “CAR ELECTRONICS”</b> Electric and Electronic Architecture: Electronics and Communication 1, Prototyping and Simulation, Lab Automotive Electronic Control Circuits in Operation Packaging and Integration: Packaging and Wiring Harness, Automotive EMC, Electronics and Communications 2, Lab Distributed Applications <b>SIMULATION AND CONTROL 2</b> <b>TEAM PROJECT</b>
1.	<b>MATHEMATICAL METHODS IN ENGINEERING:</b> Numerical Linear Algebra, Numerical Analysis, Lab FEM <b>SYSTEM DESIGN:</b> Automotive Systems and Software Architectures, Automotive Systems Development Process and System Test <b>SIMULATION AND CONTROL 1:</b> Basic Control, Advanced Control, Lab and Simulation Control <b>VEHICLES TECHNOLOGY OR ELECTRONICS, SENSORS AND MEASUREMENT TECHNOLOGY</b>
	<b>LANGUAGE AND CULTURE PROGRAM IN SEPTEMBER</b> Additionally, German class is offered parallel to the course of study afterwards.

**Total Duration: 3 Semesters (18 months)**