# BIOENGINEERING, B. Sc.

# COURSE SCHEDULE OF FULL TIME STUDY PROGRAMME

#### 1th Semester

- Cell Biology and Microbiology
- Fundamentals of Chemistry
- Bioengineering Physics I
- Mathematics
- International Project Management
- Basics of Economic Sciences and Law

#### 2nd Semester

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

#### **3rd Semester**

- Physical Chemistry
- Instrumental Analytics
- Measurement and Control Engineering
- Process Engineering
- Current Topics in Biology
- Data Analysis and Applied Statistics

# 4th Semester

- Bioprocess Engineering
- Enzyme Engineering
- Project
- Bioinformatics
- Elective modules 1

# 5th Semester

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

# 6th Semester

# Internship or study abroad (mind. 20 weeks)

#### 7th Semester

- Academic Methods and Principles
- Elective Modules 3
- Bachelor Thesis
- Colloquium

#### Elective Modules 1:

- Technical Enzymology and Biocatalysis
- Agricultural Biotechnology and Biofuels
- Nanobiotechnology
- Fluid Mechanics and Systems Dynamics
- Module from any Bachelor Study Course of Faculty of Life Sciences at Rhine-Waal University of Applied Sciences

# Elective Modules 2:

- Metabolic Engineering
- Biological Physics
- Environmental Biotechnology and Microalgae
- Pharmaceutical Biotechnology and Immunology
- Biopolymers
- Module from any Bachelor Study Course of Faculty of Life Sciences at Rhine-Waal University of Applied Sciences

#### Elective Modules 3:

- Project reg. Academic Principles and Methods in Preparation of Bachelor Thesis
- Language Course
- Module from Catalogue 1 and 2 of study programme
- Module from any Bachelor Study Course at Rhine-Waal University of Applied Sciences

#### Contact:

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