

# Branch: Chemistry and chemical engineering



**Code:** CHEBIO

**Option:** Chemical biotechnology

**Level:** Bachelor

**Prerequisites:** Scientific baccalaureate or equivalent

**Opportunities :**

Thanks to the intensive teaching of practical-methodical and analytical skills, the Bachelor of Science in Chemical Biotechnology program is initially a professionally qualifying degree for you. For example, you will have the possibility to work in the chemical industry as an engineer or in the field of academic and non-academic research institutions and authorities as a scientist. In particular, after successfully completing the Bachelor's program in Chemical Biotechnology, you can follow a Master's program with a similar interdisciplinary profile in order to obtain the additional qualification necessary for professional activity at a high scientific level.

**Description**

- One of the key technologies for making conventional industrial processes more cost-effective and environmentally friendly, as well as for developing renewable raw materials for industrial use, is industrial biotechnology - more precisely, chemical biotechnology. Process development in the field of biotechnology requires the interaction of biology, chemistry and process engineering.

- The aim of the Bachelor's program in Chemical Biotechnology is therefore to impart in-depth knowledge in the field of biotechnological

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### **Specific competences:**

Specifically, graduates of the Chemical Biotechnology degree programs acquire the following skills:

- They master the mathematical and scientific methods to abstract and analyses problems in their basic structure,
- They have a comprehensive basic knowledge of engineering and natural sciences and know the methods of analysis, modeling, simulation and design and are able to apply these methods,
- They are able to carry out experiments independently and interpret the results.

### **Quality and competences:**

They have acquired comprehensive problem-solving skills in order to be able to deal successfully with synthesis problems with balanced consideration of technical, economic, ecological, social and ethical boundary conditions.

They have become familiar with examples from selected technological fields and have built bridges between the basics of engineering and science and professional applications.

They have acquired exemplary non-specialist qualifications and are thus aware of the non-technical requirements of a professional activity.

They are able to plan projects independently thanks to their interdisciplinary knowledge in the field of chemical biotechnology and are able to carry out a correspondingly oriented professional activity in industry and research.