

PRACTICAL AND INTERNATIONAL

The Esslingen Master of Engineering reflects the needs of globally-oriented companies. We offer the opportunity for students from diverse cultural backgrounds to study, work and live together. This is made possible through active contact with partner universities in many countries throughout the world. The inter-cultural 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 Master's Thesis. The Esslingen University master courses are regularly accredited by renowned associations such as the ASIIN.

ESSLINGEN - AN IDEAL PLACE TO STUDY

The city of Esslingen has a population of over 93,000 inhabitants, and lies nestled in the vineyards overlooking the Neckar valley. Stuttgart, the capital city of Baden-Wuerttemberg, is only 20 kilometres away.

Esslingen has a history reaching back over 1,200 years, a history in which tradition and progress have gone hand in hand. Since its industrialisation, Esslingen has been an attractive industrial and business centre. Many international companies such as Daimler, Eberspächer and Festo have settled here.

Esslingen's historical city centre, with its half-timbered houses, its cafés and its diverse cultural life, is an ideal surrounding for a successful study time.

WHERE AND HOW TO APPLY?

Hochschule Esslingen
University of Applied Sciences
Graduate School
Flandernstr. 101
73732 Esslingen
GERMANY
Phone: +49 (0) 711.397-44 74
Fax: +49 (0) 711.397-44 77, -44 63
mengddm@hs-esslingen.de
www.graduate-school.de

BASIC ADMISSION REQUIREMENTS

- Bachelor of Automotive Engineering, Mechanical Engineering or equivalent
- Two confidential letters of recommendation
- Letter of motivation
- English language test (institution code: 1680)
- Additional requirements please refer to website

Application deadline: March 31st

www.hs-esslingen.de



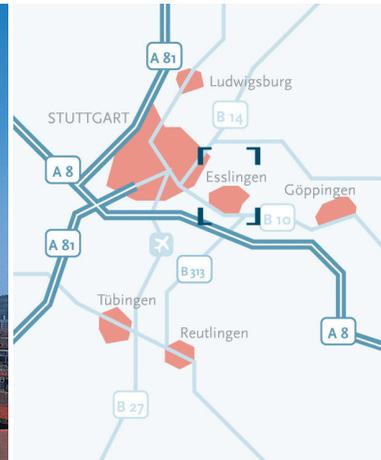
Design: www.jungkommunikation.de - March 2014/Be



**DESIGN AND DEVELOPMENT IN
AUTOMOTIVE AND
MECHANICAL ENGINEERING**
Master of Engineering

Graduate School

GS



DESIGN AND DEVELOPMENT IN AUTOMOTIVE AND MECHANICAL ENGINEERING (DDM)

Master of Engineering

- › Study in the heart of the European automotive and mechanical engineering industry
- › Achieve a networked knowledge in the core areas of engineering design and development
- › Learn through interdisciplinary and intercultural projects
- › Study in English – live in Germany

The Esslingen Master of Engineering in Design and Development in Automotive and Mechanical Engineering (DDM) is focused on supplying advanced knowledge and abilities in the area of design and development of complex engineering systems. It aims at enabling the students to deal successfully with the various facets of modern, simultaneous engineering development projects. Besides advanced technical/scientific lectures and labs, cross-cultural, interdisciplinary student projects are part of the program. Through these, students are given the opportunity to share not only their specialized knowledge but also their cultural backgrounds in real-life working scenarios.



Modern simultaneous engineering 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 Master of Engineering – DDM – is a program that aims to prepare students for a challenging job in the core areas of design and development within the globalized mechanical engineering and automotive engineering industry.

The core modules of the program include lectures on advanced strength of materials, materials technology, dynamic systems, design for manufacturing, design and development plus several complementary subjects. Graduates of the program are qualified to work for example in the following areas: automotive industry and its component suppliers, mechanical engineering industry, process engineering industry and engineering consultancy.

Students gain core competence and qualifications in problem-solving know-how which is based on networked knowledge in the core and intersection areas of design, development, simulation and production technology. Strong focus is placed on the ability to communicate confidently and act in the international/intercultural environment of modern industry.

STUDY IN THE CENTRE OF THE EUROPEAN MECHANICAL AND AUTOMOTIVE ENGINEERING INDUSTRY

Hochschule Esslingen has a long tradition in educating mechanical and automotive engineers. Founded in 1914 as Royal College for Mechanical Engineering, the university has always taken advantage of its location in one of the major centres of European industry, and therefore is closely linked to the nearby companies, including a lot of the global technological leaders, both in the area of mechanical and automotive engineering, such as Daimler, Bosch, Festo, Porsche, Index and many others.

Faculty and Teaching Philosophy

The teaching faculty consists 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. Through these, students are given the opportunity to share not only their specialized knowledge but also their cultural backgrounds, in real-life working scenarios.

ADVANCED ENGINEERING KNOWLEDGE AS REQUIRED BY INDUSTRY

The Master of Engineering Study Program

1. **ADVANCED STRENGTH OF MATERIALS**
Lightweight Design, Advanced Finite Element Method, DYNAMICS
Multi Body Systems, Simulation of Multi Body Systems
INTEGRITY OF STRUCTURES
Integrity of Structures; Failure Analysis
VIBRATION AND ACOUSTIC 1
Vibration and Acoustics Measurement
Laboratory Vibration and Acoustics Measurement
DESIGN AND DEVELOPMENT 1
Design Methodology, Ecologic and Economic Design, Reliability
NUMERICAL METHODS IN CAE
Numerical Mathematics, CAE Methods and Algorithms
2. **DESIGN FOR MANUFACTURING**
Production-oriented Product Design
Product Life Cycle Management with Laboratory
VIBRATIONS AND ACOUSTICS 2
Vibrations, NVH in Automotive Systems
Laboratory Computer-Aided Vibration Analysis (CAT)
DESIGN AND DEVELOPMENT 2
Advanced CAT, Design of Experiments
ADVANCED MATERIALS TECHNOLOGY
Advanced Engineering Materials, Surface Technology, Composite Materials
PROJECT WORK
3. **MASTER THESIS**
Scientific Work, Documentation, Defence
SOFTSKILLS FOR ENGINEERS

Total Duration: 3 Semesters (18 months)