

# Course of Study Mechanical Engineering (Study Cohort w23)

Sample course plan C Bachelor Mechanical Engineering (MBBS) Dual study program

Specialisation Materials in Engineering Sciences

| Specialisation Materials in Engineering Sciences                          |                        |     |   |  |    |   |  |     |   |  |     |   |   |     |   |   |    |   |
|---|------------------------|-----|---|--|----|---|--|-----|---|--|-----|---|---|-----|---|---|----|---|
| 1   | <b>Mathematics I</b>   |     |   | <b>Fundamentals of Mechanical Engineering Design</b> |    |   | <b>Advanced Mechanical Engineering Design (part 1)</b>           |     |   | <b>Advanced Mechanical Engineering Design (part 2)</b> |     |   | <b>Advanced Mechanical Design Project</b>                         |     |   | <b>Foundations of Management</b>                                  |    |   |
| 2   | Mathematics I          | VL  | 4 | Fundamentals of Mechanical Engineering Design        | VL | 2 | Advanced Mechanical Engineering Design I                         | VL  | 2 | Advanced Mechanical Engineering Design II              | VL  | 2 | Advanced Mechanical Design Project                                | PBL | 4 | Introduction to Management  | VL | 3 |
| 3   | Mathematics I          | HÜ  | 2 | Fundamentals of Mechanical Engineering Design        | HÜ | 2 | Advanced Mechanical Engineering Design I                         | HÜ  | 2 | Advanced Mechanical Engineering Design II              | HÜ  | 2 |   |     |   | Management Tutorial   | GÜ | 2 |
| 4   | Mathematics I          | GÜ  | 2 |  |    |   |  |     |   |  |     |   |   |     |   |   |    |   |
| 5   |                        |     |   |  |    |   | <b>Mechanical Engineering: Design (part 1)</b>                   |     |   | <b>Mechanical Engineering: Design (part 2)</b>         |     |   |   |     |   |   |    |   |
| 6   |                        |     |   |  |    |   | Embodiment Design and 3D-CAD Introduction and Practical Training | VL  | 2 | Team Project Design Methodology                        | PBL | 2 |   |     |   |   |    |   |
| 7   |                        |     |   |  |    |   | Mechanical Design Project I                                      | PBL | 3 | Mechanical Design Project II                           | PBL | 3 |   |     |   |   |    |   |
| 8   |                        |     |   |  |    |   | <b>Technical Thermodynamics I</b>                                |     |   | <b>Basics of Electrical Engineering</b>                |     |   | <b>Fluid Dynamics</b>   |     |   | <b>Introduction to Control Systems</b>                            |    |   |
| 9   |                        |     |   |  |    |   | Technical Thermodynamics I                                       | VL  | 2 | Basics of Electrical Engineering                       | VL  | 3 | Fluid Mechanics   | VL  | 3 | Introduction to Control Systems                                   | VL | 2 |
| 10  |                        |     |   |  |    |   | Technical Thermodynamics I                                       | HÜ  | 1 | Basics of Electrical Engineering                       | GÜ  | 2 | Fluid Mechanics   | HÜ  | 2 | Introduction to Control Systems                                   | GÜ | 2 |
| 11  |                        |     |   |  |    |   | Technical Thermodynamics I                                       | GÜ  | 1 |  |     |   |   |     |   |   |    |   |
| 12  |                        |     |   |  |    |   |  |     |   |  |     |   |   |     |   |   |    |   |
| 13  |                        |     |   |  |    |   | <b>Production Engineering</b>                                    |     |   | <b>Technical Thermodynamics II</b>                     |     |   | <b>Practical module 4 (dual study program, Bachelor's degree)</b> |     |   | <b>Measurement Technology for Mechanical Engineers</b>            |    |   |
| 14  |                        |     |   |  |    |   | Production Engineering I   | VL  | 2 | Technical Thermodynamics II                            | VL  | 2 | Practical term 4  | 0   |   | Measurement Technology for Mechanical Engineering                 | VL | 2 |
| 15  |                        |     |   |  |    |   | Production Engineering II  | VL  | 2 | Technical Thermodynamics II                            | HÜ  | 1 |   |     |   | Measurement Technology for Mechanical Engineering                 | PR | 2 |
| 16  | <b>Team Project MB</b> |     |   |  |    |   | Production Engineering II  | HÜ  | 1 | Technical Thermodynamics II                            | GÜ  | 1 |   |     |   | Practical Course: Measurement and Control Systems                 | PR | 2 |
| 17  | Team Project MB        | PBL | 6 |  |    |   | Production Engineering I   | HÜ  | 1 |  |     |   |   |     |   |   |    |   |
| 18  |                        |     |   |  |    |   |  |     |   |  |     |   |   |     |   |   |    |   |
| 19  |                        |     |   |  |    |   | <b>Mathematics II</b>  |     |   | <b>Mathematics III</b>                                 |     |   | <b>Computational Mechanics</b>                                    |     |   | <b>Practical module 5 (dual study program, Bachelor's degree)</b> |    |   |
| 20  |                        |     |   |  |    |   | Mathematics II   | VL  | 4 | Analysis III   | VL  | 2 | Computational Multibody Dynamics                                  | IV  | 2 | Practical term 5  | 0  |   |
| 21  |                        |     |   |  |    |   | Mathematics II   | HÜ  | 2 | Analysis III   | GÜ  | 1 | Computational Mechanics   | GÜ  | 2 |   |    |   |
| 22  |                        |     |   |  |    |   | Mathematics II   | GÜ  | 2 | Analysis III   | HÜ  | 1 | Computational Structural Mechanics                                | IV  | 2 |   |    |   |
| 23  |                        |     |   |  |    |   |  |     |   | Differential Equations 1                               | VL  | 2 |   |     |   |   |    |   |
| 24  |                        |     |   |  |    |   |  |     |   | Differential Equations 1                               | GÜ  | 1 |   |     |   |   |    |   |
| 25  |                        |     |   |  |    |   |  |     |   | Differential Equations 1                               | HÜ  | 1 |   |     |   |   |    |   |
| 26  |                        |     |   |  |    |   |  |     |   |  |     |   |   |     |   |   |    |   |
| 27  |                        |     |   |  |    |   |  |     |   |  |     |   |   |     |   |   |    |   |
| 28  |                        |     |   |  |    |   |  |     |   |  |     |   |   |     |   |   |    |   |
| 29  |                        |     |   |  |    |   |  |     |   |  |     |   |   |     |   |   |    |   |
| 30  |                        |     |   |  |    |   |  |     |   |  |     |   |   |     |   |   |    |   |
| 31  |                        |     |   |  |    |   |  |     |   |  |     |   |   |     |   |   |    |   |
| 32  |                        |     |   |  |    |   |  |     |   |  |     |   |   |     |   |   |    |   |
| 33  |                        |     |   |  |    |   |  |     |   |  |     |   |   |     |   |   |    |   |
| 34  |                        |     |   |  |    |   |  |     |   |  |     |   |   |     |   |   |    |   |
| 35  |                        |     |   |  |    |   |  |     |   |  |     |   |   |     |   |   |    |   |
| 36  |                        |     |   |  |    |   |  |     |   |  |     |   |   |     |   |   |    |   |
| 37  |                        |     |   |  |    |   |  |     |   |  |     |   |   |     |   |   |    |   |
| 38  |                        |     |   |  |    |   |  |     |   |  |     |   |   |     |   |   |    |   |
| Linking theory and practice (dual study program, Bachelor's degree) - 6LP |                        |     |   |  |    |   |  |     |   |  |     |   |   |     |   |   |    |   |

The choice of courses from the catalogue is flexible (depends on the semestral work load), provided the necessary number of required credits is reached.

