

# BIOENGINEERING, B. Sc.

## COURSE SCHEDULE OF FULL TIME STUDY COURSE

### 1th Semester

- Cell Biology and Microbiology
- Fundamentals of Chemistry
- Basics of Physics
- Mathematics and Statistics
- Basics of Management
- Project 1

### 2nd Semester

- Genetics and Molecular Biology
- Applied Chemistry
- Biochemistry
- Bioengineering Physics
- Applied Microbiology
- Applied Mathematics

### 3rd Semester

- Physical Chemistry
- Instrumental Analytics
- Measurement and Control Engineering
- Process Engineering
- Basics of Economic Sciences
- Applied Management

#### Elective Modules 1:

- Technical Enzymology
- Biofuels
- Agricultural Biotechnology
- Biopolymers
- Medical Bioengineering
- Nanobiotechnology
- Modeling of Dynamic Systems
- Free Choice

### 4th Semester

- Bioprocess Engineering
- Enzyme Engineering
- Project 2
- Elective Modules 1

### 5th Semester

- Basics of Law
- Industrial Biotechnology
- Downstream Processing
- Integrated Management Systems and Quality Management
- Elective Modules 2

#### Elective Modules 2:

- Biocatalysis
- Metabolic Engineering
- Cellular Biophysics
- Environmental Biotechnology
- Microalgae
- Immunology
- Free Choice

**internship or study abroad (20 weeks)**

**bachelor thesis (3 month)**

#### contact:

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#### heads of study course:

Prof. Dr. Joachim Fensterle  
Prof. Dr. Björn Neu