



Hochschule Düsseldorf
University of Applied Sciences



**Faculty of Mechanical
and Process Engineering**

Bachelor of Engineering

Environmental and Process Technology

Study sustainability

What is process engineering?

Process engineering is the scientific discipline that deals with physical, chemical and biological materials processing while taking into account cost-efficiency and sustainability. There are many methods of production: from oil refining to drug manufacturing to brewing beer.

Why should I study environmental and process technology?

This study programme teaches you valuable subject-specific skills and knowledge in environmental and process engineering. With this expertise, you are able to actively do your part to make production more environmentally friendly and sustainable, to save resources and to avoid CO₂ emissions as well as waste.

What to expect from the study programme?

– Fundamentals of natural sciences such as physics, chemistry and mathematics

- Work in practical projects – already in semester 1
- Properties of specific materials and how they change
- Devices and machines for materials conversion, combination and separation
- Devices and machines to store and extract materials
- Functioning of production plants
- Purification procedures for air and water, noise protection
- Electricity supply and automated control solutions in production plants
- Lots of practical exercises in our laboratories
- Aspects of profitability and sustainability

Please note: The language of instruction is mainly German.

What to expect from professional practice?

- You work on concepts for cost-efficient and environmentally friendly production.
- You plan, design and calculate devices and machines.
- You operate production plants on an industrial scale: to process raw materials, separate mixtures of materials, use residual materials and develop consumer products with special properties.
- You design plants and processes to produce high-quality intermediate and end products from raw materials.
- You contribute to air pollution control, water purification, soil rehabilitation and noise protection.
- You sell technical products and advise clients all over the world.

In which sectors can I work?

The chemical and petrochemical industry, pharmaceuticals and cosmetics, food and luxury food, plastics, wood, paper, paints and varnishes, process plant and machine design, water supply and wastewater treatment, engineering services, inspection agencies, environmental and disposal technology, biotechnology and bioprocess engineering, genetic and medical technology, nano- and microtechnology, application-oriented research, safety technology, occupational safety and emission control, waste disposal, management and patents.

Admission Requirements

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

mv.hs-duesseldorf.de/buvt-en

SYLLABUS

SEMESTERS 1-2

- Mathematics and Computer Science
- Fundamentals of Natural Sciences
- Fundamentals of Engineering
- Technical English and Project Work

SEMESTERS 3-4

- Inorganic and Organic Chemistry
- Mechanical and Thermal Process Engineering
- Chemical Reaction Engineering
- Fluid Mechanics and Noise Protection
- Environmental Analysis
- Applied Thermodynamics
- Heat Transfer
- Fundamentals of Business Administration
- Measurement Technology
- Control Engineering
- Scientific Computing
- Project Management and Problem-Solving Methods

SEMESTER 5

- Internship Semester

SEMESTERS 6-7

- Process Plant Design
- Biotechnology
- Air Pollution Control
- Water Purification and Wastewater Treatment
- Environmental Law and Licence Procedures
- Project: Environmental and Process Engineering
- Compulsory Elective Modules
- Bachelor's Thesis and Colloquium

Please check the module manual (currently available in German only) for detailed information on the contents of the study programme.

Further Information

Events for prospective students (in German only)

hs-duesseldorf.de/zsb_veranstaltungen

How to apply

hs-duesseldorf.de/prospectivestudents/degreeseekings/application

Information for international applicants

hs-duesseldorf.de/degreeseeking

About the programme and admission requirements

mv.hs-duesseldorf.de/buvt-en

Get in Touch

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