

# Course of Study Mechanical Engineering (Study Cohort w21)

Sample course plan C Bachelor Mechanical Engineering (MBBS)

Specialisation: Theoretical Mechanical Engineering

| Semester | Semester 2  |       | Semester 3   |      | Semester 4   |       | Semester 5   |       | Semester 6   |       |
|----------|---|-------|--|------|--|-------|--|-------|--|-------|
|          | Form Hrs/wk   |       | Form Hrs/wk  |      | Form Hrs/wk  |       | Form Hrs/wk  |       | Form Hrs/wk  |       |
| 1        | <b>Production Engineering (part 1)</b>                            |       | <b>Production Engineering (part 2)</b>               |      | <b>Advanced Mechanical Engineering Design (part 1)</b> |       | <b>Advanced Mechanical Engineering Design (part 2)</b>   |       | <b>Advanced Mechanical Design Project</b>              |       |
| 2        | Production Engineering I  | VL 2  | Production Engineering II                            | VL 2 | Advanced Mechanical Engineering Design I               | VL 2  | Advanced Mechanical Engineering Design II  | VL 2  | Advanced Mechanical Design Project                     | PBL 4 |
| 3        | Production Engineering I  | HÜ 1  | Production Engineering II                            | HÜ 1 | Advanced Mechanical Engineering Design I               | HÜ 2  | Advanced Mechanical Engineering Design II  | HÜ 2  | Introduction to Management                             | VL 3  |
| 4        | <b>Mathematics I</b>  |       | <b>Fundamentals of Materials Science (part 2)</b>    |      | <b>Mechanical Engineering: Design (part 1)</b>         |       | <b>Mechanical Engineering: Design (part 2)</b>   |       | Management Tutorial                                    |       |
| 5        | Linear Algebra I  | VL 2  | Fundamentals of Materials Science II                 | VL 2 | Embodiment Design and 3D-CAD                           | VL 2  | Team Project Design Methodology  | PBL 2 |  |       |
| 6        | Linear Algebra I  | GÜ 1  |  |      | Mechanical Design Project I                            | PBL 3 | Mechanical Design Project II   | PBL 3 |  |       |
| 7        | Linear Algebra I  | HÜ 1  | <b>Fundamentals of Mechanical Engineering Design</b> |      | <b>Basics of Electrical Engineering</b>                |       | <b>Fluid Dynamics</b>  |       | <b>Introduction to Control Systems</b>                 |       |
| 8        | Analysis I  | VL 2  | Fundamentals of Mechanical Engineering Design        | VL 2 | Basics of Electrical Engineering                       | VL 3  | Fluid Mechanics  | VL 3  | Introduction to Control Systems                        | VL 2  |
| 9        | Analysis I  | GÜ 1  | Fundamentals of Mechanical Engineering Design        | HÜ 2 | Basics of Electrical Engineering                       | GÜ 2  | Fluid Mechanics  | HÜ 2  | Introduction to Control Systems                        | GÜ 2  |
| 10       | Analysis I  | HÜ 1  |  |      |  |       |  |       |  |       |
| 11       |   |       |  |      |  |       |  |       |  |       |
| 12       | <b>Mechanics I (Statics)</b>                                      |       | <b>Technical Thermodynamics I</b>                    |      | <b>Technical Thermodynamics II</b>                     |       | <b>Mechanics IV (Oscillations, Analytical Mechanics, Multibody Systems, Numerical Mechanics)</b> |       | <b>Measurement Technology for Mechanical Engineers</b> |       |
| 13       | Mechanics I   | VL 2  | Technical Thermodynamics I                           | VL 2 | Technical Thermodynamics II                            | VL 2  | Mechanics IV   | VL 3  | Measurement Technology for Mechanical Engineering      | VL 2  |
| 14       | Mechanics I   | GÜ 2  | Technical Thermodynamics I                           | HÜ 1 | Technical Thermodynamics II                            | HÜ 1  | Mechanics IV   | GÜ 2  | Measurement Technology for Mechanical Engineering      | HÜ 1  |
| 15       | Mechanics I   | HÜ 1  | Technical Thermodynamics I                           | GÜ 1 | Technical Thermodynamics II                            | GÜ 1  | Mechanics IV   | HÜ 1  | Measurement Technology for Mechanical Engineering      | PR 2  |
| 16       |   |       |  |      |  |       |  |       | Practical Course: Measurement and Control Systems      |       |
| 17       |   |       |  |      |  |       |  |       |  |       |
| 18       | <b>Fundamentals of Materials Science (part 1)</b>                 |       | <b>Mechanics II: Mechanics of Materials</b>          |      | <b>Mathematics III</b>                                 |       | <b>Advanced Materials</b>  |       | <b>Numerical Mathematics I</b>                         |       |
| 19       | Fundamentals of Materials Science I                               | VL 2  | Mechanics II   | VL 2 | Analysis III   | VL 2  | Advanced Materials Characterization  | VL 2  | Numerical Mathematics I                                | VL 2  |
| 20       | Physical and Chemical Basics of Materials Science                 | VL 2  | Mechanics II   | GÜ 2 | Analysis III   | GÜ 1  | Advanced Materials Design  | VL 2  | Numerical Mathematics I                                | GÜ 2  |
| 21       |   |       | Mechanics II   | HÜ 2 | Analysis III   | HÜ 1  | Advanced Materials Design  | HÜ 2  |  |       |
| 22       | <b>Team Project MB</b>  |       |  |      | Differential Equations 1                               |       |  |       |  |       |
| 23       | Team Project MB   | PBL 6 |  |      | Differential Equations 1                               |       |  |       |  |       |
| 24       |   |       |  |      | Differential Equations 1                               |       |  |       |  |       |
| 25       |   |       | <b>Mathematics II</b>                                |      |  |       |  |       | <b>Heat Transfer</b>                                   |       |
| 26       |   |       | Linear Algebra II                                    | VL 2 |  |       |  |       | Heat Transfer  | VL 3  |
| 27       |   |       | Linear Algebra II                                    | GÜ 1 |  |       |  |       | Heat Transfer  | HÜ 2  |
| 28       |   |       | Linear Algebra II                                    | HÜ 1 |  |       |  |       |  |       |
| 29       | <b>Computer Science for Engineers - Introduction and Overview</b> |       | Analysis II  | VL 2 | <b>Mechanics III (Dynamics)</b>                        |       |  |       |  |       |
| 30       | Computer Science for Engineers - Introduction and Overview        | VL 3  | Analysis II  | HÜ 1 | Mechanics III  | VL 3  |  |       |  |       |
| 31       | Computer Science for Engineers - Introduction and Overview        | GÜ 2  | Analysis II  | GÜ 1 | Mechanics III  | GÜ 2  |  |       |  |       |
| 32       |   |       |  |      | Mechanics III  | HÜ 1  |  |       |  |       |
| 33       |   |       |  |      |  |       |  |       |  |       |

Non-technical Courses for Bachelors (from catalogue) - 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.

