

Subject-specific competencies:

- The students know what process engineering is and are familiar with practical fields of application, especially in the field of environmental technology and sustainable engineering.
- They can describe the most important basic operations in process engineering.
- They know the basic function of important process engineering apparatus and machines.
- They are able to determine initial parameters for the quantitative evaluation of material conversion processes.
- They understand the influence of production and materials properties.
- They have basic knowledge of different material classes.
- They understand the interaction between materials structure and properties.

Methodological competencies:

- The students can talk to others about technical parts and components.
- They can choose materials according to technical specifications.
- They can plan the steps for manufacturing parts and components.

Personal competencies:

- The students can work together in small groups.
- They can convince in technical discussions.

Teaching content:

- Material groups
- Material properties
- Application of materials
- Material selection
- Material manufacturing techniques
- Material characterization