

## CDS RESEARCH CENTER DYNAMIC SYSTEMS SYSTEMS ENGINEERING

### Study Programs

The degree programs

- ▶ **Biosystems Engineering (Bachelor and Master)**
- ▶ **Systems Engineering and Technical Cybernetics (Master)**
- ▶ **Sustainable Process and Environmental Engineering (Bachelor and Master)**
- ▶ **Energy and Process Engineering (Bachelor)**

are part of the CDS's promotion of young talent.

**Bachelor      Master)**

The **interdisciplinary** Biosystems Engineering course combines **biological principles** with **engineering approaches** for the quantitative description, analysis and influencing of biological systems. As a result of the conceptual design of the course, it is unique in Germany and is in constant demand.

**Master)**

The smaller degree course in Systems Engineering and Technical Cybernetics attracts **methodologically oriented students** throughout Germany. Thanks to its interdisciplinary orientation at the **interface between engineering sciences, mathematics, computer science and natural sciences**, the course provides access to a wide range of professional fields.

Many **positive feedbacks** from the supervisors of internships, Bachelor's and Master's theses from industry and universities home and abroad attest to the very good education of the students of both programmes. In the meantime, numerous **highly qualified young scientists** have emerged from both programmes, who have been integrated into the **scientific work of the CDS** in the form of diploma/master's theses as well as doctoral projects. Both degree programmes are running successfully in the Bachelor's/Master's system and have been accredited.

Since the **winter semester 2023/2024**, the Faculty of Process and Systems Engineering has been offering the two degree courses **Sustainable Process and Environmental Engineering (Bachelor and Master)** and **Energy and Process Engineering (Bachelor)**. The new courses **focus on sustainability, climate friendliness and energy efficiency**.

**Bachelor      Master**

The Bachelor's and Master's degree course in Sustainable Process and Environmental Engineering focuses on the research, development and technical implementation of processes in which the properties and composition of **bio-based materials** are modified. The course is suitable for students who wish to put **physical and chemical principles into practice**.

**Bachelor)**

The Bachelor's degree course in Energy and Process Engineering focuses on the analysis, modelling and optimization of **energy transfer and energy supply processes**. Students learn about various fields of work in **environmental and process engineering**, including areas such as recycling, wastewater treatment, air pollution control, renewable energy sources and efficient energy use.

#### Education

- ▶ **Study Programs**
- ▶ **Graduate Training**