The new bachelor’s programme Environmental and Resource Technology offers bright prospects in professional fields of the future

How can we supply the growing world population with sufficient resources and energy? At the same time, how can we protect global ecosystems and the climate? How do we develop renewable energies? What is the best technique for recovering recyclables from waste streams? These pressing questions of environmental protection, climate change, and raw material shortages are addressed in the new bachelor’s programme Environmental and Resource Technology, which links features of engineering and the geosciences in a unique way.

The new bachelor’s programme (scheduled to start in Winter Semester 2018/19, pending the approval of the Ministry) links aspects of engineering and earth sciences in a unique way, since competent engineers are in high demand in the age of climate change. “Students enrolled in the new programme will receive solid training in the basic areas of engineering. However, they will also develop interdisciplinary skills in subjects relevant to resources and the environment. In addition, they will have the chance to attend the courses in the supplemental programme Environmental Law, which provides future biologists, chemists, and geoscientists with an understanding of law”, said Prof. Dr.-Ing. Andreas Jess, who is organizing the new bachelor’s programme offered by the Faculty of Engineering Science.

“This all prepares the future highly qualified graduates of the bachelor’s programme for exciting career challenges and makes them interesting for the German and international job markets, assuming leadership functions in companies, research institutes, and government agencies.”

Prof. Jess also emphasizes that the University of Bayreuth offers prospects for completing a research-oriented master’s degree and a doctorate after graduation. In addition to the (planned) master’s programme Environmental and Resource Technology, there are the established master’s degrees Energy Science and Technology, Biotechnology and Process Engineering, and Geo-Ecology.
Laying the foundations of expert knowledge

The degree programme Environmental and Resource Technology provides students with well-grounded training with an interdisciplinary approach. The programme starts off with solid, wide-ranging training in basic areas of engineering (technical mechanics, fluid mechanics, electrical engineering, technical thermodynamics, heat and material transfer, mechanic and thermal/chemical process engineering, introduction to environmental and resource technology), including all the necessary areas in mathematics and the natural sciences (engineering mathematics, chemistry, biology, physics). With this foundation in place, the students then work in three areas of emphasis in engineering (Process Engineering, Materials Engineering, and Energy Science and Technology) with no elective options. In the core electives, they learn about additional features of process engineering, materials engineering, energy management, and production technology. The interdisciplinary portion contains compulsory courses and core electives with aspects of ecology and the geosciences (e.g. General Ecology, Geology, Hydrology, Meteorology, Climatology, Atmospheric Chemistry, Soil Protection, Urban and Regional Development). Students then have a free choice of courses in the social sciences and economics. They also have the opportunity to complete the supplemental programme Environmental Law that was launched a few years ago at the University of Bayreuth.

General Information

- Degree Awarded: Bachelor of Science (B.Sc.)
- Start of Studies: Winter Term
- Enrolment Deadlines (German and EU citizens): April to October
- Application Deadline (non-EU citizens): 15 July
- Admission Requirements: general or subject-related higher education entrance qualification or professional qualification; German language skills at the level of B2.
- Admission Restrictions: None
- Standard Period of Study: 6 semesters
- Special Features: supplemental programme Environmental Law (optional)
- Languages of Instruction: German
- Programme Coordinator Prof. Dr.-Ing. Andreas Jess
- Homepage: www.uni-bayreuth.de/de/studium/bachelorstudium/umwelt-und-ressourcentechologie

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The University of Bayreuth at a glance

Founded in 1975, the University of Bayreuth is currently one of Germany's most successful young universities. In the Times Higher Education (THE) Young University Rankings, it is ranked 30th among the 250 best young universities in the world. Interdisciplinary research and teaching is the main feature of the university's 151 degree programmes offered by six faculties covering the natural sciences, engineering, law, economics, languages, literature, and cultural studies. The University of Bayreuth has around 13,400 students, roughly 1,200 academic staff members, 240 professors, and around 950 non-academic staff members. It is the largest employer in the region. (Information as of 01.01.2018)