

## Overview: Fields and Modules

| Field   | Module  | Responsible          | CP |
|---|---|----------------------|----|
| Core Skills<br>2 mandatory modules                | Process and Plant Design in Biotechnology   | Holtmann             | 6  |
|   | Thermodynamics for Bioengineering   | Enders, Zeiner       | 6  |
| Interdisciplinary Qualifications<br>(Soft Skills) | Academic Work (z. B. Journal Club)  | Holtmann, Grünberger | 2  |
|   | e. g. offers of the House of Competence of FORUM  |                      | 2  |
| Computer-aided Methods                            | In the fields <u>Computer-aided Methods</u> and <u>Process Engineering</u> , 6 – 16 CP can be selected in each field, for a total of 22 CP.<br>If 22 CP cannot be achieved exactly due to the CP scope of the individual modules, the 22 CP may be slightly exceeded. |                      | 22 |
| Process Engineering                               |   |                      |    |
| Specialization                                    | Two to four specializations can be chosen, each with a scope of 10–20 CP, for a total of 40 CP.<br>If 40 LP cannot be achieved due to the scope of the individual modules, the 40 CP may be Slightly exceeded.  |                      | 40 |
| Internship  | 12 weeks of professional internship (industry) or research internship (KIT, other research institution).<br>The research internship can be completed at KIT either as a block internship or part-time throughout the semester.  |                      | 12 |
| Thesis  |   |                      | 30 |

### The following specializations are electable:

- Biopharmaceutical Process Engineering
- Health Technology
- Industrial Biotechnology
- Design of Food Products
- Food Process Engineering
- Micro-Bioprocess Engineering
- New Bio-Production Systems - Electro-Biotechnology
- Conversion of Renewable Resources
- Water Technology

### Curriculum - Example

|        |   |                     |                      |                          |                          |                          |
|--------|---|---------------------|----------------------|--------------------------|--------------------------|--------------------------|
| 1. Sem | Core skills<br>6 CP                             | Soft Skills<br>2 CP | CM 6 CP              | Specialization 1<br>6 CP | Specialization 1<br>6 CP | Specialization 2<br>4 CP |
| 2. Sem | Core Skills<br>6 CP                             | Soft Skills<br>2 CP | Process Eng.<br>4 CP | Process Eng.<br>6 CP     | Specialization 3<br>6 CP | Specialization 2<br>4 CP |
| 3. Sem | Research Internship (throughout semester) 12 CP |                     | CM 6 CP              | Specialization 3<br>4 CP | Specialization 3<br>4 CP | Specialization 2<br>6 CP |
| 4. Sem | Thesis<br>30 CP                                 |                     |                      |                          |                          |                          |

- Computer-aided Methods (CM): 12 CP
- Process Engineering: 10 CP
- Specialization 1: 12 CP
- Specialization 2: 14 CP
- Specialization 3: 14 CP