Hochschule Niederrhein
University of Applied Sciences

Chemical Engineering (B. Eng.)

The programme comprises the following phases: Basic courses in inorganic, organic, and physical chemistry, plus engineering mathematics, physics, and IT (lectures, seminars, exercises, laboratory).

Principles of chemical engineering including courses in English applied to technical subjects as well as management techniques (lectures, seminars, laboratory).
Additional courses to be selected from the following list (lectures, seminars, laboratory):

- Extended courses in chemical engineering
- Principles of textile chemistry
- Principles of coatings technology

After completing the programme, the B. Eng. graduates should have acquired a fundamental knowledge of chemistry. They should be able to conduct experiments in the fields of chemical analysis and synthesis.

They should have a sound knowledge of process engineering, transport phenomena, processes in the chemical industry, materials science, and process control engineering. Additionally, they should be able to operate process equipment on a mini-plant scale and use it to acquire essential data.

Graduates should be able to show that they can formulate and solve technical problems applicable to the processing industry and can judge criteria for successful industrial strategies.

Depending on the selected field of specialisation, the graduates should have acquired extended knowledge in one of the above subjects (see list).

They should additionally be able to apply leadership techniques to maintain quality standards. They should be familiar with the environmental legislation in Germany and the corresponding European regulations.

In respect of their future profession in chemical and related industries, they should be able to work with the basic tools of business administration.

At the end of the programme, the B. Eng. graduates are expected to be able to apply their acquired competence. This is proved by producing a project assignment (three months) and also the Bachelor's thesis (two months) normally in cooperation with industry.

Having completed the first degree programme in Chemical Engineering, graduates should be well prepared to pursue professional careers in chemical, coatings, textile, or related industries as well as research institutes and administration.