



**Master of Science**

# Mechanical Engineering

## Profile

The study programme builds on a solid foundation in mechanics, which is the fundamental discipline of mechanical engineering. This allows both deeper examination and broader study in the various areas of mechanical engineering. With the different subjects offered in elective modules, you get to grow and develop according to your own specific interests. The solid foundation of mechanical engineering expertise combined with your choice of elective subjects allows you to shape your individual, interdisciplinary profile. The additional strong research focus completes the innovative syllabus.

All courses are taught in English. This prepares you for a future career at international or global level without any language barriers. It is also an important requirement for international double degree programmes, which are currently under development.

During this master's programme, you acquire fundamental and methodical skills in a broad range of mechanics topics. You master modern simulation tools and develop profound knowledge of measurement technology. The programme also allows you to specialise depending on your individual interests: You can intensify your mechanics expertise or broaden your subject spectrum, choosing topics such as energy or industrial engineering.

Participating in ongoing research and industrial projects, you learn to do scientific work independently.

## **Career Options**

Career options with a master's degree in mechanical engineering are diverse. Graduates can generally work in all companies which focus on developing, producing and optimising machinery, equipment or entire systems.

There are good opportunities to find employment in large or medium-sized industrial companies which provide products or services in the following industries:

- Mechanical engineering
- Process plant engineering
- Vehicle construction
- Power engineering
- Process engineering
- Aerospace
- Electrical engineering
- Medical technology
- Safety technology
- Agrotechnology
- Food technology
- Engineering services

Alternatively, this master's degree can lead to other vocational options. These could be in management or in research and development, most likely in large or medium-sized companies. Our former students can just as well start up an innovative business themselves – inspired by current research subjects taught in the study programme. Another option is to look for a position at a university or research institution. Graduates with a master's degree generally qualify for doctoral studies.

Doctoral researchers usually work at a university, research institute or company at the same time. Since the master's programme is exclusively taught in English, its graduates can work in all sectors mentioned above at international and global level.

## **Admission Requirements**

Please check if you meet all requirements for admission to the study programme. Further information:

[mv.hs-duesseldorf.de/mme-voraussetzungen](http://mv.hs-duesseldorf.de/mme-voraussetzungen)

# **SYLLABUS**

## **SEMESTERS 1-2**

- Engineering Mathematics
- Computational Fluid Dynamics
- Finite Element Method
- Simulation of Mechanical Systems
- Computer-Based Measurement Technology

## **ELECTIVE MODULES AND PROJECTS**

- Project (Research & Development)
- 4 Compulsory Elective Modules

## **SEMESTER 3**

- Engineering Conferences
- Master's Thesis
- Colloquium

Please check the module manual for detailed information on the contents of the study programme.

## Further Information

Faculty contact:

Dean's Office at the Faculty of Mechanical  
and Process Engineering  
T +49 211 4351-2400  
[dekanat.mv@hs-duesseldorf.de](mailto:dekanat.mv@hs-duesseldorf.de)

About the programme, admission requirements  
and application:

[mv.hs-duesseldorf.de/mme-en](http://mv.hs-duesseldorf.de/mme-en)  
[www.hs-duesseldorf.de/bewerbung](http://www.hs-duesseldorf.de/bewerbung) (in German only)

## Get in Touch

### Admissions Office

[zulassung@hs-duesseldorf.de](mailto:zulassung@hs-duesseldorf.de)  
[hs-duesseldorf.de/zulassungsstelle](http://hs-duesseldorf.de/zulassungsstelle) (in German only)

### Student Advisory and Counselling Service (ZSB)

[studienberatung@hs-duesseldorf.de](mailto:studienberatung@hs-duesseldorf.de)  
[hs-duesseldorf.de/zsb-en](http://hs-duesseldorf.de/zsb-en)

### International Office (IO)

[international-office@hs-duesseldorf.de](mailto:international-office@hs-duesseldorf.de)  
[hs-duesseldorf.de/io-en](http://hs-duesseldorf.de/io-en)

### Family Support Centre

[familienbuero@hs-duesseldorf.de](mailto:familienbuero@hs-duesseldorf.de)  
[hs-duesseldorf.de/fam-en](http://hs-duesseldorf.de/fam-en)

### Office of Counselling and Disability Services (ABS)

[barrierefrei@hs-duesseldorf.de](mailto:barrierefrei@hs-duesseldorf.de)  
[hs-duesseldorf.de/abs-en](http://hs-duesseldorf.de/abs-en)

### Psychological Counselling Service (PSB)

[info.psb@hs-duesseldorf.de](mailto:info.psb@hs-duesseldorf.de)  
[hs-duesseldorf.de/psb-en](http://hs-duesseldorf.de/psb-en)

## HSD Invites You

Visit us! Join courses during our yearly trial week  
(*Schnupperstudium*) and attend our information  
events (e.g. *Tag der offenen Tür*, *Hochschulinforma-  
tionstage*, *Wochen der Studienorientierung*).

Information on all events (in German only):  
[www.hs-duesseldorf.de/zsb\\_veranstaltungen](http://www.hs-duesseldorf.de/zsb_veranstaltungen)

HSD on social media  
[facebook.de/hsduesseldorf](https://facebook.de/hsduesseldorf)  
[instagram.com/hsduesseldorf](https://instagram.com/hsduesseldorf)

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