



# HSD

Hochschule Düsseldorf  
University of Applied Sciences



Faculty of Mechanical  
and Process Engineering

Bachelor of Engineering

# Industrial Engineering – Mechanical Engineering Branch

## Profile

As an industrial engineer, you combine expertise from two fields: economics as well as technology. You can solve technical issues with business expertise, think beyond individual departments and coordinate different interests. The study programme is interdisciplinary, combining technical and natural scientific, mathematical and analytical as well as economic and social-scientific contents. Industrial engineering is a discipline at the interface between several different disciplines.

As an industrial engineer, you therefore build bridges between different disciplines. You are a generalist with broad expert knowledge.

You ensure smooth cooperation between colleagues from different departments and are competent in managerial decision-making. You are able to identify corporate interdependencies and, thus, optimise and coordinate plants, structures and processes. Thanks to the broad syllabus of the programme, you are able to build synergies and overcome potential thinking barriers. You can serve as the interface between economics and technology – understanding both the work of the designers and production engineers as well as the cost management and procurement.

The syllabus is rich in variety. During the first semesters, you acquire the fundamentals of business administration, such as investment calculation and financial reporting. In addition, we teach you the natural scientific and technical basis as well as in-depth knowledge of mechanical engineering. Simultaneously, you apply and extend your knowledge in case studies and seminars.

**Please note:** The language of instruction is mainly German.

## Career Options

The bachelor's programme Industrial Engineering – Mechanical Engineering Branch offers great career entry and future promotion prospects. The latest graduate statistics show that there is a great demand for industrial engineers, especially in the Rhine-Ruhr area with its large number of manufacturing companies. These companies need generalists to optimise their processes from both the technical as well as the economic perspective. Also engineering services and consulting firms are interested in industrial engineers. They need these engineers particularly for strategic management relating to assessment and implementation of innovative technological developments.

Possible professional fields for graduates are diverse, but especially the following fields bear employment options for industrial engineers:

- Production management and optimisation
- Technical sales
- Product management
- Service engineering and management
- Plant engineering
- Logistics, supply chain management

## **Admission Requirements**

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

[mv.hs-duesseldorf.de/bwim-en](http://mv.hs-duesseldorf.de/bwim-en)

# SYLLABUS

## **SEMESTERS 1-2**

- Mathematics and Computer Science
- Fundamentals of Natural Sciences
- Fundamentals of Engineering
- Fundamentals of Business Administration
- Project Work, Languages, Management

## **SEMESTERS 3-4**

- Statistics
- Materials Technology
- Strength of Materials
- Investment Calculation and Cost Efficiency
- Business Simulation
- Controlling
- Cutting and Chipless Manufacturing
- Enterprise Resource Planning
- Project Management and Problem Solving Methods
- Procurement and Supply Chain Management
- Scientific Computing
- Control Engineering

## **SEMESTER 5**

- Internship Semester

## **SEMESTERS 6-7**

- Marketing and Sales
- German Business Law
- Factory Planning and Quality Management
- Design Project: Designing and Manufacturing a Real Product
- Compulsory Elective Modules
- Bachelor's Thesis
- Colloquium

Please check the module manual (currently only in German) 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/bwim-en](http://mv.hs-duesseldorf.de/bwim-en)

## 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)

### 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*, *Hochschulinformationstage*,  
*Wochen der Studienorientierung*).

Information on all events (in German only):

[hs-duesseldorf.de/zsb\\_veranstaltungen](http://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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