# Course of Study Mechatronics (Study Cohort w19)

Legend

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| Core Qualification Compulsory | Specialisation Compulsory | Focus Compulsory | Thesis Compulsory |
| Core Qualification Elective Compulsory | Specialisation Elective Compulsory | Focus Elective Compulsory | Interdisciplinary complement |

Sample course plan C  Bachelor Mechatronics (MECBS)

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|---|---|---|---|---|---|
| 1 | **Procedural Programming**<br>Procedural Programming VL 1<br>Procedural Programming HÜ 1<br>Procedural Programming PR 2 | **Electrical Engineering II: Alternating Current Networks and Basic Devices**<br>Electrical Engineering II: Alternating Current Networks and Basic Devices VL 3<br>Electrical Engineering II: Alternating Current Networks and Basic Devices GÜ 2 | **Mechanical Engineering: Design (part 1)**<br>Embodiment Design and 3D-CAD VL 2<br>Mechanical Design Project I PBL 3 | **Mechanical Engineering: Design (part 2)**<br>Team Project Design Methodology PBL 2<br>Mechanical Design Project II PBL 3 | **Technical Thermodynamics II**<br>Technical Thermodynamics II VL 2<br>Technical Thermodynamics II HÜ 1<br>Technical Thermodynamics II GÜ 1 | **Electrical Machines and Actuators**<br>Electrical Machines and Actuators VL 3<br>Electrical Machines and Actuators HÜ 2 |
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| 3 | | | | | | |
| 4 | | | **Electrical Engineering III: Circuit Theory and Transients**<br>Circuit Theory VL 3<br>Circuit Theory GÜ 2 | **Production Engineering (part 2)**<br>Production Engineering II VL 2<br>Production Engineering II HÜ 1 | | |
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| 6 | | | | | | |
| 7 | **Electrical Engineering I: Direct Current Networks and Electromagnetic Fields**<br>Electrical Engineering I: Direct Current Networks and Electromagnetic Fields VL 3<br>Electrical Engineering I: Direct Current Networks and Electromagnetic Fields GÜ 2 | **Fundamentals of Mechanical Engineering Design**<br>Fundamentals of Mechanical Engineering Design VL 2<br>Fundamentals of Mechanical Engineering Design HÜ 2 | | **Technical Thermodynamics I**<br>Technical Thermodynamics I VL 2<br>Technical Thermodynamics I HÜ 1<br>Technical Thermodynamics I GÜ 1 | **Foundations of Management**<br>Introduction to Management VL 3<br>Management Tutorial GÜ 2 | **Semiconductor Circuit Design**<br>Semiconductor Circuit Design VL 3<br>Semiconductor Circuit Design GÜ 1 |
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| 10 | | | **Production Engineering (part 1)**<br>Production Engineering I VL 2<br>Production Engineering I HÜ 1 | | | |
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| 13 | **Mathematics I**<br>Linear Algebra I VL 2<br>Linear Algebra I GÜ 1<br>Linear Algebra I HÜ 1<br>Analysis I VL 2<br>Analysis I GÜ 1<br>Analysis I HÜ 1 | **Mechanics II: Mechanics of Materials**<br>Mechanics II VL 2<br>Mechanics II GÜ 2<br>Mechanics II HÜ 2 | **Computer Engineering**<br>Computer Engineering VL 3<br>Computer Engineering GÜ 1 | **Signals and Systems**<br>Signals and Systems VL 3<br>Signals and Systems GÜ 2 | **Introduction to Control Systems**<br>Introduction to Control Systems VL 2<br>Introduction to Control Systems GÜ 2 | **Bachelor Thesis** |
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| 19 | | **Mathematics II**<br>Linear Algebra II VL 2<br>Linear Algebra II GÜ 1<br>Linear Algebra II HÜ 1<br>Analysis II VL 2<br>Analysis II HÜ 1<br>Analysis II GÜ 1 | **Mathematics III**<br>Analysis III VL 2<br>Analysis III GÜ 1<br>Analysis III HÜ 1<br>Differential Equations 1 VL 2<br>Differential Equations 1 GÜ 1<br>Differential Equations 1 HÜ 1 | **Mathematics IV**<br>Complex Functions VL 2<br>Complex Functions GÜ 1<br>Complex Functions HÜ 1<br>Differential Equations 2 VL 2<br>Differential Equations 2 GÜ 1<br>Differential Equations 2 HÜ 1 | **Measurement Technology for Mechanical Engineers**<br>Measurement Technology for Mechanical Engineering VL 2<br>Measurement Technology for Mechanical Engineering HÜ 1<br>Practical Course: Measurement and Control Systems PR 2 | |
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| 21 | **Mechanics I (Statics)**<br>Mechanics I VL 2<br>Mechanics I GÜ 2<br>Mechanics I HÜ 1 | | | | | |
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| 25 | | | | **Mechanics IV (Oscillations, Analytical Mechanics, Multibody Systems, Numerical Mechanics)**<br>Mechanics IV VL 3<br>Mechanics IV GÜ 2<br>Mechanics IV HÜ 1 | | |
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| 27 | **Fundamentals of Materials Science (part 1)**<br>Fundamentals of Materials Science I VL 2<br>Physical and Chemical Basics of Materials Science VL 2 | **Fundamentals of Materials Science (part 2)**<br>Fundamentals of Materials Science II VL 2 | **Mechanics III (Dynamics)**<br>Mechanics III VL 3<br>Mechanics III GÜ 2<br>Mechanics III HÜ 1 | | | |
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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.