

# Branch: Chemistry and Chemical Engineering



**Code:** BIOTEC

**Option:** Biomass technology

**Level:** Master

**Prerequisites:**

**Opportunities:**

Depending on the direction of study, students are qualified as engineers for the energy use of renewable resources, chemists for the chemical use of renewable resources or economists for the processing and marketing of renewable resources. This qualification is in demand at energy suppliers, in the chemical and processing industries, in plant and machine construction, in engineering and planning offices, in the production of renewable raw materials, in environmental protection, in institutions, authorities and municipalities, as well as in consulting, training and research.

**Description:**

The Master program "Biomass Technology" is a joint program with the University of Natural Resources and Applied Life Sciences in Vienna. Its aim is to provide a comprehensive education in the field of biomass technology and its use.

What is the purpose of this study program?

A comprehensive education in the field of technological use and exploitation of biomass in an international context. This is the aim of the Master's program

"Biomass Technology" as a joint international degree program with the University of Natural Resources and Applied Life Sciences (BOKU) in Vienna. This interdisciplinary program is open to qualified students with a Bachelor's degree in natural sciences and engineering as well as in agricultural, forestry and economic sciences. It offers the possibility of an excellent training in the field of biomass technology.

During the course of study, it is ensured that students not only acquire knowledge in the various fields, but also an understanding of the interrelationships between energy and material use and the economics of renewable raw materials. The course covers the four sub-areas of renewable raw material production, the application areas and processes of material and energy use, as well as the particular economic conditions of this economic sector, including the changing demands of the markets.

The close connection between basic research and teaching at the Technical University of Munich (TUM) and the University of Natural Resources and Applied Life Sciences results in an optimally coordinated course offering for students.

### **Quality and competences:**

Solving environmental and sustainability problems requires crossing disciplinary boundaries. The challenges of sustainable development, such as climate change or energy supply, are transnational and therefore require international problem-solving strategies, which students in the Master's program "Biomass Technology" (joint degree) learn to develop. The Master's program in Biomass Technology is characterized to a large extent by an interdisciplinary approach. Thanks to their interdisciplinary knowledge in the field of biomass technology, Master's graduates are able to plan projects independently and carry out correspondingly oriented professional activities in industry and research. In addition, they master mathematical and scientific methods in order to be able to abstract problems. They have acquired comprehensive problem-solving skills, e.g. the application of new technologies in the field of renewable energies, taking into account technical, economic, ecological, social and ethical boundary conditions, in order to be able to work successfully in this field. Specializations are possible in four sub-fields through an appropriate choice of modules, but are not compulsory.